

# ST FORMAT

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with their  
clothes on?



WE REVIEW  
AND RATE  
**30**  
ST GAMES

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### ST FORMAT COVER DISK 29

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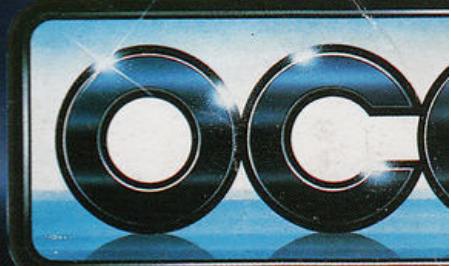
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So if your decent person a patriot, and somebody who cares about this sorry planet, you'll do the right thing.

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# ST FORMAT

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Most vivid memory of the year: 6 March, Martin got a joke! I'll not see his like again - at least until next month. The King is dead! Long live the King! - as they say in the movies...

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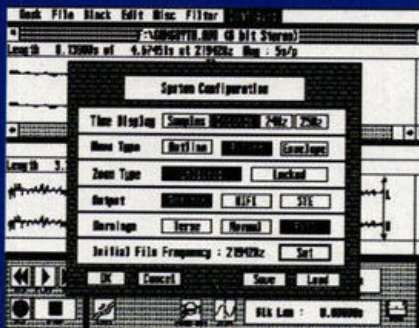
## DAYLIGHT ROBBERY

Take to crime in this exclusive preview of Electronic Zoo's new platform puzzler. You've got six manic levels to raid in a race against time. One, two or three players can compete in the action at one time – but crime doesn't always pay!



## STEREO REPLAY

An exclusive preview of Microdeal's stereo sampling package. Now you can listen to true stereo sound even if you don't own an STE!



## AUTOPLAY

It's time to join the animation revolution! With *Autoplay* and a couple of handy programs also included on this month's Disk you can write your own full-screen animations. Don't just admire the intro sequences in your favourite games – you can create animated sequences and add sound to them using the *ST FORMAT* Cover Disk. Now you have all the kit you need to take on the professional animators!



Also on this month's Cover Disk: a screen saving Accessory, RAMdisk utility, *GFA Basic* joystick routines and a music sample converter

## WIN A HARD DRIVE!

We're offering one spanking new 40MByte Power hard drive to the clever person who can write a program which can display full-screen animations even better than this month's *Autoplay*.

If you can program in *GFA Basic 2* then turn to page 149 now!

IT'S SO GOOD THERE'S NOT A SINGLE BYTE LEFT – THAT'S WHY *ST FORMAT* COVER DISKS REFRESH THE PARTS OTHER DISKS DON'T REACH



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● Win £1,500 worth of the very best *FORMAT* Gold games we've ever reviewed in this month's compo.

# Knightmare



*"You are setting forth into another place, another time, another world," said Treguard, The Dungeon Master. "And what makes you think that you four mere mortals will succeed in the Quest, when so many others have failed?"*

*I understood, at that moment, that our mission was going to take all our endurance, all our collective skill, and, most of all a depth of courage, that I wasn't sure we possessed.*

Ever since ITV's award-winning series hit our screens, the world has been waiting for a computer game worthy of the name. The wait is over.

Tony Crowther's amazing re-creation has everything.

Using the same game system that made 'Captive' adventure game of the year for 1990, 'Knightmare' makes dungeons and dragons games seem like newts splashing around in a muddy puddle.

'Knightmare' is a sophisticated role-playing adventure where you are

challenged to solve complex puzzles, logic problems and riddles that reveal a rich, ever-more rewarding storyline.

Your journey takes you deep into the dungeons of Dunshelm, to a cataclysmic meeting with Lord Fear and the unthinkable horrible FrightKnight.

Whether or not the meeting is terminal is up to you. You will need wisdom, tenacity, alacrity and, above all, courage.

But you have all those things, don't you...?



Available for Amiga & Atari ST

**BROADSWORD**



MINDSCAPE

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Atari fear Christmas shortage of ST stocks ● STACY portable ST fails crucial radio and TV interference tests in US

# Can you get an ST for Christmas?

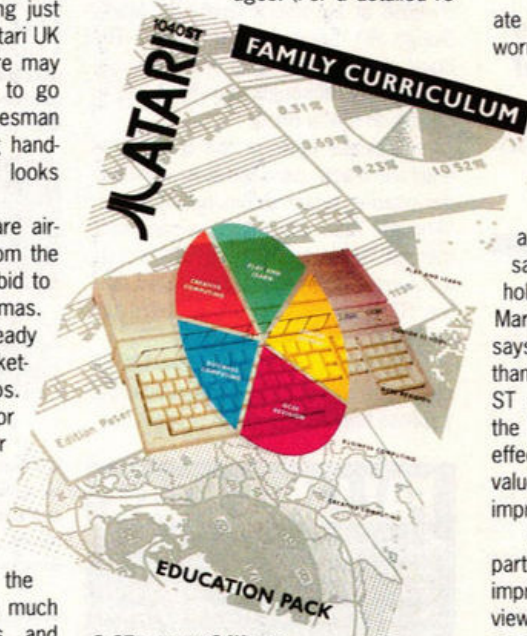
by Neil Jackson

**W**ith the onslaught of frenzied Christmas buying just around the corner, Atari UK are worried that there may not be enough STs to go around. According to Atari spokesman Peter Walker, "dealers are living hand-to-mouth as the ST market looks increasingly buoyant."

As you read this, Atari UK are air-freighting extra ST shipments from the USA and Taiwan in a desperate bid to maintain enough stock for Christmas. Several thousand STs have already been released into the UK market place, but few will end up in shops. Many are already earmarked for users who have placed earlier orders with dealers.

"We've underestimated the target for ST sales," says Walker, who sees the new STE Family Curriculum pack as the cause. "Parents see them as a much better alternative to consoles and games machines." The pack includes a 1040STE and five "modules" of software, aiming to provide for every level of user from pre-school-age children to

their parents. The software included ranges from excellent basic literacy and junior school level programs to average GCSE and "Business Computing" packages. (For a detailed re-



● STs scarce? It's no wonder with the new Family Curriculum Pack attracting both parents and kids alike. But will there be enough left for Christmas?

view of the pack, see *ST FORMAT* 24 and the letters section in issue 25. If you missed these, turn to page 130 for the *FORMAT* back issue service.)

The dealers themselves are desperate to get hold of STs and some are worried that a lack of supplies at Christmas could hit hard. They may recall how a shortage of supplies over Christmas 1989 ushered in what Atari's Managing Director laconically admits was "a flat year."

Roger Davies, Marketing Manager for retailer System Solutions, says it is "virtually impossible to get hold of new machines." Andy Leaning, Marketing Manager of Silica Shop, says: "We're selling many more STs than last year – and we've doubled our ST advertising." Leaning agrees that the Family Curriculum pack has had an effect on sales. "It's perceived as better value than previous packs and it's an improvement on Atari's past offers."

However, Leaning also feels that part of the rise in sales is due to an improvement in the way Atari are viewed by the public. "There are no negatives this year – no massive hic-

**"There are no negatives this year, no hiccups. There's nothing to stop the ST from selling"**

## RETAILER

cup, like STE problems. There's nothing to stop the ST from selling."

With their technical troubles behind them, Atari are set to clean up in the Christmas market. They may even get an unexpected present in the shape of the modified Amiga Plus games machine, which is partly incompatible with older machines and is being pushed into shops unannounced, causing havoc among buyers. It seems that Atari's major rivals, Commodore, never learned from Atari's mistakes with the early STEs and may end up paying for it. Atari may yet find it a good season.



● *The Brainies* cunningly conceal themselves among the paraphernalia of a screen from Titus' next arcade-cum-puzzle game. Pretty brainy, eh?

## My Brainies hurt

by Ed Ricketts

Paris-based games software house Titus have recently changed their British distributors. They're now being handled by Palace Software, and seem to be making a concerted effort to sort themselves out and write some better games. *The Blues Brothers*, for instance (reviewed on page 75), turned out to be much better than some more cynical industry figures had expected.

Next up from the French fellows is *The Brainies*, which they say is an arcade challenge. To us it looks suspiciously like a puzzle game. *The Brainies* are from outer space and are about as friendly as Dr Lecter. Not your problem, you might think, but unfortunately they're taking over the world. The only way to stop them is to lead them to the sleeping pills scattered about the screen. The thing is they only obey certain sorts of instructions and don't stop moving until they hit something immovable.

Quite what bearing these restrictions have on the game isn't yet apparent, since the game won't be released until January next year. More, as the saying goes, when we get it.



## ST SALES IN THE UK

PERIOD	UNITS SOLD
Sept '85 (launch) – Dec '86	30,000
Jan '87 – Dec '87	70,000
Jan '88 – Dec '88	120,000
Jan '89 – Dec '89	150,000
Jan '90 – Dec '90	150,000+
Jan '91 – Dec '91	180,000 estimated
<b>TOTAL STS IN UK</b>	<b>700,000+</b>

This year's estimated sales figures include the 1040 machine for the first time since its launch. Atari claim they sold between 12,000 and 15,000 1040s annually until this year, which saw the launch of the new Family Curriculum 1040STE pack.

The 180,000 estimate is based on 50,000 STs already sold prior to October, plus 130,000 machine-sales expected over the autumn and Christmas periods. Now it seems these figures were underestimated as dealers struggle to obtain machines.

**TOP ST GOODIES AT RIDICULOUSLY LOW PRICES – PAGE 118**

# → STACY banned from US homes

by Neil Jackson

**T**he STACY, Atari's troubled portable ST, has failed crucial US Government radio and TV interference tests. This means it now cannot legally be used in American households.

The Federal Communications Commission, the official body responsible for testing all electrical and electronic equipment, has withheld Class B certification from the STACY on the grounds that it produces too many spurious radio emissions.

Without a Class B ticket, the STACY is effectively banned from all American households – a major setback for Atari. Currently the machine is being sold strictly to musicians and certain other users who can legally use the machine only as a peripheral part of existing computer systems. The STACY's production lines have been stopped, pending a re-design of the electronic shielding which should enable the machine to pass the crucial FCC tests.

A portable ST should have been a world-beater, especially for musicians and others who needed ST power on the move, but the STACY has had a troubled history ever since its appearance over two years ago. To begin with, it had no official launch, and industry observers speculated that this was

because it had been rushed onto the market prematurely. Indeed, it suffered from debilitating problems that Atari tried to fix on the run in a piecemeal fashion that inspired little confidence in the machine. The biggest problem was short battery life – disastrous for a portable machine. If the STACY had been a car, it would probably have been recalled. As it was, Atari gave the unit little promotion and sold it promising

**STACY production lines have been stopped and its future hangs in the balance as ST Book and STylus are ready to go**

buyers an improved battery pack when one had been developed. Then, when they had such a pack, they decided to build it into a new machine instead, the ST Book. The STACY's failing the FCC exam may be the last nail in its coffin.

While the future for STACY hangs in the balance, there is better news for the newest additions to the ST range, the ST Book and the STylus. Both these machines have successfully passed their FCC Class B tests and only the paperwork remains to be completed to make them street-legal. (ST FORMAT brought



● The STACY portable ST: still on sale in the UK, but its days may be numbered.

you details of these new machines as they came to light, beginning in issue 22 and including exclusive insights from Atari's boss Sam Tramiel in issue 27.)

The ST Book is currently undergoing its final beta-testing and is to be unveiled at an official launch at Atari's Slough HQ, sometime this month. The Book should go on sale in the UK during January, although Atari have yet to decide on a final price.

A release date for the STylus, the machine which uses Atari's handwriting-deciphering systems, has not been set, although Atari's UK spokesman commented: "It'll definitely be a '92 release. It's a good deal more complicated than the ST Book, which is why we're not settled on an exact date yet."

ST FORMAT contacted Atari UK for comment on the STACY's setback, but at press time Atari had not replied.

## FALLING STAR

Star Micronics have dropped the price of their 24-pin and Laser 4 printers. The popular LC24-10 goes down by a tenner to £249, while the Laser 4 drops by £190 to just one pound short of a grand. Economies of scale are said to be responsible. Star's factory in South Wales has just been expanded and now churns out 65,000 dot-matrix printers a month, with production costs lower than before. Contact Star Micronics at Star House, Peregrine Business Park, Gomm Road, High Wycombe, Bucks HP13 7DL, ☎ 0494 471111

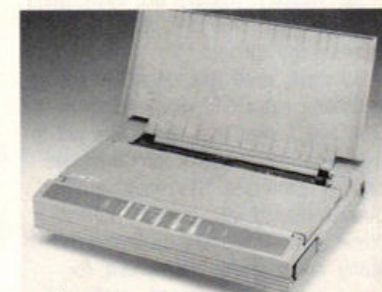
## A Star is born

by Ed Ricketts

Star Micronics, suppliers of some of the most popular printers for the ST, have announced that they are releasing an inkjet printer.

The StarJet SJ-48 has two modes, High Quality (or Letter Quality) and Economy (Near Letter Quality). Quoted speeds are 100 cps (characters per second) in both modes, with an ink cartridge life of 700,000 HQ characters. Economy mode is designed to use less ink and thus prolong cartridge life; in this mode, the cartridge should last for 1.4 million characters. Unusually, the cartridge also contains the print head itself.

Only two fonts are provided, Roman and H-Gothic, both in 6 and 12 point. The SJ-48 can print at 360 dpi in one pass – a laser printer can only manage 300 dpi maximum. To provide all-important compatibility with existing software, Epson LQ, IBM Proprinter and NEC Graphics



● Star's new SJ-48 Inkjet printer. Until now the best inkjet for the ST has been the Canon BJ-10e – but with impressive specs and a comparable price, Star's new unit could be a serious contender.

emulation is included. A hefty 28K data buffer is built-in.

Paper is handled by the traditional single sheet friction feed method. An optional sheet feeder is available, but this can only handle 30 sheets at a time. The SJ-48 is supplied with an AC adaptor as standard, but available as another extra is a rechargeable Ni-Cad battery pack to make the printer fully portable. Because it weighs only 1.8kg and has dimensions of 310mm x 216mm x 48.5mm, it's possible to use the printer virtually anywhere with the battery pack, which is recharged using the supplied AC adaptor.

Inkjet printers bridge the gap between dot matrix and laser printers. The print head contains many tiny nozzles (in the case of the SJ-48, 64 of them), through which the heated ink is squirted onto the paper. There is no physical contact between the head and the paper at any time, so wear on the head is reduced and the resulting output is of a high quality, approaching that of a laser printer.

The basic SJ-48 costs £405.38, with replacement ink cartridges (including a print head) weighing in at £21.09. The auto sheet feeder is £63.45 and the Ni-Cad battery pack £45.83. Contact Star Micronics at Star House, Peregrine Business Park, Gomm Road, High Wycombe, Bucks HP13 7DL, ☎ 0494 471111.

## Fly by feet



● Get up to some amazing feats of fancy footwork with the new Foot Pedal Controller. It can patch itself into many joystick-controlled games and add the level of realism you've always dreamt about.

A stunning new games controller is set to add another level of realism to virtually all ST games and flight simulations. The device – which is bound to be more exciting than its name, the Foot Pedal Controller – enables you to control various mouse, joystick and keyboard-related functions with your feet.

Manufactured by American firm Quickjoy, the Foot Pedal Controller is to be distributed in the UK by two respected controller-stockists, Spectravideo (known for their large range of joysticks) and RC Simulations (the Aerochopper and Gravis MouseStick specialists).

The system can quickly be set up to emulate any two of the joystick's four basic directions and the <Fire> button, using a number of front-mounted switches. This makes it immediately compatible with racing games like Lotus Turbo Challenge

or Chase HQ, where joystick accelerator and brake controls can be off-loaded to the controller.

However, the controller's three large pads would be just as adept at controlling the rudder controls in a flight-sim like *Combat Pilot* which normally uses joystick control for these functions.

RC Simulations MD Bob Sidgewick is currently working on a number of "patch" programs to interface the controller to flight simulators which use mouse-control primarily. The first ST-patch is for *Flight Simulator 2*, and this is to be followed up by a similar program for *ProFlight*.

The Foot Pedal Controller is £24.99 from Spectravideo (☎ 081 900 0024) and RC Simulations (☎ 0272 550900) in its standard form. RC Simulations can also include the FS2 patch program with the unit at an overall cost of £35.00.





## → Comms news: UK pro network closes

### ● Micronet closure kills V23 protocol by Malcolm Burridge\*

Micronet, the professional computer-users' bulletin board, is to close down after nine years of being on-line via Prestel. British Telecom announced that the service closes on 31 October and existing subscribers will be offered a good deal on registration to the American CompuServe network.

Following very closely after the demise of MicroLink, the only other major commercial public comms service, the future of comms in the UK looks bleak. The market is now served only by US giants CompuServe and GEnie and the many privately-owned bulletin boards currently on-line. What's

more, a knock-on effect of Micronet's demise is the likely end of the V23 comms protocol (one of several systems that convert messages to telephone-line impulses and back again).

This system (which used the ancient 1200/75 split baud rate) was originally developed for Prestel, but was hated by most non-commercial ST bulletin board (BBS) operators because it was incompatible with most BBS-controlling software. Many boards have already opted not to support V23 and Micronet's closure will now make it virtually redundant.

However, V23 modems have been sold very cheaply in recent years, and there are a great many people using

them daily. If bulletin boards continue to phase out their use, a large number of current comms users are likely to be lost. The Bath BBS will maintain V23 support on its lines as long as there are people using the protocol, and other BBS Sysops are urged to do the same.

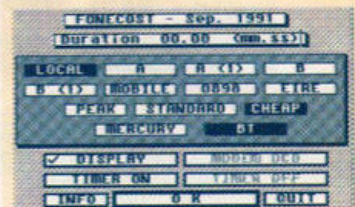
As modem prices continue to fall, V23 owners may be able to upgrade to V22bis (2400 baud) or V32 (4800 and 9600) relatively cheaply. In the meantime, if you're thinking of purchasing a modem, don't buy a V23-only system.

\* Malcolm Burridge is the Sysop of the Bath BBS (☎ 0225 840060). If you have any comms news, tips or questions to share with *ST FORMAT*'s readers, leave a message for Malcolm or Neil Jackson in the *ST FORMAT* area. See you there!

## KEEP TRACK OF TELE-TIME

The telephone time-charge calculator *Fonecost* has just been updated by authors Ainley Publishing and Communications (APC). The new version 2 contains all current distance rating-groups and line-charges for both BT and Mercury connections, and costs £5.95.

It now enables you to update charges as they are changed by the telephone companies. *Fonecost* works in all ST screen resolutions as a Desk Accessory or a stand-alone program, and constantly displays the cost of the call in the corner of the screen. Contact APC's proprietor Roger Gorbett on ☎ 0494 473054 (voice), via E-mail at Cix (raggorb@cix.compulink.co.uk), CompuServe (100014,2337) or Prestel (011156193)



● How much do you spend on phone call-charges? *Fonecost* knows and can tell you constantly. After all, it's you they send the bill to.



● Sometimes a solution is so simple...

## Cut-out the confusion

Do you get confused with all the keys that flight sims and productivity programs use? This could be the answer. Silverbird Computing have come up with Keyboard Overlay, a card that fits over your keyboard and enables you to make a

note of all the key functions close to the corresponding keys. The overlays are available in packs of five for £5.20 plus postage (80p for the UK). Contact Silverbird at 47 Barton Road, Harlington, Beds LU5 6LG, ☎ 05255 2614.

## Music news

### ● WAVE-POWER

Resotek have announced the release of *Virtual Wave*, a new sample synthesis program for Akai and Ensoniq EPS samplers, with support for more samplers promised. Touted as easy to use yet powerful, *Virtual Wave* enables you to produce MIDI sample dumps using all sorts of fancy waveshapes and maths. Features include waveform interpolation, free fundamental additive synthesis (which certainly sounds like A Good Thing) and pitch and amplitude enveloping. Samples can be spliced, merged, smoothed and looped. *Virtual Wave* works in high resolution on all STs and sample size is not limited to memory, with 1MByte or larger samples being possible on a 520ST. *Virtual Wave* costs £99.95. Contact Resotek at 681 Winborne Road, Bourne-mouth, Dorset BH9 2AT, ☎ 0202 519216.

### ● THE PULSE OF THE RHYME

If you thought MIDI, sequencing and wave-shaping were the only aspects of music your ST could handle, you'd be wrong. Now there's *Rhyme King*, a program by BSA Dataware, which can help lyric writers, poets and rappers to find the rhyming words they need. The GEM-based



● Everything you ever needed to know about MIDI is contained in one small video - *MIDI Basics*, a beginner's guide to the whole world of music on your ST.

*Rhyme King* contains a massive dictionary of words, linked together by the way they sound rather than their spelling. It can handle alliteration (the repetition of initial letters), consonance (where the consonant sound at the end is the same) and assonance (where the end vowel-sounds rhyme). *Rhyme King* costs £20.00 and you can get it from BSA Dataware, Dept F, 44 Hordern Road, Wolverhampton WV6 0HF.

### ● SOUNDS LIKE A ROLAND

Owners of the popular Roland D5, D10, D20 and D110 synthesizers can now use their STs to edit internal tone-banks, thanks to SynTec's new *ProTone* editor. The program uses a graphical environment to make the re-designing of sounds easier, enabling you to alter and combine PCM samples and subtractive synthesis tones far more quickly than if you were using the keyboard's front-panel. *ProTone* uses MIDI to control the synthesizer from your ST, and uses system exclusive commands to affect the way sounds are generated. *ProTone* is available from SynTec (☎ 081 977 5270) for £31.45.

### ● MIDI ON VIDEO

For those of you just starting out in the field of MIDI and music, East South West Video Works have just the thing - a tutorial video explaining exactly how a song is developed. The video, *MIDI Basics*, covers a wide variety of topics ranging from the simplest note-entry techniques to the complex worlds of sampling and mixer automation. The video is hosted by Paul Wiffin, keyboard programmer to musicians like Stevie Wonder and Jean-Michel Jarre. Wiffin guides you through the process of recording a song using both home-recording equipment and top-level studio equipment, controlled by the popular Dr T's *Tiger Cub* sequencing program. To get

hold of your VHS copy, priced at £29.49, contact East South West Video Works (☎ 081 460 1773).

### ● DESERT'S STORM

Music software specialists Desert Software have just announced the release of *Vivace*, a MIDI sequencing program for the ST. *Vivace* uses standard music notation to display songs and compositions, so you can move notes around on staves rather than have to deal with complex number-entry systems. Simply plug in and play, and seconds later *Vivace* displays a full score which can be edited and quantised as you desire. *Vivace* can handle 16 tracks for normal note data, 32 channels of pitch-bend and controller information, plus 16 more channels for volume-mixing. *Vivace* is £236.50 from Desert Software ☎ 051 430 7400.

### ● STEINBERG ADD-ONS

Evenlode Soundworks, the UK distributors of Steinberg, announce the release of their *Steinberg Utilities Disk 1*. The disk offers a number of invaluable programs and files for Steinberg users, including an *MROS Arpeggiator* for calculating arpeggiated sequences, a *Fostex Link* for controlling Fostex tape machines from your ST, *Chorder* (which assigns chord data to single keyboard notes) and a host of other useful programs. Contact Evenlode Soundworks on ☎ 0993 898484 for further information.

## WHISPERS

ST news from here and there

● MicroAPL Ltd are releasing upgrades to their multi-tasking programming language APL 68000. The upgrades cost £40 and enable your ST to handle four simultaneous APL tasks and still control a remote computer. For more information contact David Eastwood, MicroAPL, on ☎ 071 922 8866

● Atari Workshop have just announced the release of their TKR Fax/Modem, which for only £299 can turn your ST into the

very latest in yuppie-devices, a fax-machine. It can send text and graphics in Fax mode at 9600 baud, or it can act as a simple 2400 baud modem. For more info on the Fax/Modem contact Atari Workshop on ☎ 0753 832212.

● US music and MIDI specialists Hybrid Arts have just changed their UK distribution address. They can now be contacted at Atlantic Audio Ltd (UK), 9 Wharf Road, Gillingham, Kent ME7 1NX (☎ 0634 571695)

● System Solutions are handling the UK distribution of *Avant Vector*, CodeHead's amazing automatic vector-tracing program

which can turn a 58K bit-mapped .IMG file into a 10K vector-drawn image that can be re-scaled to any extent without jagged edges spoiling the screen display. System Solutions are currently offering pre-release versions at £233.83 until the official release date of 1 June 1992 (when the price rises to £292.58). Contact System Solutions on ☎ 0753 832212

● The All-Formats Computer Fair is to continue with its roving regional venues, hosting at least five shows per year around the country. The remaining fair dates for 1991 are as follows:

### 3 Nov - London

Horticultural Hall, Westminster

### 10 Nov - Midlands

Motorcycle Museum, Junc 6 M42, opposite NEC

### 1 Dec - Scotland

City Hall, Candleriggs, Glasgow

### 14 Dec - London

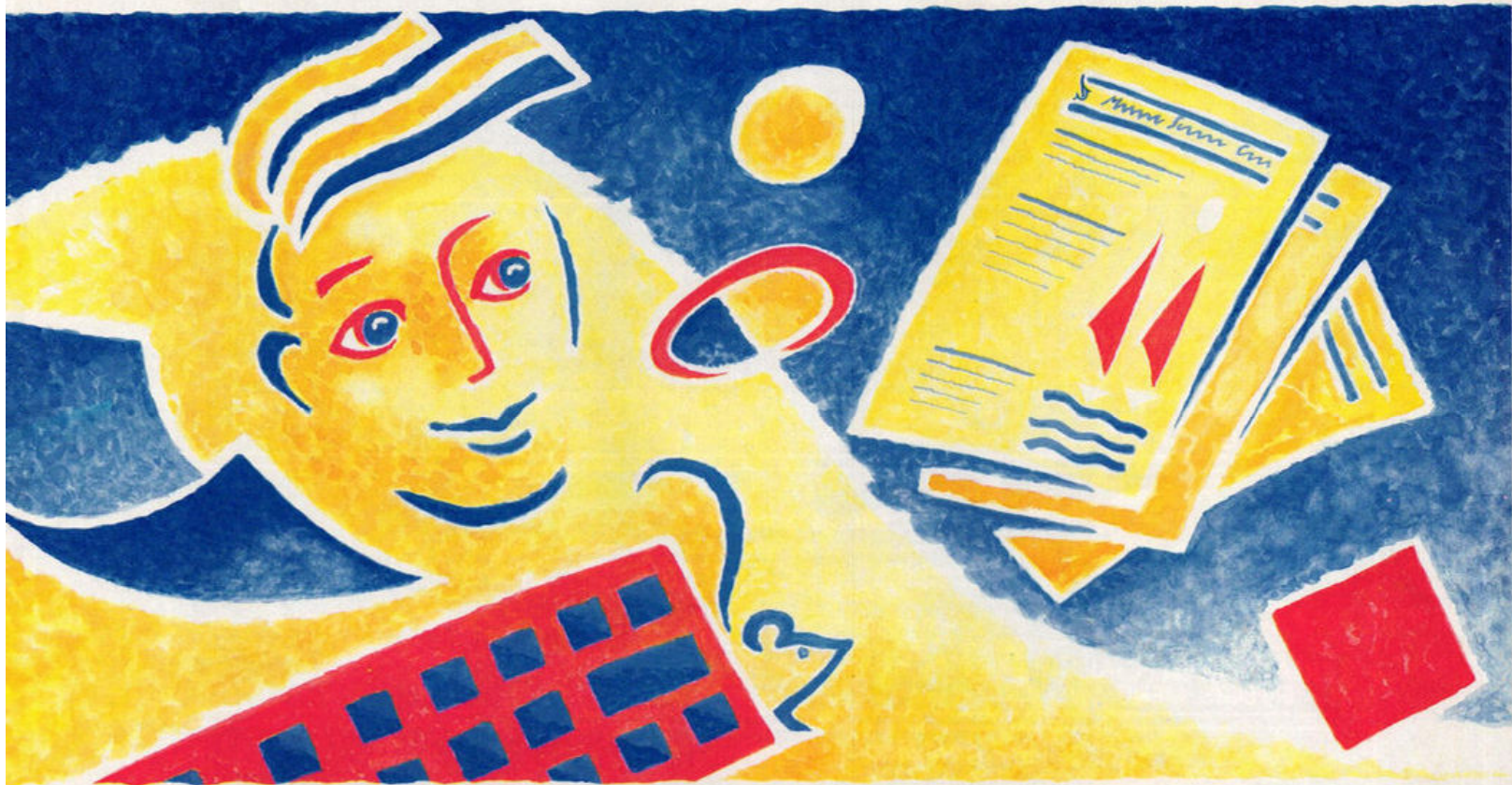
Horticultural Hall, Westminster

### 15 Dec - North

University Sports Centre, Leeds

All fairs are open from 10 am to 4 pm and admission is a mere £4. For more details phone John Riding on ☎ 0225 868100.

# THE BEST THING SINCE TIMEWORKS PUBLISHER!



## TIMEWORKS PUBLISHER 2 ST

If you wonder how you ever got along without your Timeworks Publisher<sup>SM</sup> – wait till you get your hands on Timeworks Publisher 2!

All the features that have made this outstanding Desktop Publishing program a world bestseller are there – plus many new and exciting extras.

To start with, there's a brand new choice of typefaces and styles to give the right mood and feel to your documents. Text flow – including the facility to wrap around irregular shapes – is automatic. You can also design your own customised page sizes – and have as many as 999 pages per document. We've even added style sheets to get your creative ideas off to a flying start.

Text and graphics imports now cover an even wider range of word processing and art packages, and new quick-keys make a speedier job of selecting text blocks and graphics. There's a superb new manual too.

These are just some of the enhancements offered by this major upgrade – in addition to all the Timeworks Publisher features you know and love. It's still just as simple to use and enjoy; still superb value for money.

If you're already a Timeworks Publisher user, you'll know our policy on preferential upgrade offers. If you're not, then why not find out what all the excitement is about?

Clip the coupon or phone for the full details. At only £110 (RRP excluding VAT) for new users, or £34.95 (excluding VAT and p+p) for a full upgrade, you'll soon be wondering how you ever got by without Timeworks Publisher 2!



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(please tick the appropriate box)

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Address

Postcode

Telephone

To: Lorri Morton, Electric Distribution,\* Meadow Lane, St Ives, Cambridgeshire PE17 4LG.  
Telephone 0480 496666; Facsimile 0480 496189.

Timeworks Publisher<sup>SM</sup> is a trademark of GST Software Products Limited.  
\*Electric Distribution is the UK sales division of GST Software Products Limited.

**GST**  
Software Products

**GST**

STF 1291

# stereo MASTER

When you are considering purchasing a sound sampler there are several to choose from. Why compromise? Your choice should be the new full featured STEREO MASTER for the Atari ST range of computers. The package that gives you more extras than a M series BMW. By purchasing this state of the art product, which combines a quality sampler with the expertise of over ten years of software programming, you are purchasing a top quality product in the knowledge that it is not only compatible with existing Microdeal products but will also be with future ones.

## What is Stereo Master?

Stereo Master is a low cost, high quality sound sampler for the Atari range of computers. The sampler cartridge enclosed in the package plugs into the ROM port at the side of the computer and allows you to analyze the sounds, coming in, change the way they sound using realtime special effects or record them from devices such as personal cassette players, Compact disc players etc. Once in the computer STEREO MASTERs unique editor will enable you to edit the sound in practically any way you can imagine. Once you have the sound sample how you want it, you may incorporate it into other programs such as Quartet or play it using routines supplied for many of the commonly available BASIC's.



THE MAIN EDITOR SCREEN

## The Sampling Software

Includes many features you would expect to find in a professional editing suite:

- \* Realtime playback ghost cursor marker
- \* Cut or Delete selected sample area
- \* Mix sample with full or half volume
- \* Shrink by 33%/50% by drag or wipe
- \* Fade in/out with selectable degree of fade
- \* Filter sample with hard/soft filter
- \* Full editing and control facility for Left/right channels
- \* HiFi Stereo playback option through PLAYBACK cartridge
- \* Record Frequency from 3.0 to 27.9 Khz in ST mode
- \* Record Frequency 6.25, 12.5 and 25K in STE mode
- \* Bounce sample
- \* Decrease Volume
- \* Increase volume
- \* Trigger recording
- \* Loop sample
- \* STE Volume, Bass & Treble control
- \* Clear Left/Right samples
- \* Selectable trigger volumes
- \* Paste sample (using buffer)

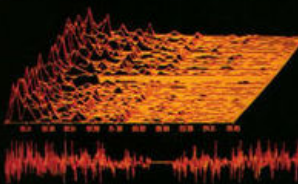


REAL TIME SPECIAL EFFECTS MENU

## The Special Effects Software

For the first time ever you can emulate sound effects in real time, just like the sound labs can for film studios, normally the hardware to produce these effects would cost many times more than this package. Features on the FX menu include:

- \* Built in realtime special effects including, Echo, Reverb, Ramp, Pitch up/down, Multi Echo, Chorus, Phaser, Reverse and Pitch Bend.
- \* Parameters of FX can be modified to provide 1000's of different effects.

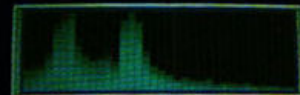


3D DISPLAY OF SAMPLE

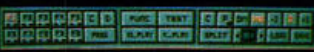
## The Analytical Software

A whole host of pro-type analytical functions include:

- \* 3D display of sample frequencies (Fast fourier transform)
- \* 3D display also includes 2D envelope display plus sample information
- \* Built in realtime spectrum analyzer
- \* Stereo Oscilloscopes with trigger markers



36 BAR SPECTRUM ANALYZER



THE MIDI CONTROL PANEL

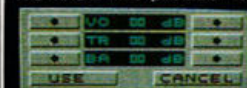
## The MIDI Software

Now you can trigger samples using external MIDI keyboard or the ST/E's keyboard. Just look at these features:

- \* Selectable MIDI channel
- \* Omni/Poly operation
- \* MIDI keyboard splits
- \* Up to 10 stereo or mono samples
- \* Samples can be mapped across a MIDI note range
- \* Load/save sample set (with all MIDI settings/splits)

## Other Innovative features;

We know this product is years ahead of its time and these additional features justify our boast:



STE ADDITIONAL CONTROLS

- \* New style stereo cartridge
- \* Including walkman type cable
- \* Saves AVR and RAW samples
- \* Full STE stereo support
- \* Playback routines for HISOFT, GFA, STOS and ATARI Basic



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# ST Charts

Storming in at number one and sliding down to number nine. Still, that's enough of me boring you about my private life. Let's get on with the charts

## ST CHART CHAT

Quick! Strike up a fanfare, run around shouting a lot - it's true! The bestselling ST game is a full-price one! It's the first time for a long while the top slots haven't been taken by budget titles. *Jimmy White's Whirlwind Snooker* lives up to its name and swirls to the top. At least it's not yet another footie game! The Bitmaps score again with *Magic Pockets* going straight in at number three. *Terminator 2* blasts, shoots and generally maims everybody in sight to reach number five though that position has nothing to do with good gameplay, as our review on page 64 proves. Plenty of older games making a comeback this month - the lull before the storm of Christmas releases, no doubt.



● Gosh! The thrill of it all! *Jimmy White's Whirlwind Snooker* storms to the top. White gloves all round, please.

## CHARTBUSTERS

This month's lucky winner is **Stuart Johnson** from **Worley**, who wins a shiny new copy of *Sim City/Populous* - he's the only person to get the top two right. You could blag any game from the top 30 for yourself - just guess next month's top three titles. Easy, eh? Have a look at this month's chart, read our stunning reviews and stick a pin in the chart. Then whack your predictions on a post-card and send it to Chartbusters, *ST FORMAT*, 29 Monmouth Street, Bath, Avon BA1 2DL. In case of a tie name the stupidest sport you can think of. Employees of Future, their families and multiple entries are banned.



● Oi, mate! Your hat's on backwards! *Magic Pockets* teleports to number three. The kid celebrates by chucking bunches of grapes to the cheering frogs.

## ST FULL-PRICE TOP 30

Scrutinise this table to discover the month's best selling ST games

- 1 NE **JIMMY WHITE'S SNOOKER**  
Virgin ● £29.99 ● STF 28: 94%
- 2 ↑ (05) **FLIGHT OF THE INTRUDER**  
Mirrorsoft ● £34.99 ● STF 27: 92%
- 3 NE **MAGIC POCKETS**  
Renegade/Mindscape ● £25.99 ● STF 27: 90%
- 4 ↓ (01) **MANCHESTER UNITED EUROPE**  
Krisalis ● £25.99 ● STF 28: 77%
- 5 NE **TERMINATOR 2**  
Ocean ● £25.99 ● 63% (reviewed on page 64)
- 6 NE **THUNDERHAWK**  
Core Design ● £30.99 ● STF 28: 91%
- 7 NE **RAILROAD TYCOON**  
Microprose ● £34.99 ● STF 28 93%
- 8 ↓ (03) **LEMMINGS**  
Psygnosis ● £25.95 ● STF 24: 94%
- 9 ↔ (09) **F15 STRIKE EAGLE 2**  
Microprose ● £24.95 ● STF 26: 90%
- 10 ↓ (04) **RAINBOW COLLECTION**  
Ocean ● £19.99 ● STF 28: 82%
- 11 ↓ (02) **FLAMES OF FREEDOM**  
Rainbow ● £29.99 ● STF 26: 92%
- 12 NE **ELF**  
Ocean ● £24.99 ● 89% (reviewed on page 69)
- 13 ↓ (06) **GODS**  
Renegade/Mindscape ● £25.55 ● STF 22: 92%
- 14 ↓ (12) **HERO QUEST**  
Gremlin Graphics ● £25.99 ● STF 24: 78%
- 15 RE **BACK TO THE FUTURE 2**  
Mirrorsoft ● £24.99 ● STF 14: 62%
- 16 ↑ (21) **SPEEDBALL 2**  
Mirrorsoft ● £24.99 ● STF 18: 98%
- 17 NE **PREDATOR 2**  
Mirrorsoft ● £25.99 ● STF23: 67%
- 18 ↓ (14) **LIFE AND DEATH**  
Mindscape ● £25.53 ● STF 26: 72%
- 19 RE **3D CONSTRUCTION KIT**  
Domark ● £39.99 ● STF 24: 95%
- 20 RE **TEENAGE MUTANT HERO TURTLES**  
Mirrorsoft ● £24.99 ● STF 19: 38%
- 21 NE **HUNTER**  
Activision ● £29.99 ● STF 26: 92%
- 22 ↓ (18) **KICK OFF2**  
Anco ● £24.99 ● STF 14: 92%
- 23 NE **RODLAND**  
Anco ● £24.99 ● 70% (reviewed on page 70)
- 24 ↔ (24) **STRIKER MANAGER**  
D & H Games ● £24.99 ● STF 28: 63%
- 25 NE **FINAL FIGHT**  
US Gold ● £25.99 ● 74% (reviewed on page 91)
- 26 ↓ (15) **MONKEY ISLAND**  
US Gold ● £29.99 ● STF 23: 63%
- 27 NE **GRANDSTAND**  
Domark ● £29.99 ● STF 28: 67%
- 28 NE **EUROPEAN SUPERLEAGUE**  
CDS ● £24.99 ● STF 28: 66%
- 29 ↓ (28) **FINAL WHISTLE**  
Anco ● £12.99 ● STF 23: 70%
- 30 RE **CURSE OF THE AZURE BONDS**  
US Gold ● £24.99 ● STF 21: 74%

● ARROWS INDICATE DIRECTION OF MOVEMENT SINCE LAST MONTH ● NUMBERS IN BRACKETS INDICATE PREVIOUS CHART POSITION ● NE = NEW ENTRY ● RE = RE-ENTRY ● STF REFERS TO ISSUE AND SCORE OF REVIEW IN *ST FORMAT*. ● THESE CHARTS ARE COMPILED AND SUPPLIED BY GALLUP. © 1991 EUROPEAN LEISURE SOFTWARE PUBLISHERS ASSOCIATION LTD.

## LAST YEAR'S TOP TEN

- 1 ↔ **F19 STEALTH FIGHTER**  
Microprose £29.99
- 2 ↔ **SHADOW WARRIORS**  
Ocean £24.99
- 3 ↔ **KICK OFF 2**  
Anco £24.99
- 4 ↑ **BATTLE OF BRITAIN**  
US Gold £29.99
- 5 NE **BATTLE MASTER**  
PSS £24.99
- 6 ↑ **OPERATION STEALTH**  
US Gold £24.99
- 7 ↑ **BACK TO THE FUTURE 2**  
Mirrorsoft £24.99
- 8 ↑ **BBS JANE SEYMOUR**  
Gremlin Graphics £24.99
- 9 ↑ **EMLYN HUGHES INTER NATIONAL SOCCER**  
Audiogenic £24.99
- 10 ↓ **MIDNIGHT RESISTANCE**  
Ocean £24.99

## ST BUDGET TOP TEN

- 1 NE **SHADOW OF THE BEAST**  
Sizzlers £7.99
- 2 ↔ **NEW ZEALAND STORY**  
Hit Squad £7.99
- 3 NE **DRAGON NINJA**  
Hit Squad £7.99
- 4 ↓ **TV SPORTS FOOTBALL**  
Mirror Image £9.99
- 5 NE **BATMAN THE MOVIE**  
Hit Squad £7.99
- 6 NE **BUBBLE BOBBLE**  
Hit Squad £7.99
- 7 NE **STEVE DAVIS WORLD SNOOKER**  
Blue Ribbon £9.99
- 8 ↓ **SUPERCARS**  
GBH £7.99
- 9 ↓ **NINJA RABBITS**  
Micro Value £7.15
- 10 ↓ **F-29 RETALIATOR**  
Ocean £24.99

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THURSDAY NIGHT LATE TIL 7.30PM

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AUTHORISED DEALERS FOR STAR, CITIZEN,  
COMMODORE, ACORN, ROMBO & PHOENIX



## THE ATARI STE DISCOVERY PACK

This pack now comes with:

**Final Fight, 9 Lives, Sim City and Robot Monsters,**  
Neochrome, First Basic, ST Tutorial, Mouse, and manuals

**only £299.99**

We can also upgrade the Atari STE Discovery pack:

1 Meg version.....**only £324.99**  
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4 Meg version.....**only £429.99**

## 1040 FAMILY CURRICULUM PACK

With 1 Meg as standard this pack must be one of the best educational packages. Inc. ST Word, ST Base, Hyperpaint 2, Music Maker 2, First Basic, Micro Maths, French Mistress language tutor, Reading tutor and general knowledge tutor, Mouse & manuals

**only £379.99**

## XMAS PACK

Take the headache out of buying a computer this Christmas with our ever popular **FIRST CHOICE Xmas Pack**. All the essentials required for the first time buyer. Ideal for any Atari and great value too! **Comprises:**

- \* Top quality microswitched Powerplay Cruiser joystick
- \* Mouse Mat
- \* Dust Cover
- \* 10 Blank Disks
- \* Plus 3 Extra games!!

**£29.99**

## THE NEW ATARI MEGA STE SERIES

### ATARI MEGA STE 1

with 1 meg of RAM and internal expansion for hard drive **only £649.99**

### ATARI MEGA STE 2

2 meg of RAM plus a 48 meg internal hard drive **only £969.99**

### ATARI MEGA STE 4

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**ADD JUST £99.99 FOR THE ATARI SM124 HIGH RESOLUTION MONITOR WHEN YOU PURCHASE A MEGA STE**

#### Technical Specification:

16/8 Mhz clock speed switchable, 32k cache, TOS version 2.2, stereo sound, separate keyboard, mouse, built in modulator, palette of 4096 colours with 16 on screen, midi in/out ports

### MODEMS by PACE

**PACLINPLUS** The standard Linnet modem has been designed to offer the maximum of facilities at the lowest cost V21/V23, auto dial, auto answer, Hayes compatible **only £139.99**

**PACLIN12** This modem comes with a higher transmission speed suitable for more demanding applications V21, V23 AND V22, auto answer/dial, Hayes compatible **only £219.99**

**PACLIN24** Top of the range quad modem with even higher speeds and optional error correction V21, V23 V22 AND V22BIS **only £245.99**

## STAR PRINTERS

All Star printers inc free std printer cable and 12 month guarantee

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Our best selling budget 9 pin mono printer is now even better value for money from First Choice. **We've dropped our price by another £10.00!!**

Replacing the famous LC10, the LC20 is faster at 180cps draft and 45 cps NLQ and quieter. The front panel now has push button operation replacing the LC10 membrane panel. Other spec is similar to the LC10

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### Star LC200

Colour 9 pin printer with 8 resident fonts and a high speed of 225cps draft and 45 cps in NLQ. A4 Landscape printing

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### Star LC24-10

24 pin quality at the price of many 9 pins. 180 cps draft, 60 cps in NLQ, 8k buffer expandable to 37k

**only £189.99**

## THE NEW STAR SJ48 BUBBLE JET

With Epson LQ and IBM Proprinter emulation. The SJ48 is a revolution in printer technology. The quality is almost as good as an expensive laser printer yet costs less than many 24 pin printers. Portable in size, very quiet, and faster than most dot matrix printers at **100 cps in LQ**. Printer cable included

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**Auto sheetfeeder £52.99**

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With 1.5 Mb of RAM as standard from First Choice expandable to 6 meg. 6 pages per minute, HP2, FX, LQ, GQ compatible. 150 autosheet feeder, 12 months on-site maintenance and printer cable

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**Toner cartridge £59.99**

## THE HP DESKJET 500

This very popular inkjet printer allows you to create laser jet quality without the cost. Features 3 pages per minute speed and 100 page auto sheet feeder, cable and **3 year UK warranty**

**only £359.99**

## CITIZEN PRINTERS

All Citizen printers inc. free printer cable and come with a full 2 year warranty!

### Citizen 124D

(Micro Decision Best Buy)

The 124D brings quality 24 pin output to you at the price of a 9 pin. The 124D shares the same high quality print head as the Swift 24 pin. 144cps draft, 48 cps LQ, 8k buffer expandable to 40k

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### The Citizen Swift 9 and 9x Colour

Unbeatable value colour printer. 4 resident fonts, 192 cps draft and 48 cps in NLQ. Highly recommended. This printer is also available in a wide carriage (136 column) version

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### The New Citizen Swift 24e and 24x

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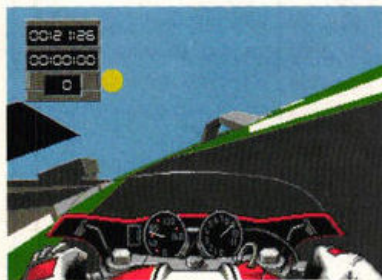
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# Previews

**Have you ever really looked at the word "Previews?" Strange, isn't it? It's just "reviews" with a "p" added. And yet if you add "p" to "sequels" you get "psequels," not "prequels." Yes indeed, the English language is a strange and wonderful thing**

## DRIVE-IN COMPILATION

Yet more driving games on the way from Gremlin. *4 Wheel Drive* is a compilation of racing sims, but then you probably guessed that. Included are *Lotus Esprit Turbo Challenge*, *Team Suzuki*, *Toyota Celica GT4 Rally* and *Combo Racer*. These scored 86%, 69%, 79% and nothing at all respectively. The last one is an ancient motorcycle sidecar racing thingie.



● *Team Suzuki*, the generally-well-received-but-not-highly-rated-by-us sim, is one of the four games in *4 Wheel Drive*.

Gremlin are also bursting at the seams with excitement about their Nigel Mansell racing game which is scheduled for release sometime next year. Unfortunately, they don't actually know what style of racing sim it'll be yet, or, erm, who's programming it, or even when it's likely to be finished. (Or started.) Still, they're dead chuffed about having Nige's name on their game, even if it is still imaginary.

## A CRASH COURSE IN CHART-ERED ACCOUNTING

You know the routine. Month after month the software houses are burbling with excitement about how great their next game will be. With the amount of hyperbole chucked about by slavering game publishers after your spondulicks, it's impossible to know what's really going to be big this Christmas. However, because we have only your welfare at heart, *ST FORMAT* can now bring you the (sort of) definitive guide to the games that will be astride the charts this Chrissy and the odds that they'll make it to the top of the charts.



### THE SIMPSONS

Ocean  
Predictably, Ocean get the hugest licence since *Star Wars - The Laxative*. Certain to sell millions just by the very mention of ol' Bart, it doesn't really matter what the game turns out to be like. (As it happens, it's horizontally-scrolling and deeply uncomplicated.) A few bare glimpses are all we've seen so far, so further judgement is reserved until it's too late anyway.

ODDS: 1 AND A VERY SMALL BIT TO 1

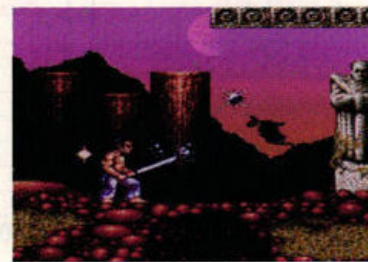


### TEENAGE MUTANT HERO TURTLES 2

Mirrorsoft

What can we say? Well, we can say (1) as with *The Simpsons*, who needs a game with a licence like this? (2) However, the *Turts* have been upstaged somewhat by Bart himself since last Chrissy, so some of the game's pulling power will be diminished, and (3) Mirrorsoft are quite probably trembling in their boots lest *STF's* verdict is as honest as our review of their first *Turtles* abomination was (38% in *STF 19*). From the screenshots, the game looks less than intriguing, but anything would be an improvement over last Christmas's original. Wouldn't it?

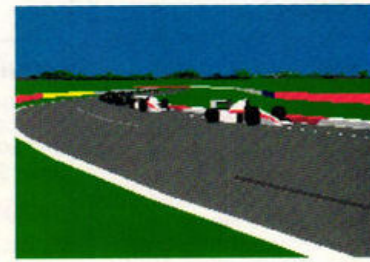
ODDS: EVENS



### FIRST SAMURAI

Image Works  
A mixture of *Strider*, *The Mario Bros* and any other console-type game you've played, *First Samurai* is, unashamedly, a platform game. With lots of monsters. And platforms. And leaping about. You probably get the picture. But in this case it's done with style, graphical flair and a great deal of enthusiasm by programming team Vivid Image. And it's just perfectly made for chart success.

ODDS: 4 TO 1



### FORMULA ONE GRAND PRIX

Microprose

Written by Geoff Crammond (author of *The Sentinel* and *Stunt Car Racer*), *Formula One Grand Prix* is a simulation with the 16 accurately-mapped tracks of the 1991 season and its 26 cars. Unfinished versions of the game look very promising, with a huge amount of track-side detail and convincing 3D. It's not as fast as some (see *Vroom* on page 78), but the detail makes up for this. For instance, if another car crashes (and they do) it clutters up the track until it's pushed off by the marshals. In all, a strong contender, but perhaps lacks that instant pull to make it a chart-beater.

ODDS: 4 TO 1

## SPITTING IMAGE

**Image Works are claiming** that the hero of *First Samurai*, their fightin', jumpin' and collectin' arcade bash (see below) is based on a real person by the name of Mevishi Dincochara. They're also claiming that he's vaguely related to Mev Dinc, one of the members of Vivid Image - the team behind the game. They do

look remarkably similar, but, of course, we weren't fooled for long. It takes more than a fibbing software house to trick us. Oh yes, we saw through their thinly-veiled mendacity soon enough. Do they honestly expect us to believe that anyone could have a name like Mev Dinc? Really.



● Mevishi Dincochara gets tough with the cameraman after the latter personage recklessly insinuated that Mevishi's roots were perhaps slightly less than Oriental. The gallant lensman managed to snap this one shot just before he croaked, so don't blame him too much if it's a little bit wonky.





● *Another World*, far in the future. Innit marvellous – there's Lester, with the latest holographic molecular transporter cube computer, and he's still using the standard Atari mouse with that terrible medium-res cursor. Sheesh.

## HALF A WORLD AWAY

As mentioned below, Delphine's next adventure (when *Cruise for a Corpse* finally hits – see page 54) will be *Another World*. It's the brainchild of Eric Chahi, who was the co-designer of Delph's first adventure, *Future Wars*.

It has taken two years to write the game, chiefly because it features polygon animation. What does that mean? Well, most graphic adventures use bit-mapped displays – standard pre-drawn screens over which the character sprites move. *The Secret of Monkey Island* is a perfect example. Polygon animation, by contrast, is the sort of thing used in the Public Domain program *Ani ST*. The characters in the game are made of quite simple shapes – polygons – and they can be animated by altering the shape and position of these polygons.

On the face of it, this sounds like an awkward way of doing things, but the advantages are many. First, you can cram a whole lot more data into memory. Instead of having to store graphic data for each object and background, the programmer just keeps a list of the coordinates of each polygon, together with its colour, its coordinates after moving, and so on. Secondly, animation

made this way is smoother and faster than normal, since the ST can be used to work out the frames to produce a smooth transition between one position or shape and another. This is an old technique called "tweening."

Finally, because geometric shapes are easily scaled, zoom, pan and other film-style effects are very simple to produce. The only drawback with polygons is that, like vector graphics, they usually imply lack of detail. This isn't the case with *Another World* – the graphics are as detailed as in any bitmapped game.

Behind all this technical excess, you'll be glad to hear, there is a game. The plot is similar to those beloved of '50s sci-fi films. You play Lester Knight Chaykin, a young nuclear scientist. As he's working late one night during a freak storm, his laboratory is hit by a stroke of lightning which somehow combines with his equipment. There's a huge explosion, which destroys his lab and catapults him into another world.

In this strange hostile world, Lester is confronted by several weird creatures. Eventually he's captured and thrown into jail with one of them, but the two become allies and vow to escape. The game begins in earnest as Lester tries to get back to our world alive.

*Another World* should be released any second now and will be dissected – er, reviewed – in next month's *STF*.

## COMPLICATED COMPILATIONS

UBI Soft have announced the release of five compilations for the winter months: *Air Combat Aces*, *Air/Sea Supremacy*, *Quest & Glory*, *The Top League* and *10 Great Games*. (Stunning titles, eh?)

You might have guessed that *Air Combat Aces* is made up of flight sims – three, to be precise: *Falcon*, *Gunship* and *Fighter Bomber*. They're all fairly enjoyable and realistic, but they couldn't really be described as the best in their field.

*Air/Sea Supremacy* is similar but includes some nautical-type games too. *Silent Service* is one of the older submarine sims – but Millennium, the programming team behind *Robin Hood* (see page 66), rated it among their top ten faves in *STF 27*, and with the imminent release of *SS 2* now might be the ideal time to catch up with it. *Gunship* is – well, in the other compilation. *Carrier Command*, an acknowledged but somewhat flawed classic, has recently been re-released by Mirror Image and garnered an impressive 91% in *STF 23*. *P47 Thunderbolt* is getting on a bit and only managed 67% in *STF 7*. *F15 Strike Eagle*, recently sequelled, isn't anywhere near as impressive as its follow-up, which earned 90% in *STF 26*. (If you missed any of these back issues, turn to page 130!)

*Quest & Glory* concentrates on adventure and strategy. It includes some desirable titles: *Cadaver* (81%, *STF 15*), *Midwinter* (one of only two games ever to score 96%, *STF 9*), *Iron Lord* (90%, *STF 7*) and *Bloodwych* (95%, way back in the very first issue). A stonking collection by anyone's standards.

If action games are your fetish, you'll be wanting *The Top League*. Here you can find *Speedball 2*, *Rick Dangerous 2*, *Falcon* (again), *Midwinter* (again again) and *TV Sports Football*. Least impressive of

this bunch is *TV Sports Football*, which gained an average sort of *STF* rating of 68%, but the rest should satisfy the hardest of game-players.

Finally, *10 Great Games* consists of all the bits that couldn't be fitted in elsewhere and includes a strange mixture of the good, the bad and the totally unrecognisable: *Ferrari Formula 1* (62%), *Rick Dangerous* (oh, let's say 82%), *Pick 'n' Pile* (46%), *Night Hunter* (69%), *Carrier Command* (91%), *Satan* (39%, but what do you expect from a game with a name like that?) *Superski* (never heard of it), *Chicago 90* (likewise), *Pro Tennis Tour* (70%) and *Xenon 2* (90%).

● Another compilation is due from US Gold at any second. *The Quest for Adventure Series (No. 1)* includes *Operation Stealth*, *Indiana Jones and the Last Crusade – The Adventure and Mean Streets*. The star here is undoubtedly the *FORMAT* Gold winning *Op Stealth* (93%). The inclusion of *Mean Streets* is a bit strange, because it's not yer traditional adventure. It's got shooting and things too.



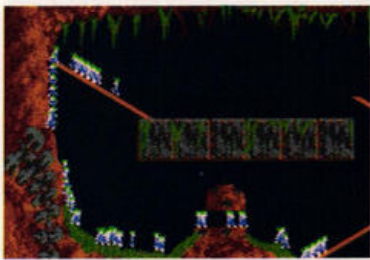
● *Midwinter* is one of the games included on the really rather good *Quest & Glory* compilation. It's also due to be released at a budget price on the Kixx label. Don't break out the champagne yet, though, because that won't be until 1993 at the earliest.



### DAMOCLES 2 Novagen

Novagen, as usual, aren't giving away too much about the follow-up to the massive space game of last year. What we do know is that it uses the same polygon engine – that is, display system – as its predecessor, but the game universe is now peopled with scores of characters, most of whom are only too glad to rook you left, right and middle bit. Only screenshots have been released so far, predictably ones with prominently-featured people to prove they really exist. Diehard *Damocles* fans will flock to it, but the lack of advance publicity may well mean that by the time Christmas swings around it has missed its chance at the big time.

ODDS: 5 TO 1



### LEMMINGS DATA DISK Psygnosis

All right, not strictly a game, but likely to cause a stir nevertheless. Although Psygnosis are also releasing *Obitus*, *Shadow of the Beast 2* and *Barbarian 2*, to be honest these look like little more than re-runs, and *The Lemms* probably rate higher as a Christmas release. No word – or even sight yet – as to the nature of the levels, but it's likely to be more of the same, only much more difficult. Since it's only an add-on, its chart chances are limited.

ODDS: 6 TO 1



### BIRDS OF PREY Electronic Arts

See our in-depth preview last issue (and if you haven't got one, turn to page 130 to find out how to get it). *BOP* is a flight sim – the ultimate one at that, if programming team Argonaut are to be believed. 40 aircraft are included, each with its own flight characteristics, with 12 mission types and brain-witheringly accurate technical details. Visually, demos we've seen aren't majorly impressive, so the gameplay will have to be something special. Flight sims either do spectacularly well (*F-19*) or spectacularly badly (*Chuck Yeager's AFT*), so its chances are hard to predict.

ODDS: 7 TO 1



### ANOTHER WORLD US Gold

*Another World*: another adventure, from those kooky Frenchies Delphine. Its tremendously impressive fully-animated graphics use a new form of polygon animation rather than standard bitmap animation. (See "Half A World Away" above for more details.) Its only down side? It could well turn out to be too weird to be true top-of-the-chart fodder.

ODDS: 9 TO 1

## → MYTHED AGAIN

In the past, System 3 have been best known for their 8-bit games such as *Myth* and the *Last Ninja* series. Now they're eager to re-establish themselves as a 16-bit company dedicated to producing more complex and involving games on the ST. The first two of these "mature" games will be *Myth* and *Last Ninja 3*. Both these titles were due to be released back in May, but System 3 reckon that the delay in release is well worth it.

*Myth* was originally a big hit on the 8-bits. In its conversion to the ST it has changed slightly. The game's an arcade adventure with puzzle and shoot-'em-up bits (just to please everyone). In the original versions, the main character was toggled out in jeans and T-shirt and



● A toasting fork up the bottom isn't something to be scoffed at in *Myth*.

was your ordinary everyday bloke. Now he's been transformed to a Conan-style larger-than-life warrior to fit in more comfortably with the general "console" feel of the game. This seems a little bit odd to us. After all, older game-players (such as those on the ST) are more likely to identify with someone wearing jeans and T-shirt rather than some adolescent warrior-hero type persona.

In play, the game is one of those massive arcade platform adventures with many sub-levels and collectable objects, a bit like *Elf* (see page 69). Instead of having to decimate everything in sight, you need to use the objects you find in solving puzzles to get you further into the game.

*Last Ninja 3* definitely is the last game in the *Last Ninja* series. The previous opuses, while being respectable enough, didn't make much of a mark on the ST games scene. The third game uses the same 3D view and intricate graphics as its predecessors, but the gameplay is tweaked. Like *Myth*, it has plenty of puzzles to be tackled in between the bouts of bashing, but this time some of the objects aren't handily lying around waiting to be picked up – they have to be manufactured from bits of other objects. So, for example, an axe could be made from its metal head and its shaft, which may be several hundred screens apart. There are 12 unique sorts of enemies which may attack you, up to three at a time. And, of course, there's the compulsory end-of-level shogun to thwart you just as you think you've finished the level.

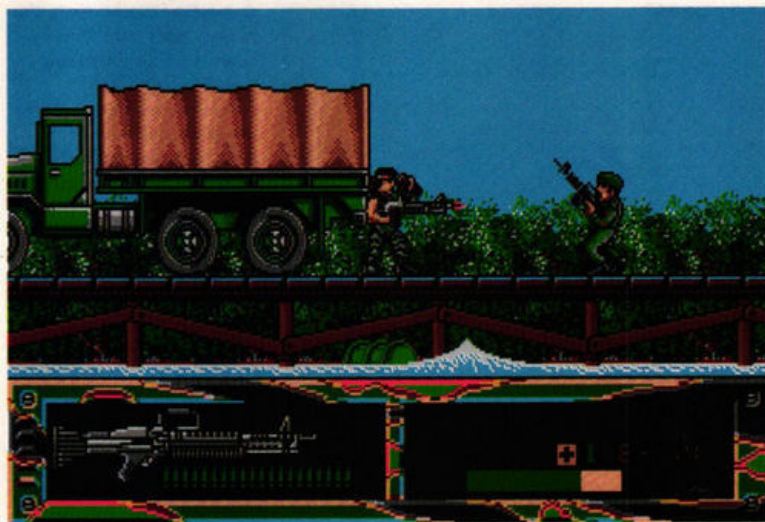
Adrian Cale of System 3 is pretty serious about *Myth* and *Ninja 3*, calling them "the best games we've ever done" and other such superlatives. Both games are finally due at the end of the month and you can be sure we'll be testing Adrian's claims very closely in next month's issue.



● The third *Last Ninja* visits his council offices to complain about the sewage that seems to be pouring from his wall. Distressingly, the Drains Inspector is slightly less than pleased with him because he hasn't got an appointment.



● A few hours later and the whole bloomin' place is flooded with nasty stuff. Mr Ninja is trapped on his slowly-sinking island while the DI taunts him mercilessly on the cut of his clothes and the pathetically inadequate water-proofs he's wearing.



● *Fireforce* is a taste-free Green Beret style romp through Rambo country, the object being murder on a vast scale. It's morally corrupt, decidedly distasteful and huge fun. Amnesty International are going to love it.

## HAVE THEY NO SHAME?

Not content with threatening the world with an as-yet-still-unreleased game about gnomes, Electronic Zoo also have the most gratuitously violent game you've ever seen on the way. It's called *Fireforce*, and in it you play a commando who, from the looks of things, must have been having some personal problems recently. The sole job of this commando is to shoot, stab, mutilate and murder his way through each horizontally-scrolling level of the game.

The enemy consists of the entire army of the opposing side, and they throw grenades, bullets and virtually

anything else they can get their hands on at you. The graphics aren't spectacular but it's the detail that makes the game so grisly. Creep up behind any enemies with a knife and you can slit their throats and watch as they sink in agony to the ground; pepper people with your machine gun even after they're dead (just to be sure, you understand) and watch as dead bodies fly past your head when you shoot someone on a tall building.

To even things up, the Zoo also have *Daylight Robbery* on the way. This is a puzzle/cutesy game with three emetic cuddly characters: a mole, a cat and, er, a gopher. On each level you have to collect, in the correct colour order, the gems dotted around the screen. Whenever you press the <Fire> button, you flip over and head towards an opposite wall, so if you're standing on a platform and press <Fire> you end up walking on the ceiling.

The game can be played by up to three people simultaneously, all working (or walking the ceiling) together. The graphics aren't wonderful, but the game concept is easily mastered and, with 130 levels, you should keep at it for a while. Mary Whitehouse should be interested to hear that both games will be ready for review next issue. **stf**



● *Daylight Robbery*. Electronic Zoo are still looking for names for the three characters. We suggested *Heinous*, *Higham* and *Vomit* but they weren't too pleased with those. (Nor was the Ed.) **WARNING: this game may be unsuitable for those of a violent disposition.**

## BURGEONING BARGAIN-BASEMENT BUDGET BUYS

If certain sources are to be believed, budget software is selling better on the ST than on any other 16-bit micro. This isn't really surprising when you consider the quality of a lot of the titles available for around a tenner these days.

Mirror Image, Mirrorsoft's budget label, have been responsible for a lot of these high-quality releases, unfailingly putting out two high-quality back-catalogue games every month – and they have no intention of stopping. By the end of the

month, you should be able to get your hands on *Onslaught*, the ex-Hewson game full of violence and fairies, and possibly the crowning glory in Mirror Image's release schedule so far, *Starglider 2*. Although it's three years old, it still hasn't really been beaten for the smoothness of its graphics – and, for a tenner, it's a game everyone should have.

Most companies have begun re-releasing their back catalogue on budget, but Microprose have

always resisted the idea. Now Kixx have twisted their arm and will be putting out 25 Microprose games on the Kixx label, starting with *Stunt Car Racer*, which should be out even now. Others expected to follow include *Gunship*, *Microprose Soccer*, *Rick Dangerous*, *Silent Service* and, as a climax, *Midwinter*. But you'll have to wait until 1993 at least for the last, because it's actually still selling well at full price. All these games will most likely carry the usual budget price of £9.99.

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## LOAD IT!

## LOOKS LIKE A BIG 'UN!

This month's jam-packed Cover Disk has something for everyone, from game-players to programmers, from musicians to budding film directors. Whatever ST application you may be interested in, you'll find enough there to keep you busy until the next action-packed Cover Disk hits the streets in a month's time. Where else can you get so much?

## ONE SIDE OF THE STORY

Everybody's heard the horror stories, but no-one had the solution. Until now. *ST FORMAT* is the only magazine which caters for both single and double-sided drive owners. With our Cover Disk, you know you can always read at least the first side, no matter what type of ST you have, what age it is or where you got it! Now is that egalitarian, or what?

## ALMOST UNBELIEVABLE!

It seemed an impossible problem. How can two types of drive read entirely different data from the same disk? Disk duplicating supremo Rob Northen was the man who finally conquered the hardships, sold himself to medical and disk science and came up with the stunningly named *ST FORMAT* format. With this, everyone had total access to the world's greatest Cover Disk.

## DOIN' THE DOUBLE

If you own a double-sided ST then you won't even notice the disk magic being performed. That's intentional! You'll find everything which is stored on the flipside of the Disk stashed away in the folder called Side\_2. If you can open this, then you haven't got a care in the world. Just get in and get playing.

## IT WON'T LET ME IN!

If you try to open the Side\_2 folder and get a rude message telling you about damaged data, don't worry. Your ST is just telling you in its own subtle way that it's only got one side on its drive, and have you thought about upgrading? Just click on "OK" and you can still access the folders on Side 1 as normal.

## THE BOTTOM LINE IS SAFETY

Whatever your ST setup, you can't afford to take risks. *FORMAT's* Cover Disk is guaranteed virus-free - our duplication master disks are tested personally by the Disk Editor himself and tested again during duplication. But this doesn't make it fireproof. If the write-protect tab on the disk is left enabled (closed), then viruses can gain access from other, infected disks to the Disk. Protect your Cover Disk as soon as you buy it, by opening the tab and backing it up. It's the only way to be absolutely sure you're safe!

It's on the outside, but what's on the inside? Chris Lloyd supplies the inside info

## Cover Disk 29

ON THE DISK THIS MONTH



## SIDE 1

**AUTOPLAY** - have a butcher's at our special graphics sequence from Core Design's *FORMAT* Gold winning helicopter sim *Thunderhawk*, then follow this issue's step-by-step guide and have a go at putting your own together

**MEGASNAP** - grab those graphics with this oh-so-useful Desk Accessory

**FASTRAM** - just what you've been waiting for: a configurable RAMdisk available on boot-up

**SCONVERT** - convert your samples between formats and frequencies

**JOYSTICK** - GFA listings to go with this issue's GFA Programmer's Surgery

## SIDE 2

**DAYLIGHT ROBBERY** - *Exclusive!* Six fully playable levels of this addictive platform romp from Electronic Zoo - a manic race against time for one, two or three players

**STEREO REPLAY DEMO** - *Exclusive!* Mess about with the first true stereo sample editor for every ST

## Daylight Robbery

BY: ELECTRONIC ZOO

SIDE: 2

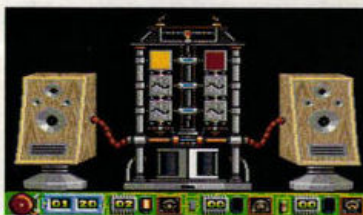
MACHINE: ALL STS

RESOLUTION: LOW ONLY

FOLDER: DAYLIGHT

FILES: DAYDEMO.PRG

GET STARTED WITH: DAYDEMO.PRG



● The jewels have to be purloined - er, I mean *collected* in a certain order - here it's yellow, then red.



● Level one - just a warm-up, really. Use your Spider-man like wall sticking powers to get those jewels. If you don't make a move for a while, your character yawns and taps his foot.



● Level two - getting a little harder now. The only way out of the central section is to stand below the hole and flip upwards. You need to release the red Driller by collecting the yellow jewel, so he can drop down and collect those awkward red jewels.

In Electronic Zoo's new platformer *Daylight Robbery* you are a cute masked jewel thief. (*Shome mishtake, surely?*) Not only do you have sticky fingers but sticky feet too! This exclusive fully playable demo has six levels for you to negotiate and up to three people can take part. It's a mad dash around the screen collecting coloured jewels and

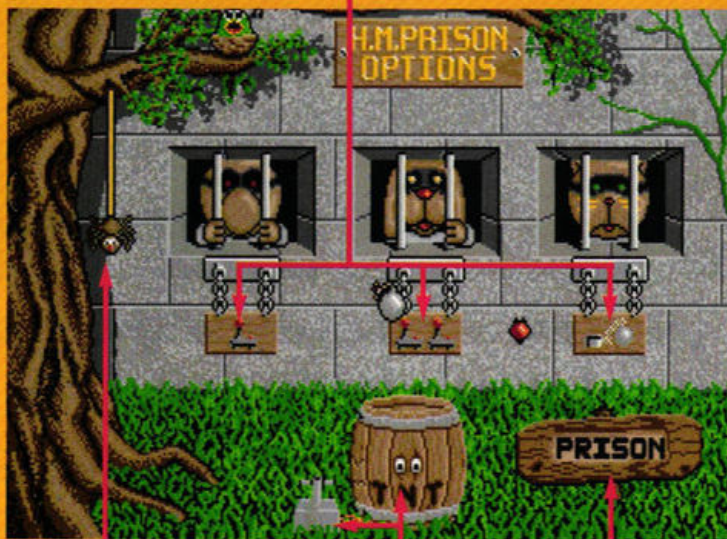
avoiding the nasties. But it's not quite as simple as that: before each level you are shown the colour order in which jewels must be collected. Anything else doesn't count! Each level is against the clock - but the more players, the less time you have, so cooperate!

Pressing the <Fire> button sends you tumbling upwards, where you stick

## LOOKING FOR TROUBLE?

*Daylight Robbery's* main selection screen. Use your joystick to move the little bomb about and click on various objects.

The dirty rotten thieves - oh, sorry, these are your characters. Click on the boards below the window to select a one, two or three-player game (using joystick port 1, joystick port 2 and the keyboard, in that order) or leave that character chained up. The keyboard controls are left <Shift> to move left, <Alternate> to move right and right <Shift> to flip you



Click on the spider for a re-run of your previous attempt

Click on the barrel for a look at your adversaries and on the plunger to get the game started

Click on the signpost to enter in the codes for each level - this enables you to jump straight there

## Sconvert

BY: CHRIS FLINT

SIDE: 1

MACHINE: ALL STS

RESOLUTION: MED OR HIGH

FOLDER: SCONVERT

FILES: SCONVERT.PRG,  
SCONVERT.DOC

GET STARTED WITH: SCONVERT.PRG



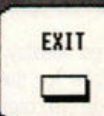
Most samples on your ST are 8-bit resolution mono. The only real difference between them is the frequency – that is, the speed at which they are played – and the file format. *Sconvert* is a handy utility which converts samples from one frequency and format to another, so you can use sounds from any source and convert them to the one you want

to use. The various tracker programs, for example, use 8MHz samples and with *Sconvert* you could change any of the myriad Public Domain sounds to suit. The program uses some fancy maths, over-sampling when expanding and interpolating when contracting, and is completely mouse-driven. Just select the input and output formats and frequencies and click on "Start." The converted sample is written back to disk with the last letter changed to an Z or X. Easy-peasy.

● For Public Domain sound sample disks, contact your favourite PD library – see *FORMAT's* comprehensive directory, page 49.

SAMPLED SOUND CONVERSION PROGRAM, (c) CHRIS FLINT - Jan 1990 V1.14

SOURCE FORMAT	SOURCE FREQUENCY	OUTPUT FREQUENCY
OLD REPLAY.SPL <input checked="" type="checkbox"/>	Replay V1. to 4.	New Replay & Pro
NEW REPLAY.SPL <input type="checkbox"/>	5 kHz <input type="checkbox"/>	5.5 kHz <input type="checkbox"/>
MAESTRO .SAM <input type="checkbox"/>	7.5 kHz <input type="checkbox"/>	8 kHz <input type="checkbox"/>
M' SOUND .SAM <input type="checkbox"/>	10 kHz <input checked="" type="checkbox"/>	11 kHz <input type="checkbox"/>
REPLAY PRO.AVR <input type="checkbox"/>	15 kHz <input type="checkbox"/>	16 kHz <input type="checkbox"/>
	20 kHz <input type="checkbox"/>	22 kHz <input checked="" type="checkbox"/>
	30 kHz <input type="checkbox"/>	32 kHz <input type="checkbox"/>
	40 kHz <input type="checkbox"/>	44 kHz <input type="checkbox"/>
	50 kHz <input type="checkbox"/>	48 kHz <input type="checkbox"/>

  
 START   
 EXIT 

● With *Sconvert* you can convert the masses of sounds available to your preferred format. It can handle *Replay* versions 1 to 4, *Replay Professional*, *Mastersound* and *STOS Maestro* samples. If you want to use the samples with *Autoplay*, convert them to the old *Replay* format.

to the ceiling. Neat trick, that! Press it again and back you go. Another neat effect: if you move off the screen you re-appear on the opposite side. Can be a real life-saver, this one!

Contact with the various nasties lowers the little status bar by the side of your picture, and when it disappears you collapse into a grey heap for a

while. Pressing <Fire> revives you again but you can only survive this three times.

You're going to need to crank up the old grey-cells to figure out how to reach some of the jewels and avoid the weird and wonderful meanies. Sound good to you? Well, back up that Disk and get it in the drive then!

## Autoplay

BY: DAVID R SULLIVAN

SIDE: 1

MACHINE: ALL STS

RESOLUTION: LOW RESOLUTION

FOLDER: AUTOPLAY

FILES: AUTOPLAY.PRG, AUTOPLAY.EXE,  
AUTOPLAY.SCP with eight sample and  
seven picture files

GET STARTED WITH: AUTOPLAY.PRG

*Autoplay* is a versatile program which displays pictures and plays samples. Sounds so simple – but wait till you see what it can do! You could use

it to play a single sample whenever you boot up, or you could put together a complete sequence of graphics with spiffy sampled effects. Which is just what we've done. Quick, turn to page 28 for our special Intro Graphics feature and see how it's all done, then follow how *Autoplay* does its stuff step-by-step on page 35. It works using a script file which holds all the instructions – details are on page 37.

Please note that this program is Shareware, so if you decide to use it regularly you are morally obliged to send a donation to the author, David Sullivan, 4156 Tolowa Street, San Diego, CA 92117, USA.

Shareware means that the programmer receives no money from software houses and pays for development himself, so it's only fair that if you use his program regularly you make a small donation. For around ten US dollars or so, you can expect advance notification of any updates or improvements to the program. Don't just turn the page! Shareware is a risky business for programmers. Without your help, they won't keep releasing good programs for next to nothing, will they?

## Megasnap

BY: JOHN HOLLIS

SIDE: 1

MACHINE: ALL STS

RESOLUTION: ALL RESOLUTIONS

FOLDER: MEGASNAP

FILES: MEGASNAP.ACC

TO GET STARTED: see below

Ever wanted to capture the screen from a program as a picture file so you can have a good look? *Megasnap* can grab the image on-screen and save it as a *Degas Elite* file, so you can load it into an art package and muck about with it. All you need is the ability to get to the menu bar after taking your snap. *Megasnap* is a Desk Accessory – that is, a special type of program that your ST loads into memory when it boots up. You can recognise these by the ACC filename extender, and you can have up to six loaded at once.

Open the *Megasnap* folder and copy MEGASNAP.ACC straight to your boot disk. It mustn't be in any folders. Then reset your ST with that disk in the drive. Now *Megasnap* is loaded whenever you boot up with that disk. To capture a screen, just press <Alternate> and <Help> together. The screen flashes, showing it's now been captured. To save it to disk you need to go up to the GEM menu bar. Under "Desk" is the option to save the snapshot. Select this and up comes the file selector box. Give your picture a name and click on OK. Another one for the album!

## WHO TO STEAL AWAY FROM

Some creatures you really want to avoid.



● Bigfoot – patrols about. Easy to avoid and doesn't do much damage



● Mummy – disappears and re-appears at random. Does quite a lot of damage, so timing is important



● Glipher – the ghost of the chap who blew the prison wall for you. Not very happy about it either!



● Ding Dong – Touch this fellow and the alarm goes off. Game over, man!



● Drillers – don't do much damage but collect jewels the same colour as themselves. Use these chaps to clear those hard-to-reach ones



● Driller killer – this chap zaps the Drillers, so make sure you've made use of them before he gets to them



● Tick Tock – paralyses you for a while, but the timer keeps ticking!



## CAN'T GET MiG OFF THE GROUND?

Having trouble loading the demo of *MiG-29M SuperFulcrum* from Cover Disk 28? If other programs on the Disk work all right, the problem is probably that you have a 520STFM with TOS 1.4 – and we have the solution! Turn to page 147.

## Stereo Replay

BY: MICRODEAL

SIDE: 2

MACHINE: ALL STS

RESOLUTION: MEDIUM ONLY

FOLDER: REPLAY

FILES: EDITOR.PRG, EDITOR.CNF,

EDITORC.RSC, GUIDE.DOC,

READ\_ME.DOC, READ\_ME.2, GUN.AVR,

SCREAM.AVR, LAA.AVR

GET STARTED WITH: EDITOR.PRG

Stereo Replay is the first true stereo sampler for the ST, using two separate analog to digital converters, one for each channel. For the full story, have a butcher's at our comprehensive review on page 132. On the Cover Disk is a demo version of the editor. You can load the samples included on the Disk or some of your own, muck about with them and have a good play around with all the features. Only the Save, MIDI and some of the Echo functions are missing in the Cover Disk version.

To get started, open up the REPLAY folder and double-click on EDITOR.PRG. Note that if you have a mono monitor, the program won't run without a resource file which you have not got. But don't fret - we'll be getting hold of the resource file for you for next month's Cover Disk.

The editor uses a friendly system of icons and menus. Each sample you load gets its own icon, which makes editing between samples a doddle. Across the top of the screen is the main menu. From here you can access all the main functions.

Double-click on the disk icon to bring up the file select box and load in a sample. A sample icon is added to the screen and a window is opened containing the sample. To close this window, click on the box at the top left. Double-clicking on a sample icon opens up the window again. Most functions can be executed with the mouse, by selecting a menu option or by using a keyboard short-cut. The ♦ symbol represents the <Alternate> key and ^ the <Control> key. Using these together with the letter shown on the menu duplicates that function.

At the bottom right is a set of controls rather like those on a tape recorder. Click on "Play" to hear the sample and "Fast Forward" and "Reverse" to move the pointer about. You can also move the pointer about by clicking directly on the sample with the mouse. At the bottom right there is a little gauge which shows how full your available RAM is. Between this gauge and the controls are the mark and block icons. Click on the "Mark" icon to place a marker where the pointer is.

Under the "Configure" menu are the important functions for changing the frequency of the sample, converting

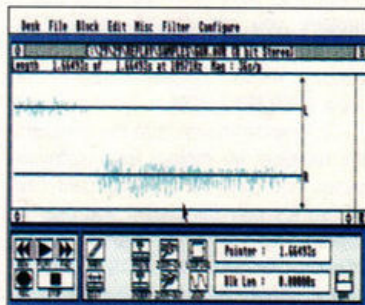
between mono and stereo and setting the output method. STE owners can even output via the DMA chip and mess about with the bass and treble. From the "Edit" menu you can control the fancy options like fades, volume and stereo effects. The "Block" menu controls all the chopping and changing. Any block copied or cut from a sample is stored in a paste clipboard, with its own icon on the Desktop. You can experiment with this to test various effects without changing your original sample. The block can then be copied into any of the other samples held in memory.

### MONO TO STEREO STEREO

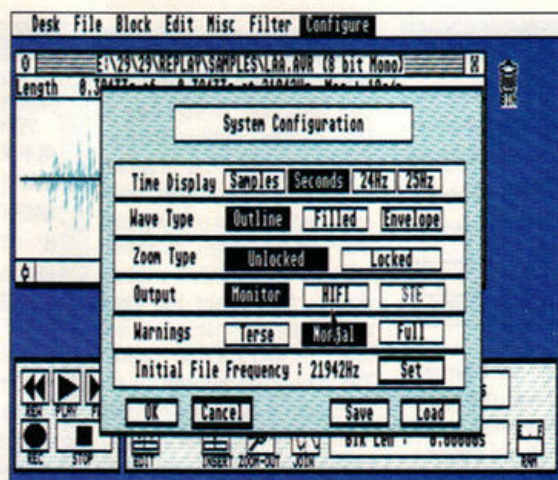
What really sets this package apart from all the others is of course the stereo bit. Conversion from mono to stereo and vice versa is very flexible, with all sorts of fade and panning effects possible.

Load in the gun and scream samples from the samples folder on the Cover Disk. Open up the gun sample, select "Mono/stereo" from the "Configure" menu and click on "Stereo" for Display and "Right" under File. The sample is now converted to stereo and the gun sound is all on the right channel. Do the same for the scream, only convert it to the left channel.

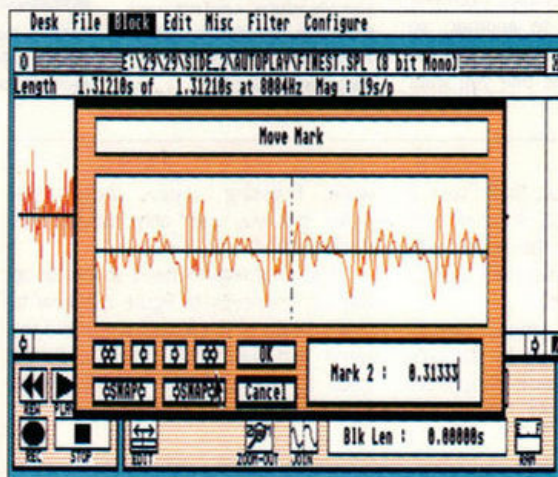
Now we want to join the two samples together so the gun fires on one speaker and the scream sounds on the other. Select the whole of the scream sample as a block - pressing <Alternate> and <W> together captures the whole sample. Now click on "Copy." This copies the current block to the paste clipboard. Open the gun sample and move the pointer to the end of the sample. The easiest way is using the arrow keys, which move the pointer between the start, any markers and the end of the sample. Now click on the "Insert" icon. You have just created a true stereo sample. Lucky STE owners can hear the results through the phone sockets at the back of their STs. You must set the output to "STE" on the System Configuration screen first. You can now experiment with the stereo effects. Get those samples swooshing across your speakers!



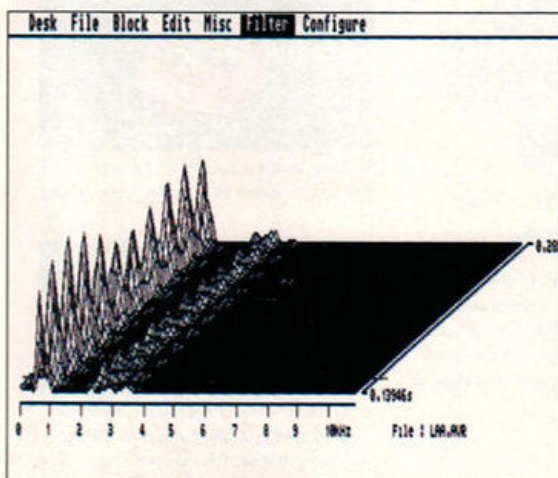
● This is a full stereo sample produced by converting two mono samples and pasting them together. Stereo Replay is also able to convert between 8, 12 and 16 bit samples.



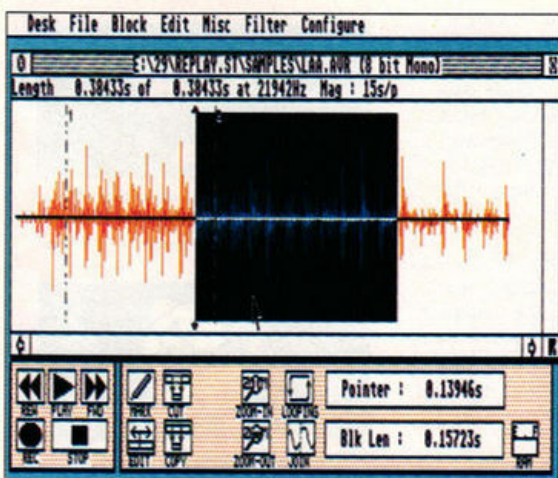
● The main configuration screen. From here you can direct output to your monitor, to the stereo sockets at the back of your STE or via the cartridge to your Hi-Fi. This demo version can also use the standard Replay cartridge to give you much better sound.



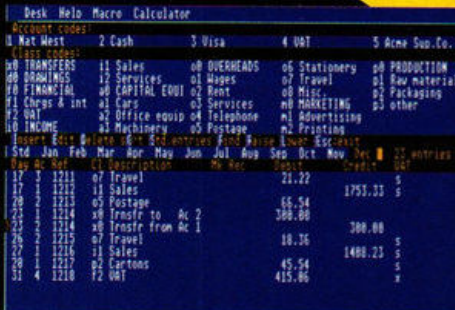
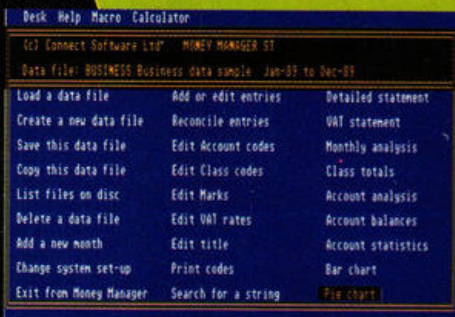
● Stereo Replay uses a system of definable markers, which mark editing points within the sample so you can zoom about in the sample, editing to your heart's content, and not lose track of those important sections. The pointers can be edited to mark fine detail and snapped into position.



● Have a good look at that sample using the FFT (Fast Fourier Transform) analysis. Cor! Just look at the frequency pattern on this one! This helps you highlight areas that need filtering.



● A block is highlighted, ready to be cut, copied or processed. Very fine control of block boundaries is possible, and there are keyboard short-cuts for nearly all the main functions.



*'I cannot let this opportunity pass without repeating my satisfaction with Money Manager. I am using it for the book-keeping of several small businesses. Before I retired recently after 40 years in banking, 24 of which were as a branch manager, I would have been delighted if my small (and some not so small) business customers had presented me with figures and statistics of their businesses as produced by Money Manager. It really is a program which, being so easy to use, could save many businesses from the chaos and disaster which can, and so often does, result from poor or non-existent book-keeping.'* (R. A. L. Cheshire)

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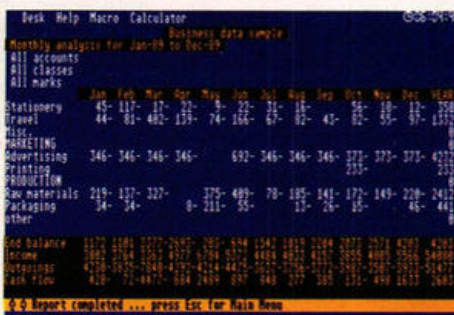
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## BACK UP YOUR DISK!

Because the *ST FORMAT* Cover Disk is non-standard, the back-up procedure is not simple. Follow these steps, though, and you won't encounter any problems. Do it any other way and you could mangle your Cover Disk. And then where would you be?

1. Format a couple of blank disks (you may not get all the data onto one) – single-sided if you've got a single-sided drive, double-sided if you have a double-sided drive.
2. Write-protect (notch open) the original Cover Disk and insert it into the drive (if you have two drives, you lucky devil, insert the Cover Disk into drive B). Double-click on the drive B icon to open a window showing the Cover Disk contents. If you haven't got a second drive, a message appears requesting you to put disk B in drive A. Simply click on OK and carry on as below.
3. Insert one of the blank formatted disks into drive A (removing the Cover Disk if you have only one drive). Double-click on the drive A icon and open up another window. You may be asked to insert disk A in drive A – you already have, so just click on OK again.
4. Highlight each folder in the drive B Cover Disk window and drag them into the drive A window, one at a time.
5. If you have one drive, you're asked to insert disk A and disk B at regular intervals. Don't mix the two up! Disk B is the Cover Disk and disk A is the freshly formatted disk.
6. When you get a "disk full" error message, recopy the incomplete folder and any subsequent folders onto the second freshly formatted disk, using steps 3 and 4 above.
7. Double-sided owners, double-click on SIDE\_2 once you've finished copying all the folders from side 1 of the Cover Disk. Copy the folders inside as you did in steps 3 and 4. When it's finished, use only the backup. Put your Cover Disk away safely.
8. Don't forget, you must not try to use the standard Atari disk copy function (dragging Floppy A onto Floppy B) to back up your Cover Disk – because of our special format, it won't work.

## FAULTY DISK?

Oh dear, could it be a defective Disk? We duplicate so many and so few fall over, but it's still annoying when they do. If you're unlucky, sorry. You're guaranteed a free replacement if you send your faulty Cover Disk, with an SAE, to: *ST FORMAT* December Disk Returns, Discopy Labs plc, Unit A, West March, London Road, Daventry NN4 4SA.

Sorry – only Discopy can help you. We're afraid we have no spare Cover Disks ourselves.

### Fastram

**BY:** CHARLES SMETON  
**SIDE:** 1  
**MACHINE:** ALL STS  
**RESOLUTION:** ALL RESOLUTIONS  
**FOLDER:** FASTRAM  
**FILES:** FASTRAMD.PRG, RAMDISK.INF, DESKTOP.INF, FASTRAM.DOC  
**TO GET STARTED:** see below

A RAMdisk is probably the most useful utility you can have. It sets aside an area of memory which your ST uses as an extra disk drive. You can read and write files to it, just like any other drive. The big advantage is speed. Because the files are held in memory rather than on a magnetic disk, access is very quick indeed. Frequently accessed data files placed in the RAMdisk ends those annoying waits. If you have only one disk drive, your disk to disk copying can all be done in one disk swap: simply copy the files to the RAMdisk, swap disks and copy them onto the new one. Once you get used to using it you'll wonder how you lived without it.

*Fastram* is quite a clever little beastie. It can be placed in the AUTO folder of your boot disk so it sets up a RAMdisk for you when you boot up. (The Cover Disk is configured ready for you to do this.) The program looks for a file called RAMDISK.INF in the root directory of the disk – that is, not inside any folders, not even the AUTO folder – which tells it which drive letter to use and what size the RAMdisk should be. To change the settings you need to edit the file with a text editor – *ST Writer Elite* is ideal, and it was yours on Cover Disk 27! (If you missed it, turn to page 130 for info on ordering back issues.) Remember to save the file as pure text (ASCII), or *Fastram* won't understand it. The INF file just consists of the drive letter and the size of the RAMdisk in kilobytes, so C200 would give you a 200K RAMdisk as drive C.

On the Cover Disk, *Fastram* is set up to install a 320K RAMdisk as drive M. Open up the FASTRAM folder and copy the contents to a blank disk, then reset with the new disk in the drive. You now have a new disk drive icon on your Desktop, drive M.

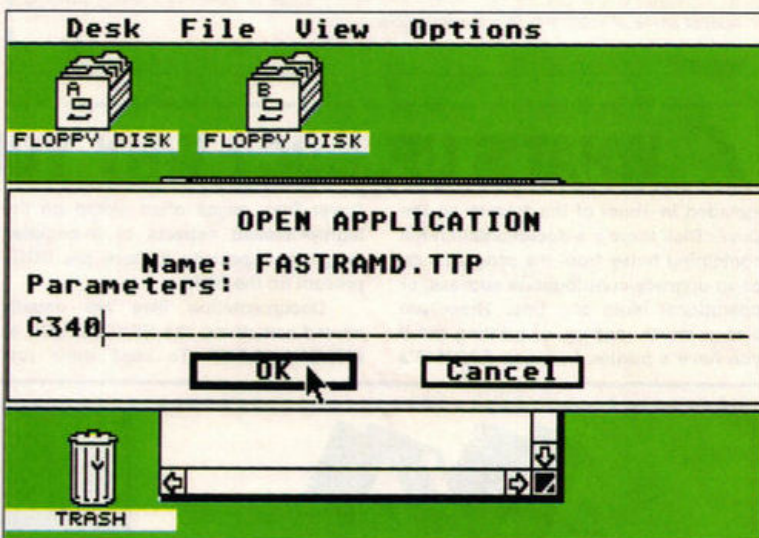
When your ST boots up, it looks for a file called DESKTOP.INF, which tells it which icons you want and how the windows are set up. Installing a new icon is easy. If, for example, you want to

### Joystick

**BY:** BARRIE CAPEL  
**SIDE:** 1  
**MACHINE:** ALL STS  
**RESOLUTION:** ALL RESOLUTIONS  
**FOLDER:** JOYSTICK  
**FILES:** JOYSTICK.LST, JOYTEST.LST  
**TO GET STARTED:** Merge into *GFA Basic*



● Installing Drive C icon as a RAMdisk from the Desktop is as easy as – er, installing Drive C icon as a RAMdisk from the Desktop, really.



● When you run a TTP program, this box enables you to pass parameters to the program. Here, it's setting up a 340K RAMdisk as Drive C.

change the RAMdisk to drive C, click on a drive icon once, so it turns black. Then go to the "Options" menu and select "Install disk drive," enter the new drive letter and click on "Install." You now have an extra icon. Move it to the position you want it in and select "Save Desktop" from the "Options" menu. This saves your new DESKTOP.INF file, so next time you boot up it's all ready for you.

That's not all, though! You can also run *Fastram* from the Desktop. Rename the program FASTRAM.TTP and double-click on it. A window appears, asking for parameters. These are just the

same as in the RAMDISK.INF file. For more information, have a read of the DOC file on the Cover Disk.

**Note** that memory assigned to a RAMdisk is not available to run programs. If you get strange error messages when you run large programs with *Fastram* installed, you haven't necessarily done something disastrous – you've probably run out of memory. On a normal 520ST the largest RAMdisk possible is around 340K. This doesn't leave much room for running programs, but is useful for copying files. If you specify too large a RAMdisk using *Fastram* you simply get the default value of 50K.

Inside the JOYSTICK folder are joystick reading routines for *GFA Basic* to go with this issue's *GFA Programmer's Surgery* on page 152. You need to load up *GFA Basic 2* first, then merge in the files. JOYSTICK reads the joystick position as you wiggle it about and draws a line on screen, rather like an Etch-a-sketch. (Remember those?) JOYTEST

shows you the returns from the keyboard processor for all the various combinations of mouse and joystick movement. Turn to page 152 for the full inside story.

● This listing needs *GFA Basic 2*, which was yours on Cover Disk 19 – if you missed that, turn to page 130 for the *FORMAT* back issue service.

## THE COVER DISK NEEDS YOU

We need *your* software – games, utilities, demos – anything good, original and short. If you've written anything worthy of the *ST FORMAT* Cover Disk, send it with this form and full documentation to: Chris Lloyd, *ST FORMAT* Cover Disk Editor, 30 Monmouth St, Bath, Avon BA1 2BW. Then please be patient – we get heaps of submissions, and we try to give them all a fair testing!

Name \_\_\_\_\_

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Daytime phone \_\_\_\_\_

Program title \_\_\_\_\_

Size of files in K \_\_\_\_\_

What's so good about it, then? \_\_\_\_\_

Don't forget to: ■ Include on-disk and paper documentation ■ Write your name and address on the disk ■ Use a virus-free disk ■ Keep a copy of your program, because contributions are non-returnable ■ Enclose wads of cash

**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 \_\_\_\_\_

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## COVER DISK HOTLINE

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### WEDNESDAYS (2pm to 6pm)

Having trouble with your Cover Disk? This is what to do. First, before you try anything else, please make sure you have thoroughly read all the relevant parts of these Cover Disk pages and all documentation files on the Disk. If that doesn't solve your problem, try consulting your Atari ST Owner's Manual, which may help you find what you're doing wrong.

If all else fails, give us a buzz in the *ST FORMAT* offices during the hours specified and

we'll do our best to help. However, we don't write the Cover Disk programs ourselves, so we may not know everything the programmers do. Try to have your ST nearby (up and running), and let us know which model ST you have, plus the issue number of the Cover Disk that's giving you hassle. Do this before you call, and it might save you a large phone bill when we go tell you to go back and find out! And please: Cover Disk problems *only*.

## WHAT'S UP, DOC? WHY YOU SHOULD READ .DOC FILES

Included in some of the folders on the Cover Disk there's a documentation file containing notes from the programmer, or an upgrade/contributions address, or operational hints and tips. These are always worth reading, or printing out if you have a printer, because *FORMAT*'s

Cover Disk pages often skimp on the highly-detailed aspects of a complex program, especially if there are DOCs present on the Disk.

Documentation files are usually named something like README.DOC or PROGRAM.TXT. To read them just

double-click on the file icon and you see a dialogue window appear. This says something like "You can only show or print this document." Click on SHOW and your ST displays the file on-screen. (This is usually more readable in medium or high resolution, even if

the program runs in another resolution.)

Click on PRINT and your ST sends the file to a printer – if there's a printer connected and set up correctly. Be careful that you don't click on this if you don't have a printer, or you may cause your ST to "hang up."

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# In the beginning...

They used to be short and entirely forgettable, but these days intro sequences are often fast-moving, colourful masterpieces of ST animation. Yet creating one is easy. All you need is plenty of blood, a few murders, the odd explosion and maybe even something to do with the game. Allow Ed Ricketts to introduce himself and explain how you can Do The Intro, too

**W**hat takes two months and three people to create, is seen twice and then forgotten? There are several answers but the most obvious is an intro sequence. Why – and how – is so much effort put into something that is so easily ignored?

Just a few years ago, the words "intro sequence" described the bit where the programmer's name appeared on the title screen and you were testing the limits of your personal credibility to call them sequences at all. Now, they're often huge affairs that fill a whole disk by themselves and use techniques more reminiscent of a film than a game. They've evolved to such an extent that Psygnosis, generally acknowledged masters of the intro, are even considering releasing a compilation of their best.

A typical intro sequence consists of a short piece of animation, often coupled with sound, that is shown before the main game loads. Usually it's there to set the scene for the game and give you a reason to be playing it in the first place, although it may just be a gratuitous excess. These sequences often have a great deal of time and effort lavished on them, because they're the first thing you see when you boot up the game.

There are other reasons for having an intro. They're perfect material for displaying on STs in shop windows, particularly if the game itself isn't visually striking. They look good on the back of game boxes,

too; you don't know it's not part of the game until you actually buy it, when, of course, it's too late anyway. And magazines can plaster scenes from the intro all over their reviews – again, very handy if the graphics in the game are a bit dodgy or samey. (Having said that, however, *ST FORMAT* only includes intro scenes in its reviews as “decoration,” not as a description of the game, because the latter would be misleading.)

Because the design of an intro isn't tied to the game it belongs to (apart from its general content), it can be freelanced out and worked on at the same time as the programming of the game. This is what happened with *Populous 2*. While Bullfrog were beavering away with the design and programming, the intro was being done by a company called ESD (see the box on page 32). In theory, when Bullfrog had finished the game, all they had to do was take the intro from ESD and bolt it on the front. And, for once, the theory worked.

This freedom means it's possible for virtually anyone to produce an intro. You don't really need any specialised programming skills. Rather, you need to be able to plan thoroughly and draw well – or well enough to draw what you plan. Planning is the most important part of creating an intro. The last thing you

want to do is to get halfway through drawing the backgrounds and then decide you want to change them.

If you do the planning properly most of the work is already done. The next stage depends on your ability to draw. Don't even think about attempting an intro unless you're handy with an art package. More than anything else, intros rely on their graphics and animation.

**Virtually anyone can produce an intro. You don't really need any specialised programming skills, just the ability to plan and draw**

In the end, all animation is simply made of one frame being shown after another. The most basic form of animation would be to draw each frame of your animation on the background and then flip between them. Any program that can achieve this is capable of being used for an intro. The only drawback is memory. Depending on the size of your animation program, you have 410 – 450K to play with in

a 520ST. 15 frames at 32K each equals 480K, which is pushing it. If you use a program such as *Cyber Paint 2* (£51, Electric Distribution ☎ 0480 496666), which only stores the changes between each frame rather than the whole thing, you have much more space to play with.

The alternative, more adventurous, option is to design your sprites separately with a package like *Animaster* (see page 152) and then overlay them onto the backgrounds with a few lines of code. This method isn't suitable for the sort of full-screen animation used in *Thunderhawk*, though. (Issue 21's Cover Disk had a demo of *Animaster* and big feature on animation. Turn to page 130 if you haven't got a copy.)

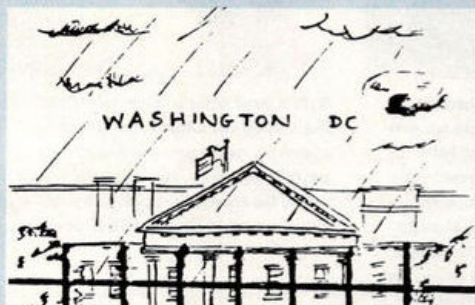
Remember it's the small details that give an intro watchability. The sequence with Chuck Rock overleaf is an excellent example – you only notice some of the more subtle touches after watching it two or three times. These details mean someone may even want to watch your intro more than once.

Intro programming can lead to greater things. Stewart Gilray of ESD has just completed a deal for his first game, *Rubicon*, to be published by Century. With a bit of skill, some inside knowledge and a whole lot of flair, you could be next! **stf**

## AH YES, I CAN SEE IT ALL NOW

Use a storyboard to plan your intro, in just the same way as a film is planned. Sketch each scene and write a short description of the action that takes place in it. Don't be too sketchy with the details – it doesn't hurt to put in as much as possible at this stage.

The drawings on the top row are from the original storyboard for the intro to *Thunderhawk* by Core Design. Although the finished sequence keeps the same general story line, it's not as detailed or as long as originally planned, because of disk restrictions – the intro has to fit on one disk. The intro also includes sampled sound and this is always more difficult to squeeze than the graphics.



**STORYBOARD:** “Black screen with thundery sound effects. Screen fades in from black on a thundery sky. Rain lashes down with lightning and thunderclaps adding atmosphere. The noise of an approaching helicopter increases as it comes into view. The screen pans down as the helicopter descends.”



**STORYBOARD:** “The caption overlays as the screen pans down. The White House and railings parallax in to give the illusion of depth to the scene. The helicopter continues its descent. The caption is removed and the scene continues until the helicopter is some ten feet from the floor. At this point it can be seen to be a large military helicopter used for the transport of important dignitaries such as the President.”



**STORYBOARD:** “The screen cuts to this close-up of the helicopter a few feet from the floor. It lands and its doors open to allow its passenger to get out. The passenger, a large, heavily built man in a trench coat, carrying an attaché case, runs across the White House lawn, his coat tails being blown around by the down-draft of the helicopter's rotors. As the figure exits the scene, the helicopter's rotor noise intensifies and it is seen to take off.”



**REAL THING:** This has stayed close to the original conception. The only major difference is that the top of the White House is already visible in this first frame. All the other elements – the lightning and thunder – have remained.



**REAL THING:** A few changes here. The caption is absent, the helicopter actually lands on the lawn of the White House, and it's not, in all honesty, possible to see what sort of helicopter it is at this point.



**REAL THING:** Lots of changes in this frame. First, by this point the helicopter has already landed and its doors are open. Next, the man isn't carrying anything and is only seen for a split second – too fast to see his coat tails at all. Finally, the helicopter doesn't take off when the man has left it.



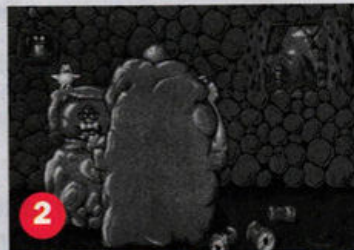
# A BIT OF A ROCKY START

The intro to *Chuck Rock* is a classic scene-setter, obviously influenced by "The Flintstones" and traditional Warner Brothers cartoons. There are several screens of text interspersed with the graphics, clarifying certain aspects of the intro that wouldn't be immediately obvious. This text is of the "gee whizz" style you find in silent films - if you've seen any Harold Lloyd you know the sort of thing.

Although there's no sound, the intro works because it uses tried and tested animation methods combined with humour in a well-thought-out sequence.



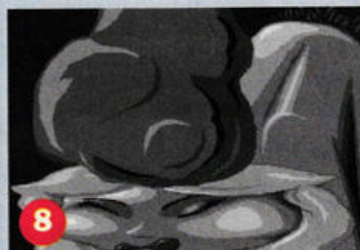
1 ● The intro begins with a screen of text, which informs us that Chuck is sat at home with his wife Ophelia, waiting for the footrock game to start on the telly. There's a mysterious figure watching their house. Cut to an external view of Chuck's house. From the bushes in the foreground a quiffed figure, obviously a man, slowly rises and peers at the house, then sinks down again to a slightly lower position. It's obvious he's up to no good. Note the birds on what looks like a washing line - the one nearest to us jumps nervously during the scene.



2 ● We then cut to the inside of Chuck's house. He's sat in his chair, which we see from behind, watching the game on telly. The beer cans scattered around the floor are rather unsubtle clues as to what else he's up to. The television flicks between the newsreader (who looks uncannily similar to John Major), and illustrations of what he's talking about - a stone wheel and a fire both appear if you watch carefully. We discover that the small bird perched on the TV is acting as the aerial, because when the bird grows tired and lets its wings fall, the telly dissolves to static. To wake it up, Chuck throws a beer can at it, which hits it and flies over his shoulder straight towards the screen.



3 ● Back outside, and from out of the house comes a scantily-clad cave-woman, presumably Ophelia. Carrying what looks like a bowl of washing, she walks over to the washing line. The detail is such that you can even see her passing the window inside the house before she emerges. The mysterious figure in the foreground is still watching intently.



8 ● Gary's club crashes down on her bonce. This part is pure traditional animation. Her eyes close in pain and her whole head is compressed and bulges exaggeratedly to a squashed version of its former self as the club swings down, then re-expands to its normal shape as it lifts. She goes cross-eyed and stars twinkle around her head.



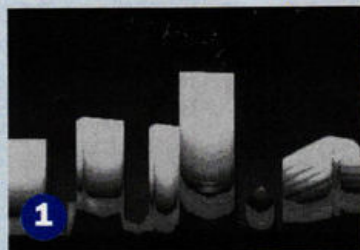
9 ● The text exhorts Chuck to stop watching telly and get after Ophelia. Back in the house, he's obviously heard something from outside, because his face peers around the side of his chair. He blinks stupidly and frowns in dim puzzlement. Outside, we see evil Gary dragging the unconscious Ophelia away by her hair.



10 ● Chuck manages to tear himself away from the telly and wanders outside. Unfortunately, the text tells us, his loincloth has just been washed - indeed, it's the very same one that's hanging on the line. Luckily, though, Chuck had the forethought to cover certain areas of his body to avoid any potentially embarrassing situations. Not being too bright, he's at a loss as to what to do.



11 ● The text tells him to think fast. This isn't easy for Chuck, so we get a close-up as he goes through the painful process. His eyes flick left and right, he frowns stupidly and his mouth tightens as if he's made a decision.



1 ● The intro starts with the 20th Century Fox logo and dissolves to the title *Predator 2*. At a short burst of music, the titles fill with blood, which drips down the letters. Cut to the moonlit night sky, filled with stars. There's a low monotonous pounding. A caption tells us it's Los Angeles, 1997. Then, with another burst of music, the moon turns blue and the "camera" pans down to show city skyscrapers bathed in the moonlight, accompanied by low-key atmospheric sounds.



2 ● The scene changes to a view of a sort of Art Deco gargoyle on the side of a building in the city. Part of the background begins shimmering as the Predator, using his invisibility, makes his way onto the gargoyle. Gradually he appears, and we see he's holding a human skull with the spinal column still attached. He lets out a roar.



3 ● The camera begins zooming into the Predator in three stages, each stage coinciding with another burst of music. Eventually all we can see is a close-up of his eye. As the caption appears and with another sound effect, the eye turns green.



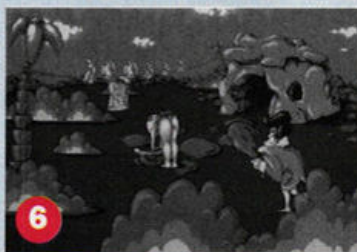
4 ● Cut to a street scene viewed from above - the Predator's perspective. A policeman and a member of a gang are shooting at each other with the expected sound effects, using overturned cars as barricades. Overlaid on this the Predator's laser sight appears, roving across the scene and finally settling on one of the people. It locks on with a beep.



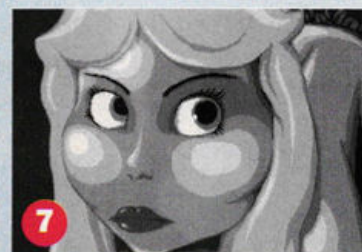
● For the first time we get a full-face view of the watching man whose gaze is fixed on Ophelia. His face breaks into a lecherous grin, his eyes widen, and, in the traditional cartoon way, his pupils turn into love-hearts, which pulsate rapidly. He also has the standard "window reflection" on his eyes, to make them look more realistic.



● Returning to the viewpoint behind the man, we see Ophelia bend down and put the bowl on the ground. This is followed by a close-up of the bowl. It looks as though it's made from a tortoise shell and contains Ophelia's bra and some other nondescript clothes. Ophelia's hand reaches down and picks up a loincloth. Next we see a close-up of the washing line. As Ophelia reaches up with the loincloth in her hand, two of the birds jump up. She drapes the loincloth over the line, whereupon the birds flip over in mid air and hold it on the line with their beaks. They're the clothes pegs.



● A screen of text tells us that the figure is, in fact, Gary Gritter, the local lounge lizard. He's more than a little bit taken with Ophelia. Returning to the scene, Ophelia bends down to pick up more clothes, revealing - ahem - quite a bit. At this, Gary slides off the bottom of the screen and reappears in the midground, sneaking up on Ophelia with a large club in his hand.



● Cut to a close-up of Ophelia's face. She's obviously heard something behind her, because her eyes blink and shift to the side as if she's trying to look behind her. Unfortunately it's a little too late, because just then...



● Time for another Warner Brothers touch. As Chuck is standing there wondering what to do, a bird on the washing line pulls out a helpful sign from nowhere. Chuck turns, spots the sign, and whizzes off to the right, leaving a cloud of dust disappearing behind him.

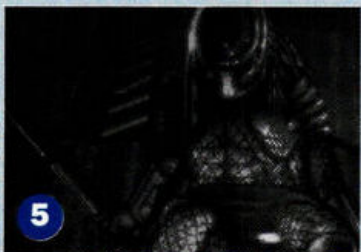


● Cut to the last scene. Chuck lopes in from the left, hands still covering his dangly bits, and disappears behind the bush. Just the top of Chuck's head is visible behind the bush as it quivers and shakes. He's obviously up to something. Eventually, he emerges from the other side, clad in a costume of leaves (to cover his soft bits), and walks off right into the game.

## NOW FOR SOMETHING COMPLETELY DIFFERENT

Now compare Chuck to the intro sequence from *Predator 2* below. There are a number of differences. Because of the subject matter, traditional animation is out of the window; it just wouldn't be right to see the Predator running round as a 16-pixel-high sprite. Instead, the intro is more a series of static screens and borrows ideas from the movie world to create a slick short "film." This gives you the impression that you're watching something closer to a trailer than a game intro. And the atmosphere is much darker. Humour would, of course, be out of place too.

The animation is very simple, two or three frames sufficing for most actions, but the detailed backgrounds and the sound effects help to produce an exceedingly effective intro, spoilt only by a bout of disk accessing half way through.



● From the reverse angle, we see the Predator's laser sweeping round to find its target. When it does, a beam of energy shoots out with the inevitable sound effect.



● Next we see the effect of the laser. The car the cop was standing next to explodes with a massive wallop and he's thrown bodily along the road by the explosion. The flames billow out very rapidly and the whole scene lasts one second at the most.



● A close-up of the Predator's face follows, as he slowly removes his helmet and another caption appears. The scene fades just before the helmet is fully removed, just so you have to wait that bit longer to see the Predator's face.



● And with the caption "Bad as things are, they're about to get worse... much worse!" the Predator is finally revealed in all his glory. Once again, he lets out a battle roar, and his mandibles quiver as the sound ululates. For a final time we zoom into his face in three stages, each stage accompanied by a roar. By the last frame we're literally looking into his mouth and can see the Predatorial equivalent of tonsils vibrating in the back of his throat. Fade to black.



## FRAMES OF FREEDOM

When designing your animations, allocate a suitable number of frames for each movement. The *Thunderhawk* intro features two instances of this - and the special cut-down version on this issue's Cover Disk shows you how easy it is to fake convincing action (see page 35).



● In the *Thunderhawk* intro there are sundry sequences where characters talk. The mouth action for these scenes is made simply of two or three frames of the lips moving up and down, which are repeated several times to give the impression of speech. It's surprisingly effective. Even a frame of the lips open alternating with one of the lips closed can produce a convincing result.



● Earlier in the same sequence, a character runs up a flight of steps, viewed from behind and slightly below. Many more frames had to be used for this part because of the greater degree of movement. If the character's legs were done in two or three frames, they would look very jerky and odd. At the same time, the character has to become smaller as he disappears into the building.

## WE'D LIKE YOU TO MEET THE INTRODUCTION AGENCY

Because intro sequences can just be bolted on to the front of games, they can be written by specialised programming houses - like ESD.

Stewart Gilray of ESD is a man who knows his intro sequences. He's the programmer who - with his colleagues Richard Fox, Andy Smith and Steve Chalmers - designed and programmed the intros for the hit Bullfrog games *PowerMonger* and *Populous 2*. Stewart explained the steps involved in getting a sequence together - in this case, the intro for *Populous 2*.

The designs for the intro were given to the team two to three months before it was due to be finished. Bullfrog had a few basic ideas that they wanted incorporated, and these were fleshed out and added to by the team. Richard then drew a storyboard for the intro - a comic-strip-like sequence showing each scene and a detailed breakdown of what should happen in it. For *Populous 2* there are six of these scenes.

The first things to be drawn are the backgrounds - simple screens without any of the foreground sprites or animation. These backgrounds are then handed to Andy, who draws the sprites and designs their animation, according to what is specified on the storyboard.

The first scene uses 390 frames and originally took up 297K - that's before crunching. For this, the team use a script system which means they can assign sequences of frames to one number and create animations just by creating a list of these numbers. So, for example, the three numbers 3, 2, 5 could represent 10, 50 or

500 frames, depending on the sequences they're assigned to. Using this system, the first scene was compressed to 110K, a reduction of over 60%. Once the animations have been sorted, it's up to Stewart to turn the whole thing into an executable program. In principle this should be easy, but various factors such as memory, disk space, and sound complicate matters and cause serious problems.

Memory can sometimes be a big hassle. The *PowerMonger* intro was all of 2MBytes in total and had to be crunched

down to 410K, because the entire thing had to fit into a 0.5MByte ST - it couldn't be loaded part by part from disk. Even if that method is possible, there are disk restrictions. For *Populous 2*, the team were given just one disk to play with - that's about 700K of uncompressed data.

Sound is added by an out-of-house company. Bullfrog weren't happy with the person they'd originally intended to use for the intro sound effects, so they switched to a company called Skinnybone Productions, who specialise in sampled effects. They've

just finished the samples for *Deathbringer*, due soon from Empire.

The ESD team aren't afraid to steal ideas from other places when they're stuck. For instance, the first *Populous 2* scene features a view over a village, with a volcano erupting in the background, lightning flashing around the sky, bushes waving in the wind and rain lashing down. The team were at a loss as to how to achieve the effect of the rain - it's not the easiest thing in the world to represent convincingly on an ST screen. In the end they "borrowed" the effect from a version of *Ghouls and Ghosts* on a console.

The whole intro took approximately one to two months to complete. As you might expect, the creation of the graphics takes up most of this time.

So does Stewart agree with the idea of intros in general (apart from the fact that they pay his wages)? "Yes," he replies readily. "I really think they add to a game and pull the players into it." What does he think of the intros around at the moment? "I thought the intro to *Thunderhawk* was rubbish - it was really badly done. The helicopter at the start was awful and when the characters talked you didn't see their faces, which is a bit of a cop-out. The original sequence to *Aquaventure* [the much-delayed game by Psygnosis, due soonish], written about four years ago, was excellent, but that's been redone now. Psygnosis write probably the best intros around, but they always leave the sound out of their ST versions, and I don't know why - it could easily be included. The best intro I think I've ever seen is the one with *Shadow of the Beast 2*."



● A scene from the almost-award-winning *PowerMonger* intro. "Andy would put things in without telling us," says Stewart. "For instance, in this scene there are two women on the top of the tower. One of them waves to the departing troops in the distance, but the other one just buggers off into the castle. It took us a while to notice."



# WHERE'S THE MAC?

## PageStream 2

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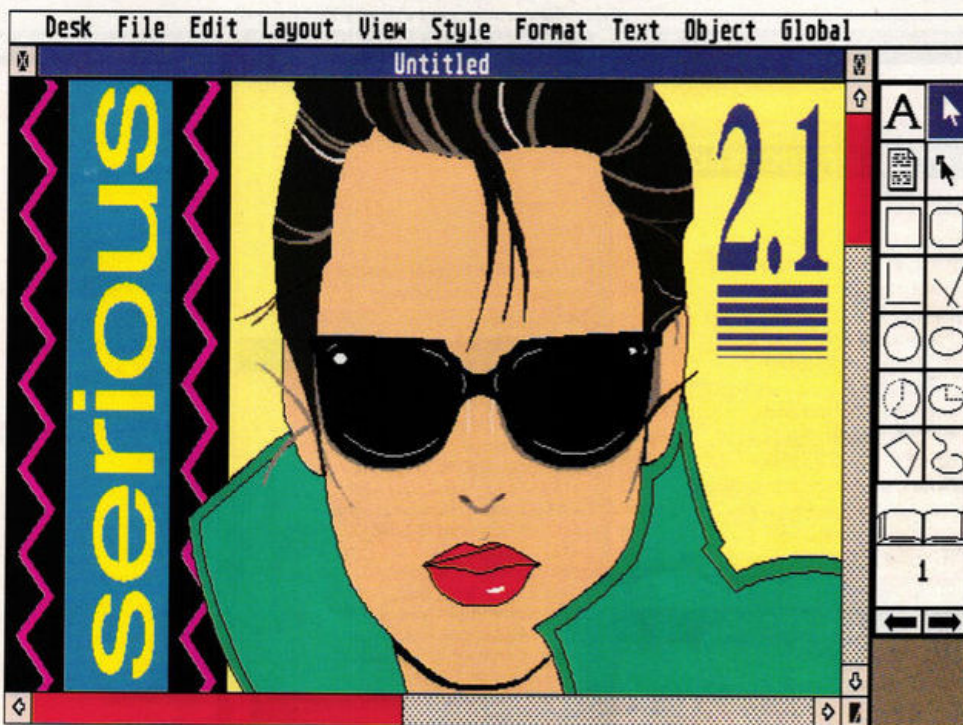
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Actual PageStream 2.1 screen shot. PageStream is ST/STE/TT compatible.

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At Soft-Logik, we have a cure for Mac envy. We call it PageStream 2.1. Do you want PostScript fonts? PageStream lets you use any PC format PostScript font. Plus, PageStream can print PostScript fonts on your dot matrix, inkjet, HP or Atari laser printer!

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### LOOK MA, NO ATM!

Because Adobe Type Manager is not likely to be released for the Atari any time soon, we've built font scaling technology into PageStream 2.1. When you select Palatino Italic 72, that's what you will see on the screen, even if you rotate it or bleed it off the page. PageStream scales all Compugraphic, PostScript and Soft-Logik outline fonts.

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### WHY DID WE GO TO ALL THIS TROUBLE?

Soft-Logik exists because of Atari users like yourself. We grew up with the Atari ST and we think Atari users deserve the best. We believe PageStream 2.1 is the best. So the next time you feel Mac envy, take a dose of PageStream 2.1. You won't be left wondering "where's the Mac?"

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The *FORMAT* Gold winning helicopter flight sim *Thunderhawk AH-73M*, reviewed last issue, boasts one of the best intro sequences of any current game – and thanks to Core Design, a

special version is yours on this issue's Cover Disk. This breakdown shows how the sequence of repeating pictures works, and the code that runs it is explained in detail on page 37.



White House scrolls into view. Held for about 4 sec.

Chopper pic plus sample: "Choppa-choppa-choppa."

Switch to pic of the agent as he dashes up the steps.

Switch to our first glimpse of the President's office.

To give an impression of speech, cut between mouth closed and mouth open rapidly. Sample: "Sir!"



Cut back to mouth closed. Awaiting instructions.

Significant pause. Sample: "Is the team assembled?"

As before, intercut from the pic of the agent with his mouth closed to the one with his mouth open and back again while sample plays: "Yes, Mr President."

President pauses again. Sample: "And the pilot?"



Cut to the agent as he prepares to reply again.

Sample plays: "One of our finest, sir."

Cut back to mouth closed again as sample finishes.

President considers his response. Sample: "Good."

Cut to agent awaiting his final instructions.

Cut to last pic. Sample: "You've got 24 hours."

# Roll your own introduction

Lights, camera, double-click! Putting together a flashy sequence is much easier than you think, and everything you need is on this issue's Cover Disk. Chris Lloyd grabs a megaphone and directs you through it

**Y**ou don't need to be a hex-headed code freak to get your own ST to produce jazzy introduction sequences. On this month's Cover Disk is a handy little program called *Autoplay*, which is designed to display pictures and plays samples – just the ticket!

To show you how it's all put together we've got a complete example on the Disk for you. Grab a blank, virus-free disk and walk this way. Open up the *Autoplay* folder on side 2 of the Cover Disk and copy everything in it to your blank disk. Then, using this new disk, double-click on *Autoplay* and sit back. If you want it to run automatically, create a folder called *AUTO* on your new disk and copy the *Autoplay* program into it. The sequence then runs when you boot with the disk in the drive.

*Autoplay* works using a script file – that is, a text file containing all the instructions to run your

sequence. This file is called *AUTOPLAY.SCP* and must be in the same directory as *Autoplay*, not in another folder. To create your own script file or alter this one, you need a text editor. There are several in the Public Domain – check what's on offer from your local PD library (and for that, see our comprehensive directory on page 49). The best is probably *ST Writer Elite* – it's so good that we put it on Cover Disk 27! (Check out page 130 for the *STF* back issue service if you missed it.) The file must be in pure text form – that is, without any of the style commands and embellishments added by word processors – so save it as an ASCII file.

Want to set up your own picture and sample sequence to play when you boot up? Place the *Autoplay* program in the *AUTO* folder of your boot disk and then your picture and sample files in the root directory – that is, on the same disk but not in any

folders – and write a little script to run it all. All you need to know is explained here and on page 37.

To put your own sequences together you're going to need graphics, samples, imagination and this month's Cover Disk. A really strong cup of tea, while not essential, might be a nice too.



Get a good idea of the effect you're after and the sequence of pictures you need, and get drawing. *Autoplay* can make use of both uncompressed *Degas Elite* (PI1, PI2 and PI3) and *Neochrome* (NEO) pictures, and all decent art programs can save in one of these formats.

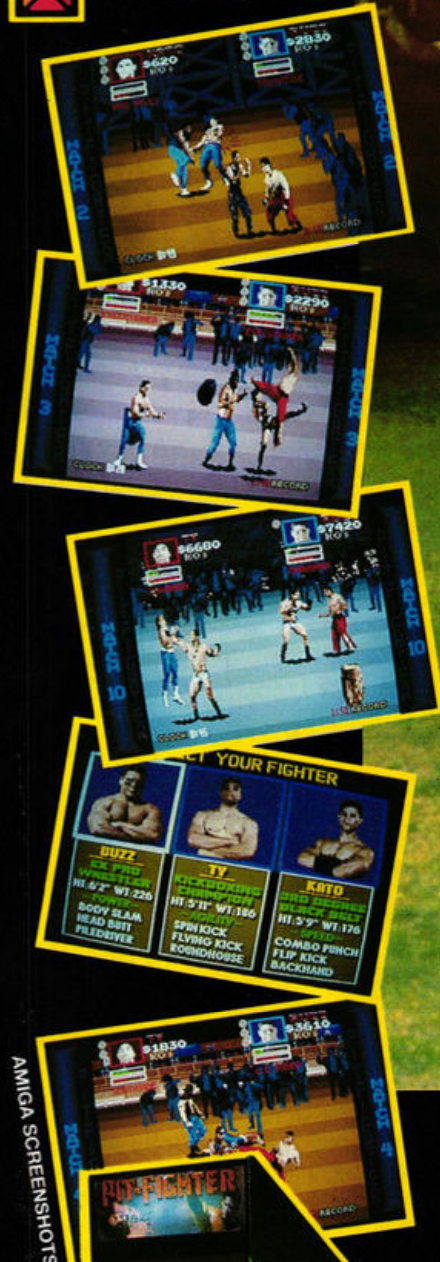
Can't draw for toffee? Also on the Cover Disk is a handy little program called *Megasnap*, which you can use to grab screens from other programs, you cheat!

Now for some sound. If you haven't got a sampler, try the Public Domain again. There are zillions of samples available, from Captain Kirk to rap. Samples need to be in .SND or .SPL format, so also on this month's don't-be-caught-without-it Cover Disk is a sample convertor called *SCONVERT*, enabling you to use almost any sample you want. And guess what? The *Stereo Replay* demo on the Cover Disk comes with some samples you could convert. (For more info on these and other Cover Disk programs, turn to the Cover Disk pages, beginning page 20.)

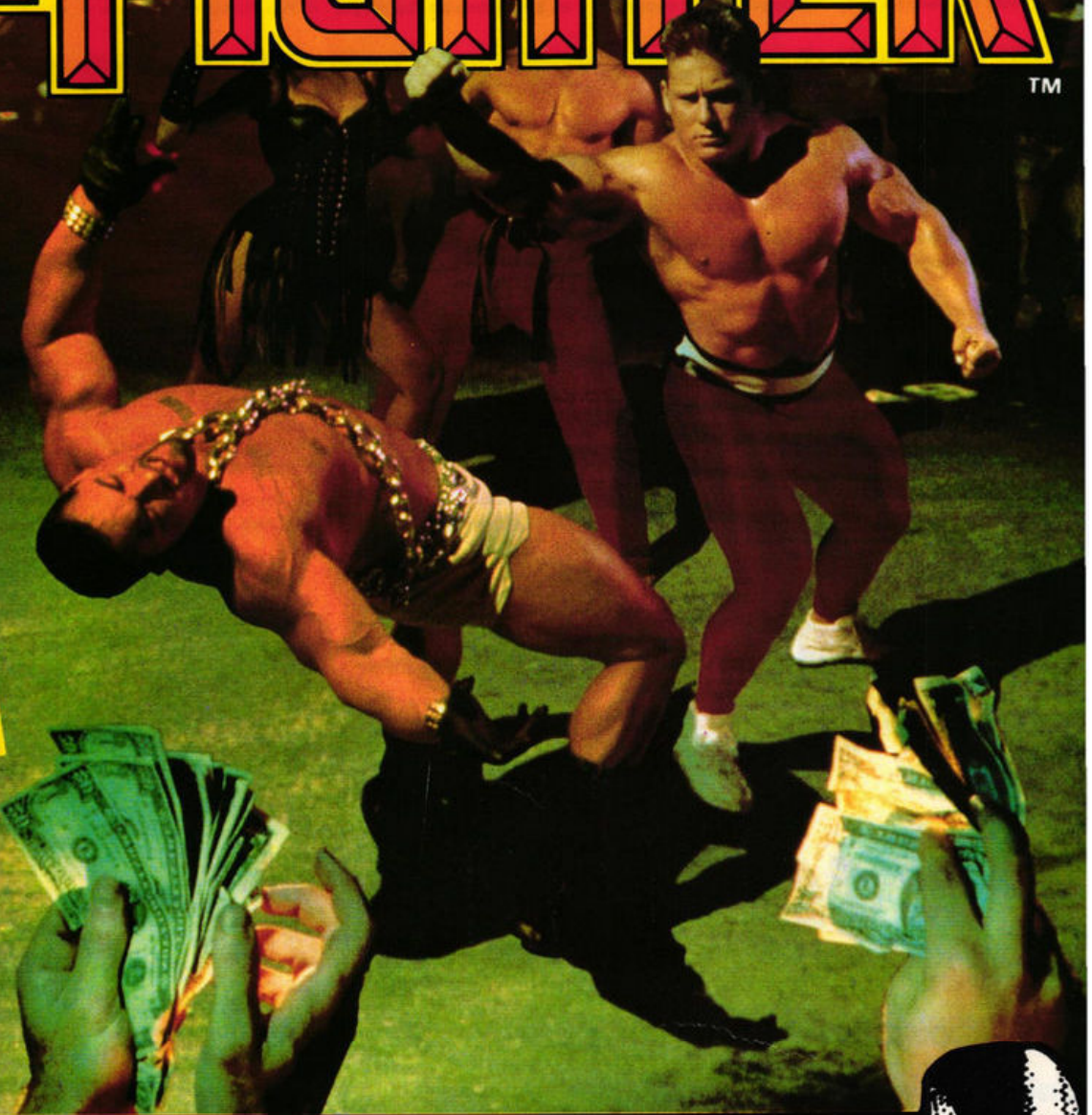
What more could you ask for? Have a go at changing our *Thunderhawk* introduction – on your backup disk, of course, not the original Cover Disk. Add the speech as text on-screen using the Print command, or just muck about with it. Get creative and have a bash at your own sequence. Who knows, we might all see it introducing the next big game. Get busy with those scripts! And if you're really handy with GFA programming and reckon you could improve *Autoplay*, you could win a hard drive – see page 149! →

THE NO. 1 ARCADE COIN-OP HIT.

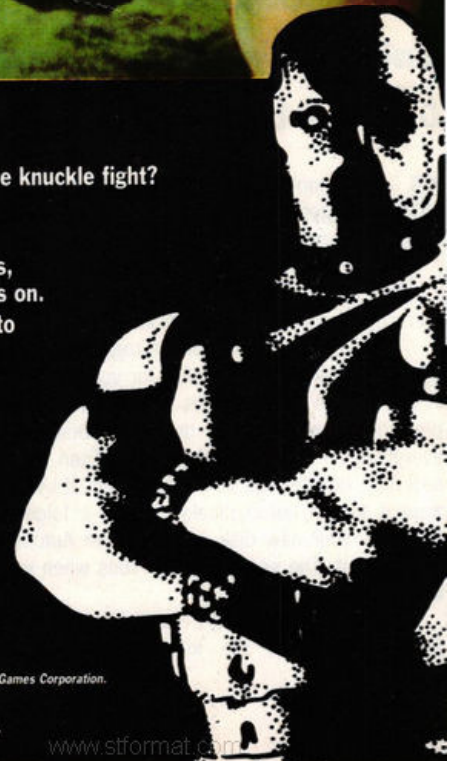
# PIT-FIGHTER™



AMIGA SCREENSHOTS



**W**elcome to the meanest, toughest way of making a living!  
 Enter the World of Pitfighting - fighting for money.  
 Do you rate your chances in a free for all, no holds barred bare knuckle fight?  
 You'll have to face thugs like The Executioner, Heavy Metal and Chain Man Eddie.  
 Use every form of fighting - martial arts, kickboxing, stab with knives, throw bar stools, beer kegs and anything else you can lay your hands on.  
 Remember you're never safe - even from the crowd - get thrown into them and you may never come out alive.  
 Incredible graphics, digitised from real fighters, and amazing real time sprite scaling, bring you the perfect conversion of Atari's No. 1 Arcade Hit.  
 You'll never tire of this brutally addictive game!!



**DOMARK**  
**TENGEN**

© 1991 Tengen Inc. All Rights Reserved.™ Atari Games Corporation.  
 Programmed by Teque London.  
 Artwork and Packaging © Domark Group Ltd.  
 Published by Domark Software., Ltd, Ferry House,  
 51-57 Lacy Road, London SW15 1PR

# SEEN THE FILM, GOT THE TEE-SHIRT - NOW READ THE SCRIPT

The Cover Disk sequence script file explained.

```
THUND1 \LOAD ONLY \BUFFER=0
THUND2 \LOAD ONLY \BUFFER=1
THUND3 \LOAD ONLY \BUFFER=2
THUND4 \LOAD ONLY \BUFFER=3
CHOPPER \LOAD ONLY \BUFFER=0
```

```
\CLEAR
\SCROLL UP \BUFFER=0
\DELAY 250
```

```
\BUFFER VIEW 1
\SPEED=0
\BUFFER PLAY 0
\DELAY 10
\BUFFER VIEW 2
\DELAY 100
\BUFFER VIEW 3
```

```
THUND5 \LOAD ONLY \BUFFER=0
THUND6 \LOAD ONLY \BUFFER=1
SIR \LOAD ONLY \BUFFER=0
TEAM \LOAD ONLY \BUFFER=1
YESPRES \LOAD ONLY \BUFFER=2
PILOT \LOAD ONLY \BUFFER=3
FINEST \LOAD ONLY \BUFFER=4
```

```
\DELAY 50
\BUFFER VIEW 0
\DELAY 100 . 0
\BUFFER VIEW 1
\SPEED=2
\BUFFER PLAY 0
\BUFFER VIEW 0
\DELAY 100
\BUFFER VIEW 3
\DELAY 50
\BUFFER PLAY 1
\DELAY 60
\BUFFER VIEW 0
\DELAY 50
\BUFFER VIEW 1
\BUFFER PLAY 2
\BUFFER VIEW 0
\DELAY 50
\BUFFER VIEW 3
\BUFFER PLAY 3
\DELAY 20
\BUFFER VIEW 0
\DELAY 20
\BUFFER VIEW 1
\BUFFER PLAY 4
\BUFFER VIEW 0
```

```
THUND7 \LOAD ONLY \BUFFER=2
GOOD \LOAD ONLY \BUFFER=3
24HOURS \LOAD ONLY \BUFFER=4
\DELAY 25
\BUFFER VIEW 3
\DELAY 25
\BUFFER PLAY 3
\DELAY 20
\BUFFER VIEW 0
\DELAY 25
\BUFFER VIEW 2
\BUFFER PLAY 4
\DELAY 100
\CLEAR
\DELAY 100
```

Off we go! These lines load in the first set of data - in this case, four picture files and one sample. You have five buffers available for pictures and five for samples, each set numbered 0 to 4. There is no need to add the file extenders, but be careful of those spaces and slashes. The program can be very fussy.

After the program clears the screen, the picture in buffer 0 is scrolled up. This is the picture of the White House in suitably moody tones. The DELAY command holds the picture on-screen for 250 sixtieths of a second. This sets the scene for our introduction.

Next comes the helicopter picture in picture buffer 1, with the sample from sample buffer 0. Autoplay needs the sample's frequency or speed - in this case, speed 0 is 5MHz. The scene switches to our chap running up the White House steps and finishes with our first glimpse of the President.

The next lot of data is loaded in. Because Autoplay allows only five buffers each for pictures and samples, we need to load in more as we go. Here are five speech samples and two shots of the CIA agent type chappie, one with his mouth open and one with it closed. We can use these to go with the speech. The new data overwrites the old - but note that because picture buffer three has not been used, it still contains the shot of the President.

Now for the interesting bit. Using the two pictures of the agent we can get him to open his mouth when speaking. Buffer 0 holds the initial picture; then we view buffer 1 and follow immediately with the sample. This stops the action until it's finished and we switch back to buffer 0 again. The speed is set to 2 or 10MHz for these samples. The President only has one picture and we give him pauses to give the impression he's deep in thought - or perhaps just confused...

The finale! The last picture and samples are loaded in. Autoplay can sometimes get confused when loading in samples of different lengths. If you have problems, try switching round the buffer numbers.

## AUTOPLAY SCRIPT LANGUAGE IN FULL

Don't panic! The script language is rather like a very simple BASIC with only 21 commands. You can't do any damage with it, so if things don't work at first, have another go. As with any language, it must be laid out in an exact format, so watch out for typos.

**\BUFFER PLAY 1** : Plays sample in buffer 1, or any other sample buffer - just type in the correct buffer number.

**\BUFFER PLAY** : Sets the default buffer for samples here, which can be played later. Useful after a LOAD command.

**\BUFFER VIEW 1** : View picture in buffer 1, or any other of the picture buffers.

**\BUFFER=0** : Sets default buffer to 0. There are five buffers each for pictures and samples, numbered 0 to 4

**\CLEAR** : Clears screen.

**\DELAY 10** : Pauses for ten sixtieths of a second - or as many sixtieths as you type in here. Specify 60 and - surprise! - the pause is one second.

**\END** : You'd never guess it, but this ends the script file. Life's full of surprises, innit?

**\GOSUB 50** : Another command just like BASIC. Program jumps to a GOSUB on line 50.

**\GOTO 12** : Just like the BASIC command. In this case the program jumps to line 12.

**\LOAD ONLY** : Loads data into buffer. Needs a file name. You don't need to specify a file extender, just the name of the picture or sample, which must come before the backslash.

**\LOCATE 1-2** : Used to position text on screen, in this case at 1,2.

**\PLAY** : Plays default sample.

**\PRINT HELLO** : Prints the word "hello" on the screen, or anything else you type in here.

**\REPEAT 10** : Repeats the script file up to current command ten times, or any other value you enter.

**\RES=1** : Changes screen resolution. 0 = low, 1 = medium and 2 = high. Also resets your ST.

**\RETURN** : Ends a GOSUB. Program returns to the calling point.

**\SCROLL DOWN** : Scrolls default buffer down onto screen.

**\SCROLL UP** : Scrolls default buffer up onto screen.


**\SOUND 1-2-3-4-5** : Plays sound, equal to GFA Basic's SOUND command.

**\SPEED=0** : Sets the sample speed. There are six speeds: 0 = 5Mhz, 1 = 7.5Mhz, 2 = 10Mhz, 3 = 15Mhz, 4 = 20Mhz and 5 = 30Mhz.

**\VIEW** : View picture in default buffer.

## I'VE GOT A BIG ONE, SO THERE

If you're one of the lucky ST owners with more than 512K of memory, you can speed up the demo by using a RAMdisk. This is an area of memory your ST uses as a super-fast disk drive. Again, everything you need is on the Cover Disk. Open up the *Fastram* folder on side 2 of the Disk and copy the contents to your animation demo disk, then reset. The program is set up to install a 320K RAMdisk as drive M. Now copy all the *Autoplay* files to drive M and run *Autoplay* from your new RAM-disk. No more delays while the program loads in new files, because they're already in memory! Clever, eh?



● Logical but still amazing: you can produce a printed music score on your ST without even having to swap your MIDI keyboard for that other sort typewriters have!

# Scoring high

The ST is the machine of choice not only for musicians but also for composers, with a range of programs available that can score any music you play in and print it out in traditional music notation, or play back any music you write down. Tim Anderson explores the world of music notation on the ST and explains how Scorewriters work

**M**ind-boggling but true: a printed musical score that plays itself back on the instrument (or orchestra) of your choice! All it takes is an ST, ideally alongside a MIDI-compatible instrument. It works the other way as well: play your own composition on a MIDI keyboard and you can print out your music in traditional music notation. Not long ago, the only alternative to illegible musician's handwriting was ponderous "music engraving," a laborious process of etching out musical symbols to make plates for printing. Now, the ST makes printing music quicker and more accurate than ever before.

Music notation brings together two of the ST's greatest strengths: MIDI compatibility and desktop publishing. The first MIDI software to be developed was the sequencer – a way of recording, editing and playing back music through any MIDI-compatible instrument. Soon after, programmers learnt to display

### Scorewriting software combines two of the ST's greatest strengths – MIDI compatibility and desktop publishing

sequencer files in traditional music notation. At the other end of the ST market, users of desktop publishing software wanted to include music in their publications, especially in areas like schools and churches.

Scorewriting programs all combine MIDI with DTP, but they fall into two categories, depending on how they were developed. Some, like C-Lab's famous *Notator*, are sequencers with a scorewriting feature. All the musical symbols, even things like treble clefs which have no sound of their own, are defined as "MIDI events," like the other data which goes to make up a MIDI file. This makes for excellent integration between the scorewriting and sequencing aspects of the software, but can limit its flexibility over how the music is laid out. Other programs, like *Take Control's Music DTP*, are advanced drawing programs with special features for music publishing. These are superb for complex layouts, but can be weak when it comes to MIDI compatibility.

#### WRITING THE HIT NOTE

Getting something resembling music notation on-screen and on a printer is not too difficult, but getting code good enough for serious use is very demanding. Like other DTP software, it has to handle text in multiple fonts, positioned anywhere on the page. In addition, music presents some problems of its own. For example, the vertical alignment of notes must be precise, because it represents their musical timing, and to look good the notes must have even spacing horizontally as well. Where there are lyrics underneath the notes, these have to line up exactly. The

best software automates all this, to save you hours of boring measuring and editing.

When the music is "played in" from a MIDI instrument, there's another problem. The ST lays down the basic beat with a metronome-like click, but no human musician plays in perfect time. If a program printed out exactly what was played – to the nearest 768th of a bar, for example – it would be incomprehensible! So the software needs to interpret the timing as best it can. This process is called "quantising," and the best quantising routines are extremely sophisticated in their efforts to preserve the subtlety of the music while presenting it in an understandable form. Some of the scorewriters have only basic quantising routines, whereas sequencers are usually much better, so you get the best results by pairing sequencers and scorewriters. Integrated programs like *Notator* give you the best of both worlds.

To help you find your way through the amazing range of music notation programs, we've included summary reviews of all the current packages. Note that Steinberg, producers of the stunning *Cubase* sequencer, don't appear – they are working on new versions of their specialist scorewriter, *Masterscore*, and of the scorewriting module in *Cubase* itself. Watch for news of these in future issues! **stf**

### TIGER CUB WITH QUICKSCORE

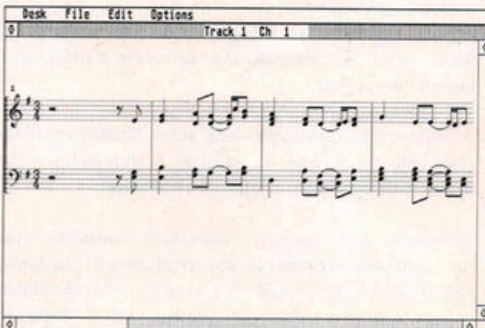
Machine: All STs, 1 MByte required  
£99.00 Zone Distribution ☎ 081 766 6564

One of the cheapest ways into scorewriting, Dr T's *Tiger Cub* graphical sequencer comes bundled with the *Quickscore* scorewriting module. *Quickscore* is a cut-down version of *Copyist Apprentice* (reviewed at right), and is actually a separate program which runs together with *Tiger Cub* under Dr T's multi-tasking system, MPE ("Multi Program Environment"). This means that *Quickscore* can be used with other Dr T programs like the *KCS* sequencer. When you're working with a piece of music in the sequencer, you can flip to *Quickscore* at any time, see what the score looks like, and flip back to the sequencer to edit it further if you need to.

True to its name, *Quickscore* is a handy tool for getting music onto paper quickly and easily. Appealing features include basic drum notation and transposition facilities. For music publishing, however, *Quickscore* has severe limitations, like no text or lyrics capability, no display of triplets, and no score editing from within *Quickscore* itself. And it may not be possible to display complex rhythms correctly. But when you consider that it comes free with a decent graphical sequencer at a very reasonable price, who's complaining?

#### FORMAT RATINGS

**Features:** 50% All you need to turn out a simple score, but no more.  
**Speed:** 50% Like *Copyist's*, printing and screen update are slow.  
**Ease of use:** 80% You can soon get to grips with *Quickscore*.  
**Results:** 55% Good results, but of course no lyrics or complex notation.  
**FORMAT Value:** 85% *Tiger Cub* is a very neat program, at a good value price.



● *Quickscore's* screen is simplicity itself.

## WHICH PRINTER?

All music software prints in graphics mode. In other words, the image of the page is sent pixel by pixel to the printer, not character by character as in text printing. The result is slow printing, although some programs are much faster than others. Fastest of all is PostScript printing, if the software supports it, which gives outstanding quality from PostScript laser printers and professional typeset quality from bureaus using Linotronic typesetting machines which print at 1,200 dots per inch.

The new inkjet printers – like the Canon Bubblejet BJ10e (£279.99 Ladbroke Computing ☎ 0772 203166) or the Hewlett Packard Deskjet 500 (£352.50 Switchboard ☎ 0560 85296) – are ideal for scorewriting at a very reasonable price. 24-pin dot matrix printers can give excellent results, and if you need wide carriage printing there isn't any other choice. And even a 9-pin dot matrix can print a very readable score, if you're patient. So don't despair if you can't afford a PostScript laser. Check out *FORMAT's* comprehensive roundup in issue 25 of 20 of the best printers available for your ST – and if you missed that issue, turn to page 130 for the *STF* back issue service.

### COPYIST APPRENTICE

Machine: All STs, 1MByte required  
£99.00 Zone Distribution ☎ 081 766 6564

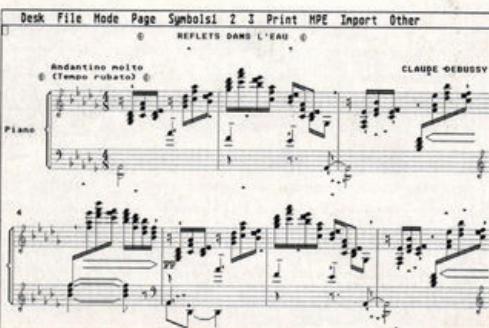
Dr T's series of notation programs betray their PC-compatible origins by making rather poor use of the ST's GEM interface, and many of the symbols are only available through obscure key combinations – like "I!@#\$" for a slur! *Copyist* is however a born-and-bred notation program, not an adapted sequencer.

It can certainly turn out some smart-looking scores. All the usual symbols are available, including some of the less common ones like grace notes and fermata. But be warned: *Copyist* is laborious to use, prints at snail's pace and has a long list of limitations. You can't adjust the width of paper, which is fixed at 8 inches. You can't use multiple fonts – even the expensive DTP version is restricted to printer-resident fonts. The display is not WYSIWYG (What You See Is What You Get), so lining up lyrics with notes is not at all easy. Hard drive users should beware – *Copyist* also sports a horrible form of copy-protection which causes your system to crash if you forget to put the master disk in drive A.

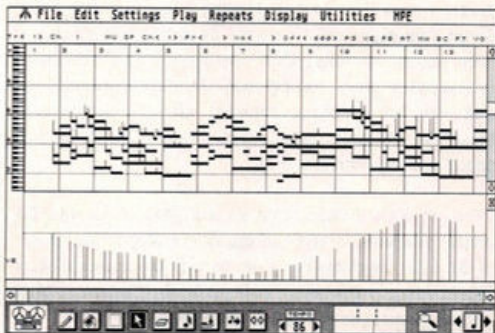
*Copyist* has no direct MIDI compatibility, but can import standard MIDI files. However, it can't play back your scores, although the Professional and DTP versions can export a MIDI file.

#### FORMAT RATINGS

**Features:** 55% Plenty of musical symbols, but limited in other departments.  
**Speed:** 45% Printing is slow, and so is redisplaying the score during editing.  
**Ease of use:** 55% Okay once you're used to it, but old-fashioned in approach.  
**Results:** 80% Good results, especially when lyrics aren't required.  
**FORMAT Value:** 75% A good choice for good results at a lowish price.



● *Copyist Apprentice* editing a complex piano score.



● Graphical note editing with *Tiger Cub*.

## → EZ SCORE PLUS

Machine: All STs

£99.00 Atlantic Audio ☎ 071 607 9036

It may have been the latest thing in 1987, but EZ Score is showing its age – only dot matrix printers are supported. This is a shame, because within its limitations this is a pleasant program to use, and can turn out some very respectable scores. The text fonts are in standard GEM format, so you could edit your own characters using a font editor. You enter notes from pop-up menus using the mouse or in step-time from a MIDI keyboard. There's no real-time MIDI entry unless you own a Hybrid Arts sequencer, because EZ Score only imports the special Hybrid Arts file format. But EZ Score can play your music using either MIDI or the ST's soundchip.

Other limitations are a maximum of three staves in a score; no part extraction; no drum notes; fixed page size; and no help with spacing notes to fit in lyrics neatly. Hybrid Arts' distributor says a new version will be available soon, and it's certainly needed.

### FORMAT RATINGS

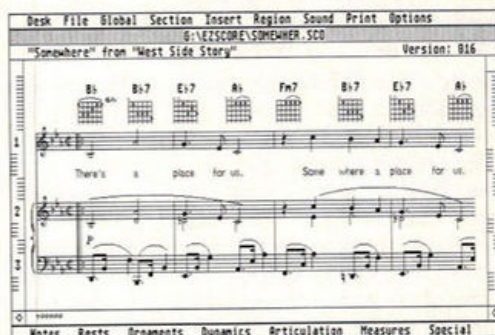
**Features:** 59% Good basic features, but in need of updating.

**Speed:** 65% A reasonable turn of speed.

**Ease of use:** 75% EZ Score is well-designed and straightforward to use.

**Results:** 53% More pleasant to use than Copyist, but results are not as good.

**FORMAT Value:** 56% An update is needed to make EZ Score competitive



● **EZ Score Plus:** a top program, but showing its age.

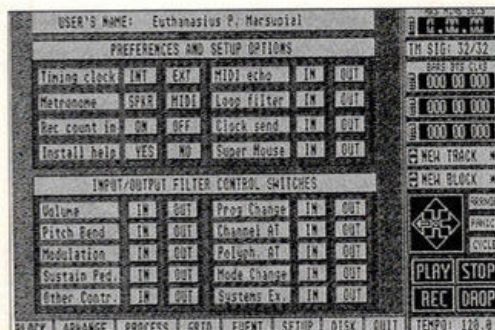
## PRODIGY AND VIRTUOSO

Machine: All STs (Virtuoso Mono only)

Prodigy £170, Virtuoso £305 The Digital Muse ☎ 071 828 9462

These sequencers from The Digital Muse include score editing and printing. Virtuoso is a full-featured sequencer, and Prodigy is a simpler and cheaper system which works in a similar way. The score editing, identical in both programs, is very limited compared to either of the Notator packages, with just one staff per page, only a basic range of symbols, and printing at draft resolution only. Currently, only dot matrix printers are supported.

On the plus side, you can edit the score (something you can't do with Dr T's Quickscore), and have the full benefit of excellent quantisation routines. It's useful as an extra facility for the sequencer, but not



● **Prodigy's preferences page:** prodigious features.

for proper music publishing. The Digital Muse are tackling this problem with a new package called *Music 2000*. Using *Virtuoso's* multitasking system, VMOS, this will integrate *Virtuoso* with *Music DTP* (see page 43), and Digital Muse hope this will provide a sequencing/scorewriting package to rival Notator.

### FORMAT RATINGS

**Features:** 45% Sufficient for basic scores only.

**Speed:** 85% Written in machine code, for fast operation.

**Ease of use:** 63% Well integrated with the rest of the sequencer.

**Results:** 43% Printout is little better than draft quality.

**FORMAT Value:** 59% Fair value, since the sequencer is well featured.

## PROSCORE

Machine: Mono STs, 1MByte required

£200.00 GFA Data Media ☎ 0734 794941

Produced by the French software house Digigram, *Proscore* is distributed in this country by GFA. It is a mono-only package, primarily aimed at transcribing scores from MIDI files and from real-time MIDI input, though notes can be entered with the mouse as well. It can arrange up to 27 staves, including four drum staves and one special track for chord symbols.

This is a quirky package, with its own distinctive way of working. Once you adjust to it, it works very well, with capable quantisation routines and good editing features. MIDI playback is excellent, with good control over channels and instruments. Lyrics can be inserted very easily, with excellent auto-spacing and alignment. *Proscore's* screens are functional rather than elegant, and there are tell-tale bits of French which pop up here and there, but not so much as to cause problems.

Unfortunately, *Proscore* is let down by having only one very basic font, and it lacks PostScript



● **Proscore isn't really hard to use – just quirky.**

printer output. There is no facility for exporting scores to desktop publishing programs. *Proscore* is just a bit too expensive for what it does, but if you want to check it out, GFA have an excellent demo disk, available on request.

### FORMAT RATINGS

**Features:** 82% A fine range of features, spoilt by limited text fonts.

**Speed:** 71% Speed of operation is fair.

**Ease of use:** 65% Has its own individual way of doing things.

**Results:** 76% Good results, but poor text printing.

**FORMAT Value:** 68% The best of the mid-price range.

## NOTATOR ALPHA

Machine: All STs, 1MByte required

£205.00 Sound Technology ☎ 0462 480000

Ever since the days of the humble Commodore 64, C-Lab have been developing software which integrates sequencing and scorewriting. The state-of-the-art Notator package (see page 44) does this superbly. Last year, C-Lab released a simplified version at less than half the price, although at around

# THE FEATURES TO LOOK FOR

What you need depends on the kind of work you're doing. Musicians who just want to get their MIDI compositions down on paper may not care much about the finer details of page layout, but do need software that can convert MIDI files intelligently. If you're aiming to produce music for publication, however, you need even more power at the writing and printing end. Here are some features to look out for:

**Special symbols.** Musicians use an incredible variety of special symbols, some with mysterious names like fermata and arpeggiato. Particular instruments sometimes need special notation – guitar chords for example.

**Page preview.** Most scorewriting programs present music on the screen as one long strip, which is not very handy if you're concerned about where the pages break or the general appearance of the page. A page preview facility, to show what the page will look like when printed, is extremely useful. A true WYSIWYG (What You See is What You Get) editable display is even better.

**Page layout.** Some music software is very limited when it comes to getting your score onto paper – like only allowing one size of paper. If you want to print on large A3 paper, check that the software can handle it before parting with any money.

**Fonts.** For a professional-looking score, flexibility over the style and size of type is essential. A nice bonus is the ability to design your own special characters.

**Automatic note display.** Professional musicians write the same note in different ways, depending on the timing and rhythm of the music. For example, it's sometimes correct to show a crotchet as two tied quavers. Some pro-

grams automatically decide how you want the notes to appear. Of course, this can work against you if you disagree! The option to overrule the program is a nice extra.

**MIDI support.** Most music writing software can play back a score through MIDI. The other way round, there's more variation. The ideal is real-time MIDI entry, where you just play the music in. A halfway house is step-time MIDI entry, where you play in notes from MIDI but specify their duration separately. You could use your favourite sequencer instead, as long as the scorewriting program can read standard MIDI files. Some can't.

**Ease of use.** Have you got all day? Some software can take that long and more, for fine editing of a medium-complex score. If you're in a hurry, check out the top speed of printing as well.

**Export.** However good they are, no music programs can offer all the facilities of a full-featured DTP package. But some can export the score in a form a DTP program can read, so that you can include it in other documents. The ideal is a format which can be exchanged between programs without any loss of quality, like GEM files. PostScript (the high-resolution page description language) is even better, for those lucky enough to have access to PostScript printers. Failing that, the IMG bitmapped format can be effective, although high resolution files (essential for sharp print quality) take masses of disk space and are clumsy to edit.

**Printer support.** Check that the software works with the printer you have, or the one you're planning to get. Some of the older programs don't get on with the newer printers like the Canon BubbleJet inkjet printer. (For more about printer choice, see the box on page 39.)





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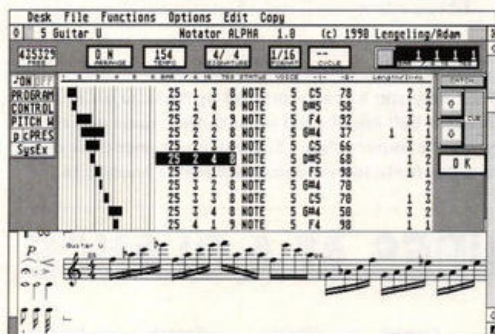
£200 you still couldn't call it cheap. You are buying a basic sequencer as well as a scorewriter, so price comparisons are difficult.

There are two ways to use *Notator Alpha*. If you're a MIDI musician, you can play in the music, do some creative editing in the sequencer, and then switch to the scorewriting page to print it out. On the other hand, even a non-musician can copy hand-written music, using the mouse to drag notes onto the staves from the pop-up partbox.

Entering lyrics is a joy: simply drag the "lyrics" icon under the music, and type the words, pressing <Tab> to move from one note to the next. *Notator Alpha* automatically re-spaces the notes to fit in all the words neatly. Printed output is fast and fair quality, although the font used for text is rather ordinary. And why did C-Lab decide not to support laser printers with this version?

#### FORMAT RATINGS

**Features:** 71% Plenty of scorewriting features, along with a basic sequencer.  
**Speed:** 76% Printing is fast, even using dot matrix printers.  
**Ease of use:** 74% Excellent use of the mouse makes it quick to learn.  
**Results:** 59% Results are fair, but limited by the printer drivers supplied.  
**FORMAT Value:** 63% A quality program, but expensive for what it is.



● *Notator Alpha*, showing the music as a list of MIDI events and in traditional notation. Edit one and the change immediately shows up in the other.

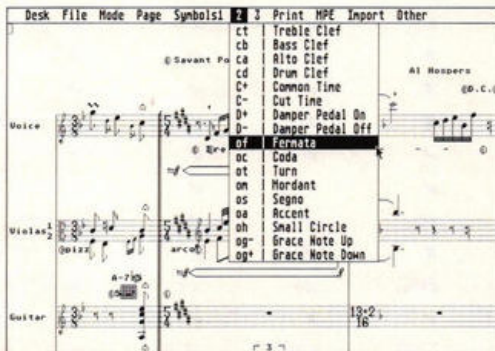
#### COPYIST DTP

Machine: All STs, 1MByte required  
 £249.00 Zone Distribution ☎ 081 766 6564

Despite its far higher price, *Copyist DTP* is remarkably similar to its little brother, *Apprentice* (see page 39). The main differences are:

- Score length of up to 100 pages (as opposed to five in *Apprentice*)
- Font editor included for special symbols
- Full range of printer drivers, including PostScript
- Export score as bit image file (TIFF)
- Export score as MIDI file

If you need these features, you need the DTP version. *Copyist* can score virtually anything, given time and patience. But you still have to put up with its clunky interface and slow print speed. The latest ver-



● Choosing a symbol in *Copyist DTP* is straightforward and there's an extensive range available, but you need to know the name of the one you want.

sion (1.7) has the dreaded copy protection removed, making life much easier for hard drive users.

#### FORMAT RATINGS

**Features:** 78% Does most things, but can't play back through MIDI.  
**Speed:** 55% Not the fastest performer, in use or for printing.  
**Ease of use:** 55% Poor use of GEM makes it hard to learn.  
**Results:** 80% Good results once you get there.  
**FORMAT Value:** 65% Over twice the price of *Apprentice*, not twice as good.



● *Music DTP* produced this printout of a complex piece of music on a DeskJet 500 inkjet printer.

#### MUSIC DTP

Machine: Mono STs, 1MByte required  
 £307.85 Titan Designs ☎ 021 415 4155

*Music DTP*, like the *Copyist* series, is a specialised drawing program which gives you total control over the appearance of the score. Unlike *Copyist*, it makes excellent use of GEM, and since it uses standard GEM fonts you don't have to look far for a wide range of alternatives to those supplied. Judging by the examples in the manual, it is aimed primarily at the classical musician; but does have a small number of drum notation symbols, along with guitar chords, which enable it to present a broad range of musical styles. Printing is through Atari's GDOS system, which can be slow, but with the latest printer drivers this arrangement offers good speeds and excellent quality. A PostScript driver is available as an add-on for £30.55 extra.

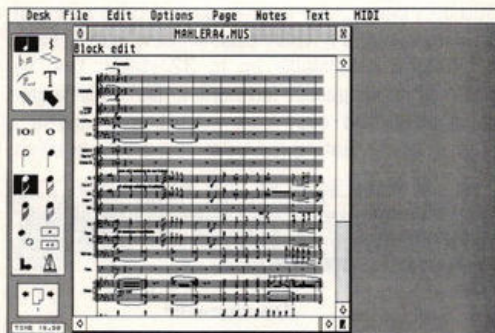
It's no fun putting lyrics into *Music DTP*, because re-spacing the score to make room for them has to be done manually. Getting the notes of a chord to line up vertically can be a chore as well. Import of MIDI files is not yet possible, although it is promised in the next version (2.1), and real-time MIDI input should come at the same time.

*Music DTP* does have some unique and valuable features. Pictures can be included in the score, and it is the only program which can export scores as GEM metafiles. These can be included in *Timeworks DTP*, with excellent results, though other DTP software may have problems if there are lyrics in the score. You can play back the music through MIDI or through the ST's own monitor, and samples can be used for high quality sounds. Overall, this is potentially an

excellent program, spoilt by very limited MIDI compatibility and the lack of automatic formatting. But you can achieve good results if you're patient.

#### FORMAT RATINGS

**Features:** 68% Flexible scorewriting, but lacks full MIDI capability.  
**Speed:** 75% Good, responsive display, and fast printing with the right driver.  
**Ease of use:** 69% Most operations are simply click-and-drag, but spacing is not automatic.  
**Results:** 90% Superb printouts are possible.  
**FORMAT Value:** 58% Price will look more reasonable when a MIDI-compatible version is available.



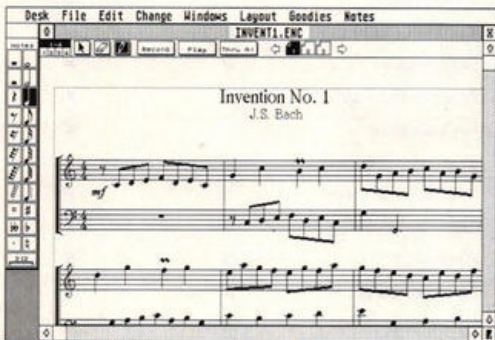
● The excellent Page Preview in *Music DTP*.

#### ENCORE

Machine: Mono STs, 1MByte required  
 £379.00 MCMXCIX ☎ 081 963 0663

Passport's *Encore* is a sophisticated score editor, converted for the ST from a Macintosh version. It is slick and responsive to use, and looks great on the screen. At first sight, it offers all that anyone could want for producing great scores: real-time MIDI entry; MIDI file import and export; 64 staves per page; up to four scores open simultaneously; multiple fonts; a nice page preview facility; and good quality printing.

*Encore's* printed output is PostScript-only – but don't panic if you've only got a nine-pin dot matrix,



● *Encore's* interface is as slick as any ST program's.

because a program called *Ultrascript*, included with *Encore*, can convert the PostScript into excellent quality printing on virtually any non-PostScript printer. In fact, *Encore's* Postscript support is second to none.

When it comes down to details, though, *Encore* has weaknesses. It's not easy to get imported MIDI files scored correctly without a great deal of manual editing, especially with compound timings like 6:8. Putting in lyrics is a chore as well, because *Encore* gives very little help with the spacing and alignment. Yes, it's a very slick program, but there are more niggles than there should be at this price.

#### FORMAT RATINGS

**Features:** 85% An outstanding range of capabilities.  
**Speed:** 81% Snappy screen display and reasonably fast printing.  
**Ease of use:** 78% Excellent use of the mouse makes things easy. But spacing can be awkward.  
**Results:** 92% High quality, scaleable printouts.  
**FORMAT Value:** 59% A Mac-like program at a Mac-like price.

➔ **NOTATOR**

Machine: Mono STs, 1MByte required  
 £515.00 Sound Technology ☎ 0462 480000

At £515.00, *Notator* is breathtakingly expensive, although the price includes a top-of-the-range sequencer. For serious scorewriting, it has several advantages over the cheaper *Alpha* version. The most significant is support for GEM fonts, and up to eight fonts can be used in one score. *Notator's* font manager makes it easy to change the selection. Printer support is excellent and fast, and quality of output at 300 dots per inch (on laser or deskjet printers) is outstanding. There's a handy page preview feature too.

*Notator* can handle up to 32 staves, and because of its sequencer functions it has sophisticated quantisation and easy part extraction. There is a drum-mapping feature for clear percussion notation,



● *Notator's* powerful, versatile score edit window.

## WHAT IS MIDI?

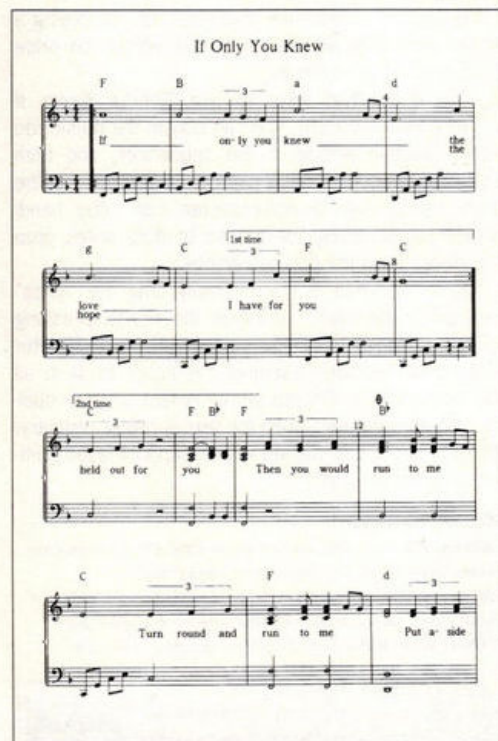
MIDI stands for Musical Instrument Digital Interface. Devised in 1982, it's a standardised way of storing and transmitting musical information. MIDI software controls instruments in much the same way as word processors control printers. MIDI also enables several instruments to be connected together, all playing in time, controlled by the ST. With its built-in MIDI ports and outstanding high-res monitor, the ST has become the musicians' favourite computer.

and *Notator*, unlike most score editors, is musically intelligent – for example, it won't let you put five beats in a bar if the timing is 4:4 – and insertion of rests is automatic.

There are one or two niggles. There are no dotted ties, and *Notator's* method for handling complex chord symbols is poor. In some cases, very complex notation is easier to achieve using a music drawing program like *Music DTP*. For desktop publishing, *Notator* has IMG export but no GEM files or PostScript. But for ease of use and integration with the sequencing side of things, *Notator* is unbeatable.

### FORMAT RATINGS

**Features:** 85% Has everything except PostScript support.  
**Speed:** 83% Screen response is fair, print speed outstanding.  
**Ease of use:** 79% A complex program, but easy to start using.  
**Results:** 88% Fine results from all kinds of printers.  
**FORMAT Value:** 82% If any software is worth this much, *Notator* is.



● "If only you knew" – printed by *Notator* on a DeskJet 500 inkjet printer. Both the music and the lyrics are impeccable – and you could incorporate up to eight fonts in one document if you needed to.

## SCORE IT! SCOREWRITING PACKAGE FEATURES AT A GLANCE

PROGRAM	Tiger Cub/ Quickscore	Copyist Apprentice	EZ Score	Prodigy/ Virtuoso	Proscore	Notator Alpha	Copyist DTP	Music DTP	Encore	Notator
Version tested	1.0	1.6	1.1	2.0	2.0.1	1.0	1.7	2.0(f)	1.3.1	3.1
Import MIDI file	✓	✓	✗	✓	✓	✓	✓	✗	✓	✓
Export MIDI file	✓	✗	✗	✓	✓	✓	✓	✗	✓	✓
Real-time MIDI input	✓	✗	✗	✓	✓	✓	✗	✗	✓	✓
Play back score	✓	✗	✓	✓	✓	✓	✗	✓	✓	✓
ST sound-chip support	✓	✗	✓	✗	✗	✗	✗	✓	✗	✗
Max number of staves	12	16	3	1	27	4	16	24	64	32
Export Bitmap (IMG)	✗	✗	✗	✗	✗	✗	✓(TIFF)	✗	✗	✓
Export GEM	✗	✗	✗	✗	✗	✗	✗	✓	✗	✗
Export PostScript	✗	✗	✗	✗	✗	✗	✓	✓	✓	✗
Include lyrics	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓
Incl. miniature notes	✗	✓	✗	✗	✗	✗	✓	✓	✓	✓
Page preview	✗	✗	✗	✗	✓	✗	✗	✓	✓	✓
Part extraction	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓
Macros	✗	✗	✗	✗	✗	✗	✓	✗	✗	✓
Multiple fonts	✗	✗	✓	✗	✗	✗	✓ (P'Script)	✓	✓	✓
Import images	✗	✗	✗	✗	✗	✗	✗	✓	✗	✗
Auto-align notes	✓	✗	✗	✓	✓	✓	✗	✗	✓	✓
Auto-align lyrics	N/A	✗	✓	N/A	✓	✓	✗	✓	✓	✓
Auto-space lyrics	N/A	✗	✗	N/A	✓	✓	✗	✗	✗	✓
Guitar chords	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓
Drum notes	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓
Transpose	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓
Scaleable output	✗	✗	✗	✗	✗	✗	✗	✓	✓	✗
Page sizes	8x11	8x11	8x11	8x11	any	8x11	8x11	any	any	any
Fast draft printing	✗	✗	✗	✗	✓	✗	✓	✗	✓	✓
Price	£99	£99	£99	£99	£200	£205	£249	£305.50	£379	£515
<b>FORMAT value rating</b>	<b>85%</b>	<b>75%</b>	<b>56%</b>	<b>59%</b>	<b>68%</b>	<b>63%</b>	<b>65%</b>	<b>58%</b>	<b>59%</b>	<b>82%</b>

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ST FORMAT 92% Hooray for Henrietta

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"This program is great fun and has great potential for work in any language ..."  
I thoroughly recommend it Times Educational Supplement "Spells"

"... an excellent parent/teacher facility  
which sets it aside from the competition"  
ST FORMAT Hooray for Henrietta

"An amusing and well designed program which  
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# Public Sector

The dream began to change again – a strangely smiling man was handing me something. “This is just what you need, mate,” he said, before changing into a packet of milk chocolate Hobnobs. I looked down in surprise at my hand – it was a warm disk. Chris Lloyd dreams in digital again

## GAMES



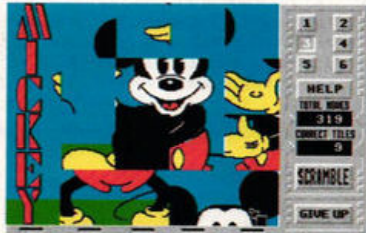
● **Infiltration** is a 3D Construction Kit puzzler. You have to get to the yellow crosses and lay mines.

### INFILTRATION

LAPD – Disk G142

*Infiltration* is a classic puzzle game written using the 3D Construction Kit. Your mission is to search a deserted space-ship and lay 20 mines. There are lifts, teleporters and loads of puzzles to get in the way. Most seem to involve being in the right place and shooting things. The colours are rather drab but it's well put together. The going is a little slow – as with all 3DCK games – while you troll along the corridors looking for the yellow crosses. Puzzles vary from easy to seemingly impossible. One for the more thoughtful, exploring types.

**STF RATING – 70%**



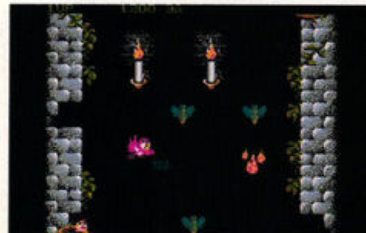
● Okay, you try and put Mickey back into shape! I give up! **Scramble** is a simple, but infuriating, puzzle game.

### SCRAMBLE

Goodman PDL – Disk GD 1371

Nicely programmed version of those plastic sliding puzzle games. Just move the blocks around to complete the picture. It looks easy but has you climbing the wall while you try and work out how to get the last piece into place without mucking up all the rest. You need to be logical and plan ahead – better leave that to the kids, eh? When you've pieced together all the supplied pictures, there's a utility to add your own.

**STF RATING – 67%**



● **Robin** is an avoid-'em-up – you guide the little pacifist past those nasty wasps to save your brood.

### ROBIN

South West Software Library – Disk 1723

Written with the *Shoot-'em-up Construction Kit*, *Robin* has a novel twist – you can't shoot anything! You play a little robin trying to save your chicks and catch flies, while avoiding the nasty spiders, wasps, candles and flaming meteors. Later on, you meet these mad mice that throw out little hearts at you. Graphics are simple and quite cute. The game is not too hard to get into. Can't help wishing the little bird would suddenly grow laser cannons though. Rainy afternoons only, methinks.

**STF RATING – 66%**



● In the world of **Conquest** people are born, grow up, join the army and die – all in the space of a few days!

### CONQUEST

Goodman PDL – Disk GD 1386

In *Conquest* you play the part of king and must survive for a year. You can plant crops, chop down trees, send armies off to attack your mates and so on. You need to keep your subjects happy and healthy, but not too contented or they breed like crazy and you run out of food. There are also plagues and enemy armies to cope with. The graphics are pretty and the whole thing is simple to play – point and click on icons. The real trouble is that it all works in real-time, so you need to be very quick on the mouse as the days whizz past. Everything's going okay one second, then half your peasants starve before you can get to the food icons.

**STF RATING – 63%**

## ART AND MUSIC

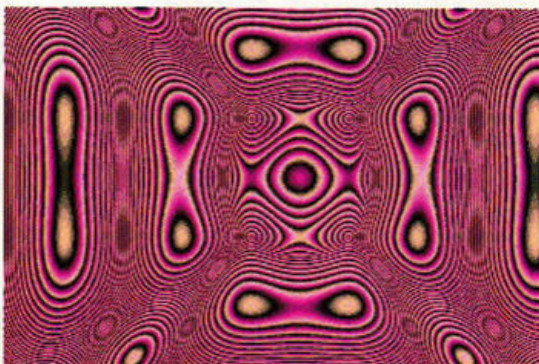
### RIPPLES

Floppyshop ST – Disk ART 53

Oh no, not more iterated functions! *Ripples* is another of those weird drawing programs that produce psychedelic patterns. This one uses simple polynomials. You enter a few parameters and, after a minute or two, you have a work

of modern art or a complete mess, depending on the data. It's all a bit hit or miss. Add colour cycling and you've got, er, a pretty screen. Screens can be zoomed in on, moved about and saved as *Degas* pictures. Fascinating and almost pointless. Great stuff.

**STF RATING – 76%**



● *Ripples* uses differentiation and modulo arithmetic to draw hypnotic patterns. This one comes in handy for the odd brain-washing session.

### ENERGY FOR YOU

Riverdene PDL – Disk DEM 952

A straightforward selection of tracker music. Most of the music is not half bad. Nice samples and hip tunes – what

more can you say? After the terrible sound-chip generated noises a lot of ST games produce, it's good to hear what the machine is capable of.

**STF RATING – 68%** →



● The only screen you see. *Energy for you* is a collection of house-style tracker music. “Gimmie some bass!” and other such phrases abound.

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# The ST Club

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Over two years ago New Computer Express described our newsletter: "To call it a newsletter shows a terrific amount of modesty on their part...It really is packed with information, with more concentration on the serious side of the ST." ST Applications is a complete re-design of The ST Club Newsletter that has grown to 3,500 subscribers since we started it four years ago. Each monthly issue runs to at least 60 A-4 pages. If you would like to subscribe or receive an evaluation copy please complete the form below.

## Fontkit Plus 3.

The essential font utility for the ST. Edit or create GEM fonts, Signum fonts, screen fonts and downloadable printer fonts. Incorporates a suite of drawing tools, plus block manipulation tools, and it will import Calamus, Degas and Macintosh fonts. Price £19.95

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Powerful replacement for the Atari Item Selector. Universal Item Selector III incorporates a host of utility functions: format disks, copy, move and rename files and folders, create folders, find files, set file paths etc. "You'll wonder how you ever lived without it", ST Format, December 1990. Price £19.95.

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# TOP TEN PD SHOOT-'EM-UPS

Fancy a bout of mindless mayhem? Check out these alien-bashers! You could get the lot for the same dosh as a single full-price game!



## 1. LLAMATRON

Goodman PDL - Disk GD 1200  
A brilliant and manic blast. Guide your llama - yes, llama! - around, avoiding various wacky nasties - coke cans, brains, Mandelbrot creatures and all sorts. There are loads of power-ups and fluffy creatures that you have to rescue. The graphics are colourful and move around at quite a pace. Sound, just for once, isn't left out, with loads of dead groovy samples. With 100 levels of hectic blasting, this really is a little gem.

**STF RATING - 95%**



## 2. BLASTER

Jennix PD - Disk JPD 267  
Lovely version of the classic arcade game *Defender*. You zap around the horizontally-scrolling world, keeping the aliens away from your chaps. All the arcade features are here: smart bombs, swarms and the radar at the top of the screen so you can plan ahead. Soon has you wrenching the joystick around trying to save the little blokes from being mutated. The sprites are small but things moves nicely, even when the screen is crammed with them. Addictive stuff.

**STF RATING - 90%**



## 3. SPACE INVADERS

Budgie - Disk 50  
It had to be in here somewhere, didn't it? The granddaddy of all arcade games and still a jolly good one it is, too. This ST version is faithful to the original; the sprites move very smoothly and the games ooze that one-more-go-before-bed quality. There's that wonderful panicky feeling as the last invader whizzes down the screen towards you going "dun-dun-dun-dun!" Classic carnage.

**STF RATING - 85%**



## 4. EXODUS

Budgie - Disk 41  
*Exodus* is an eight-way job - you control a little spaceship across a smoothly scrolling futuristic landscape. There are loads of ground and air targets to hammer at. The graphics are small but colourful. There's a radar too, showing the positions of all the ground targets. Once you've reduced them to ashes, it's on to the next level. The control's tricky at first, 'cos the bullets fly from all over. Eight-way destruction.

**STF RATING - 85%**



## 5. A QUEST FOR GALAXIA

Budgie - Disk 30  
Another ST version of a classic arcade game, *Galaxians*. Wave after wave of bird-like aliens wibble down the screen at your spaceship. You're down at the bottom of the screen moving left and right. You can only fire one shot at a time, so aim carefully. It looks like the original. Although the sprites are rather small, the last little sod is always the hardest to hit. Lovely alien annihilation.

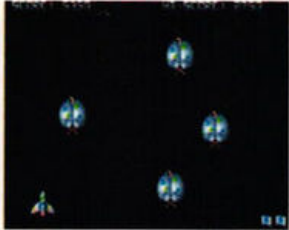
**STF RATING - 78%**



## 6. AVINA BLUE

Budgie - Disk 72  
You need fast reactions for this frantic horizontal mission. Your task is to infiltrate a huge spaceship - zooming along tunnels and blasting what you can. You get plenty of ships - you're going to need them, too. Hope you've got a sturdy joystick. A manic buzz.

**STF RATING - 77%**



## 7. NOVA

Floppyshop PD - Disk GAM 167C  
A variation on *Space Invaders*. Each wave of nasties uses different graphics and tactics. The sprites are detailed and the game has a slick feel to it. Among the cannon-fodder are these huge beetles that split into smaller ones. Left a bit, right a bit, fire as fast as you possibly can. Simple stuff, but addictive. Great guns.

**STF RATING - 75%**



## 8. CYBERSTORM

Budgie - Disk 83  
The latest Budgie title, *Cyberstorm*, is like *Defender* without all the little men to rescue. Control's difficult at first - your ship moves quickly and it's easy to run into the baddies you're trying to shoot. To help there's a radar screen, smart bombs, a shield and a power-up which makes life a lot easier. So, don't shoot the silver ball, pick it up. Nice graphics, including parallax scrolling. Hectic obliteration.

**STF RATING - 73%**



## 9. BELLUM

Softville PD - Disk GAME 124  
A *Galaxians* type game with extras. You can move anywhere on the screen. Your ship gradually disappears as you get damaged, ending up as a tiny sprite. Luckily there are power-ups which float by to help. These include speed-ups, triple guns and damage repair. The first level is easy, but it soon hots up. Simple graphics, but they move nicely. More waves of extermination.

**STF RATING - 72%**



## 10. SWIFSTAR

Caledonia PDL - Disk GM 63  
Your ship scrolls vertically across a varied landscape. There are flying things, gun turrets and tunnels to get through. The graphics are a bit crude but colourful. It's sluggish compared to the better ones, but has enough variation to keep you on your toes. Flying bug-bash. The end of Level One in *Swifstar* pits you against these vicious swarms, who home in on your spaceship. Don't these roughy-toughy heroes have any friends?

**STF RATING - 70%**

# FAVE RAVES - FLOPPYSHOP'S TOP TEN

The very nice man from Floppyshop, Steve Delany, has put together his personal top ten of jolly good proggles for you. What a very nice man.

1. EZ ART - excellent art package, recently upgraded to version 1.5.
2. KAODESK - replacement Desktop from Germany with nice little icons and all that. Now translated into English for the less cosmopolitan of us.

3. ROBOT WORDS 1 - one for the kiddies - an educational version of *Hangman*.
4. PICTURE MIX - another kiddies' special. Piece together picture against the clock.
5. MYSTIC WELL - *Dungeons and Dragons* game, exploring nasty holes in the ground and being heroic.
6. THINGS NOT TO DO - funny and original demo.
7. VEGETABLES MEGA DEMO - a mega demo by, er, the

- vegetables? I can see it now: cavorting cucumbers, bouncing beetroot, scrolling spinach leaves...
8. DIGI COMPOSER - groovy soundtracker for knocking out digital music.
9. PAGESREAM OUTLINE FONT EDITOR - powerful and useful utility for desktop publishing.
10. AMATEUR RADIO DISK 2 - hams only - they seem to like it.

# MAGIC POCKETS

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They've whipped his helmet.  
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bonus games • secret rooms • loads and loads of power-ups**



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# SCREENPLAY

Life is just one big game, innit? We're the sprites, the world is the background, the troubles strewn in our metaphorical path are the nasties, and the end-of-level meanie is – er, Death. Actually, forget it – life is nothing at all like a game

The *ST FORMAT* reviewers: impeccably-animated, well-drawn sprites with just a hint of Javanese musk



## ED RICKETTS

Not many people know this, but Ed actually started the Second World War single-handedly by insulting Hitler's poodle. Uncanny.



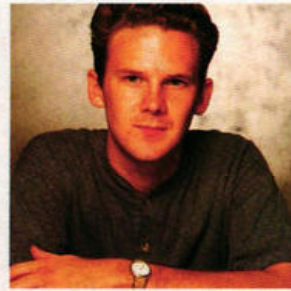
## CHRIS LLOYD

Occasionally hilariously mistaken for the slightly famous tennis player. You can imagine the hours of fun we have. How we laughed.



## NEIL JACKSON

Neil cites Goebbels, Pope John Paul 2 and Esther Rantzen as his major influences. Known for being tall, he's famous for not being short.



## ADAM WARING

A fine upstanding man, proud of aspect and noble of bearing, with a massive IQ and a keen moral sense. Yep, he's a good friend of Adam's.



## JAMES LEACH

James was once thought to be a child prodigy, but it turned out to be a birthmark. He enjoys taping birds' legs to the windowsill and watching them flap.



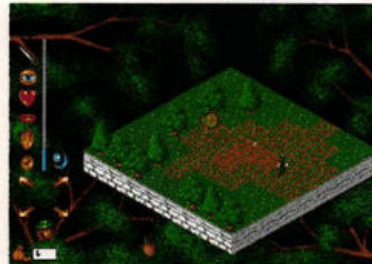
## 62 CRUISE FOR A CORPSE

Destined to join *Midwinter 2* in the *Blimey! It's Not Actually Here At Last, Is It?* file, *C for a C* finally gets the review it so richly deserves. And what a review it is! Packed with words and full to the brim with punctuation. You've never seen the like, etc and so on.



## 54 UTOPIA

Don't think living in a Utopia would be such a breeze. You'd have hours and hours of pointless happiness to wade through. Can you imagine a life where you didn't have to complain about the weather? Bring back the old days, that's what we say (or something).



## 66 ROBIN HOOD

Fashion gods, note: green tights are in this autumn. Rob bounds onto the *ST* screen with a camp wiggle and some embarrassing underwear. (Quite frankly we don't give a damn what the game is like, just as long it doesn't include that bloody Bryan Adams song.)



## 64 TERMINATOR 2

It's nothing personal, but, to tell you the truth, we're sick and tired of all the clichés from *T2*. Wouldn't "I'll be back" have been much better if it had been "I'll be back shortly"? "Hasta la vista"? What about "Goodbye then"? No imagination, these scriptwriters.



## 59 MiG-29M SUPERFULCRUM

Cast your mind back to issue 20. Remember *MiG-29 Fulcrum*? Well, after months of intensive research, late nights and offensive body odour caused by not washing for a week, Domark have come up with a new improved version. Incredibly, the *Fulcrum* is now super. Impressive, eh?



## 78 VROOM

Not much vroom for improvement here. Yes, it's standing vroom only by the track – there's no sitting vroom. It's a vroom with a view. It's certainly a living vroom. These and other tired old clichés have been completely cut out of our scorching review of UBI Soft's racer with bite.

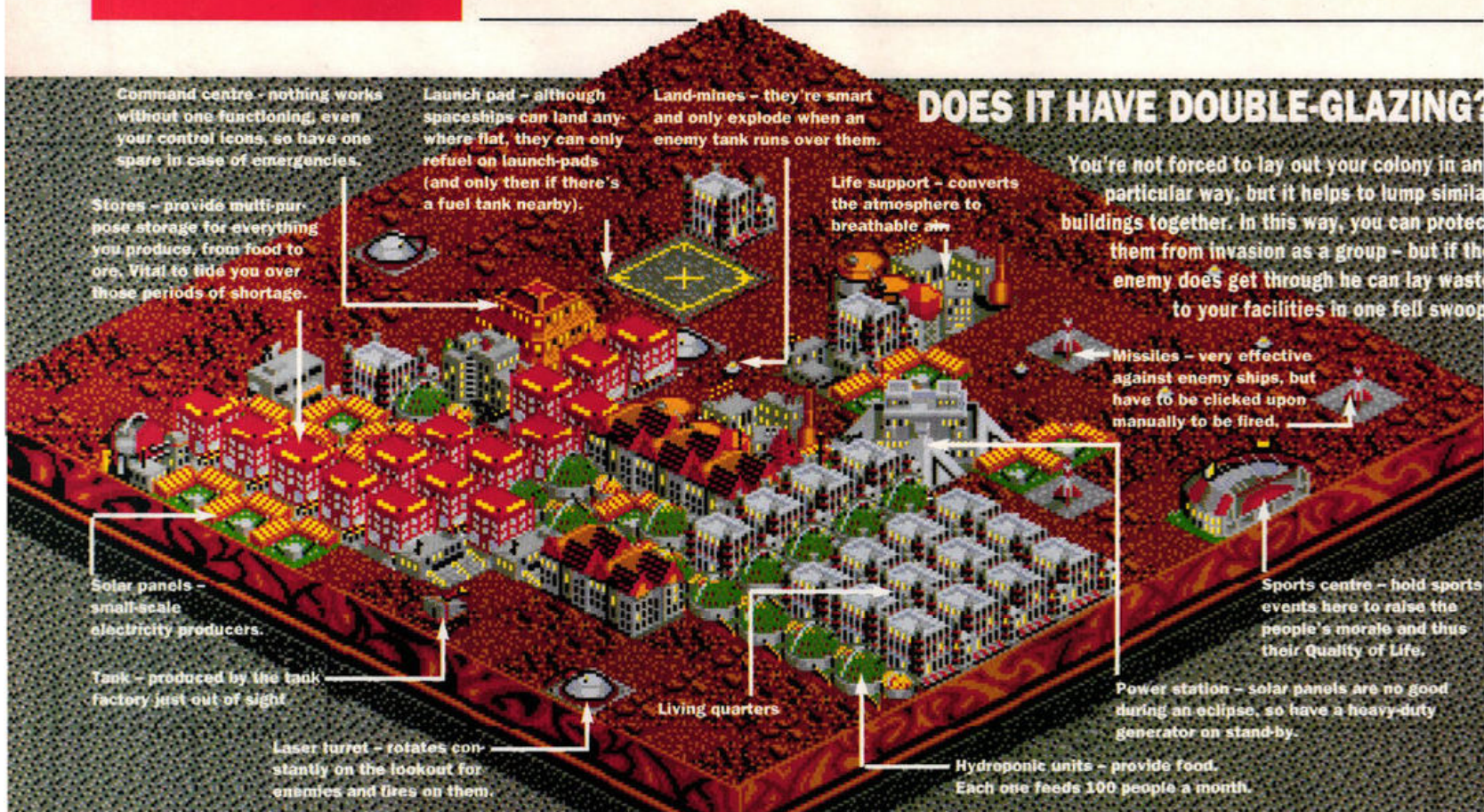
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### STF REVIEW POLICY

- It is *ST FORMAT* policy to review only finished games – that is, the games you could buy in the shops – never incomplete or demo versions
- We review all games released, but only when they're finished. We won't be rushed into reviewing unfinished games to beat our "competitors"

MIRRORSOFT'S OWN INSIDE TIPS FOR MEGA LO MANIA ● BEAT FLAMES OF FREEDOM THE EASY WAY ● SURVIVE THE NIGHT SHIFT ● POWERMONGER CRACKED – PAGE 94



**DOES IT HAVE DOUBLE-GLAZING?**

You're not forced to lay out your colony in a particular way, but it helps to lump similar buildings together. In this way, you can protect them from invasion as a group - but if the enemy does get through he can lay waste to your facilities in one fell swoop.

# UTOPIA



**Someday there'll be a game called *Dystopia*. You'll be put in charge of a city and the challenge will be to make life as miserable as hell for the poor inhabitants. But, for the moment, Ed Ricketts has to settle for *Utopia***

**W**ouldn't it be nice to have a game that combined the graphics of *Populous* with the playability of *Sim City*? A game where you had total control over the development of a city - one which actually looked like a

city? Well, step right this way, because *Gremlin* may just have something to interest you.

In *Utopia*, you are given command of a newly-formed colony on a deserted planet. Using the available resources, it's up to you to expand and improve

the colony, making it the best you can for your people. Their contentment is measured by a Quality of Life (QOL) rating.

Starting with a few essential buildings - such as a life support, some hydroponic sites and a command centre - and a handful of people, you have to construct further buildings in accordance with your colonists' needs and wishes. Your people are constantly multiplying, so your food supply is soon inadequate, which forces you to build more hydroponic sites. You must also ensure they have enough oxygen and power by adding further life support and power generators. You need stores to keep surplus supplies in, and flux pods to store unused energy.

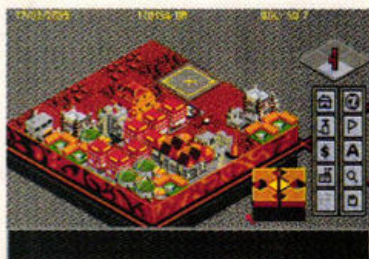
Once the basics are catered for - at least temporarily - you can invest in other things. Some laboratories would be useful. With these, a few scientists working in them and a healthy research grant, you soon produce new inventions

that make life that bit easier - more powerful solar panels, for instance. Then, how about a sports centre to keep your people amused?

Unfortunately you're not alone on the planet. Another race have settled elsewhere, and are evolving identically. Sooner or later they attack you - and when they do, you must be prepared.

There's a wide range of weapons you can use - defensive ones, such as laser turrets and missiles, and offensive ones - spaceships and tanks. The latter items have to be built in workshops, which, in turn, have to be built. You also need to construct a mine over a suitable ore deposit to produce the raw material, a chemical plant over a similar deposit of fuel to provide fuel, some fuel tanks to hold it, and a weapons lab to arm the ships and tanks. As you can see, building weapons is not something to be taken lightly.

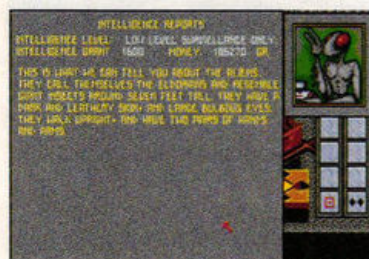
Although you can never see the alien city, you can send spies into it to



● If your idea of *Utopia* is eking out a miserable existence on a barren mud-ball of a planet, trying to make an honest living by rooking your colonists left, right and centre, you'll probably like *Gremlin's* new god-game. It has everything - it has violence, it has aliens, it has hydroponic centres and, of course, it has space moss.



● When the aliens attack, the first thing to do is protect your command centre, then get your ships and tanks (you did build some, didn't you?) into the area. They automatically fire on anything within range, so there's no need to position them too accurately. Your laser turrets should be your first line of defence.



● Your spies do the best they can in uncovering the enemy city, but remember that they work better with more cash. The first bunch of aliens are called the Eldorians. This happy lot eat their people when they've died. (Similarity to any publisher living or dead is completely coincidental and frankly staggering.)



● Ignore the physical appearance of your advisors; concentrate on what they say. Click on each to find out about your people's morale, population density, what's going on with your factories, your money, how research is going, your current battle state and everything you always wanted to know about sex but were afraid to ask.

# ICON (OH!) CLASS IN THE MIDDLE OF NOWHERE

The display in *Utopia* is surprisingly uncomplicated, given the nature of the game. Even the icons are quite understandable.

**Date**      **Amount of spending money available**      **The all-important Quality of Life rating**

27/10/2054      177210 BR      QOL: 53.7

**Build** – choose a building to erect, providing you have the money

**Demolish** – mainly used to clear away rubble after an alien attack

**Financial** – change the amount you're trading and set the research grants

**Industry** – set the number of workers employed in each trade

**Pause**

**Map** – sort of takes you to the map screen, really

**Marker** – enables you to set one of eight markers to direct your vehicles

**Advisors** – when in doubt, ask other people – and then blame them

**Spy** – step through the reports from your spies and set the Spying grant

**Disk** – load/save a game or change to a different scenario

**Direction scrolling arrows**

**Your current mode. Picture of a building for construction, a dump truck for demolition and an "I" for information mode**

find out about the race and tell you when an attack is likely. Again, the information you get back is dependent on the funding you put in. You can also make a pre-emptive attack on their city if you're particularly aggressive.

Building, researching, spying and so on all take money. For the first six months you're given a grant to help you, which you can supplement by trading some of your less essential items. Trade can either be done automatically by the trading computer within limits you set, or manually each month. Each colonist pays tax, too.

As if all this wasn't enough, there are occasional natural events that interfere with the running of the colony. Solar eclipses render your solar panels inoperable, meteors destroy buildings and machinery sometimes goes wrong and damages nearby buildings.

There are ten scenarios included with *Utopia* which effectively act as difficulty levels. Each scenario presents

you with a different terrain, alien race and problems from those of the last one. A scenario never actually ends unless your city is completely destroyed by the aliens, but you can consider it completed when the vital Quality of Life rating rises over 80%.

The graphics in *Utopia* are a strange mixture of the impressive and the thoughtlessly plain. The main display graphics are very well drawn, full of detail and imaginatively designed – although you need a monitor to get the most from them – but the icons, some of the informative graphics and the text look shoddy and amateurish. There's not much animation – it's confined to the spaceships and tanks, plus a few flashing lights on the buildings. Sound can be toggled between reassuring but unambitious beeps and a selection of maddening but indifferent tunes.

**VERDICT:** At first glance, *Utopia* appears to be loaded with rules and

complications. Dig deeper and you discover there's more to it than just changing lots of numbers. As your colony grows, you gain more money and more things begin to happen. You then become completely involved in its running. There are so many things to take care of at once, you just don't have a chance to sit idle and watch.

The game does have a few faults. It's hard – the first few times the aliens attack, your city is completely destroyed. Even when you can fight back, it is a real struggle to raise the QOL to above 60%, let alone 80%. There's no way to access other parts of the planet quickly (apart from the scroll arrows) – to do this you have to bring up the map screen, click on the area you want, and return to the display. And there's quite a bit of disk swapping if you've only got one drive.

But these faults are not enough to detract from what really is a first-rate god-game. There's enough here to

keep you occupied for several months at least, and there's even the possibility of more scenario disks to come. For all these reasons, *Utopia* is the first Gremlin game to gain a *FORMAT* Gold. Long may its hydroponics domes flourish.

**ED RICKETS**

## UTOPIA

GREMLIN £29.99

- Undeniably similar to *Sim City*, but this is set in the future and is more interesting
- Populous springs to mind on seeing the graphics, but the games aren't really similar
- Closest in spirit and gameplay to *Railroad Tycoon*. *Utopia* has superior graphics and is more accessible
- Setting is reminiscent of *Millennium 2.2*, *Deuteros*, *Supremacy* et al.

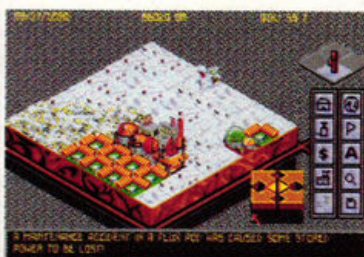
**STF RATING 90 %**



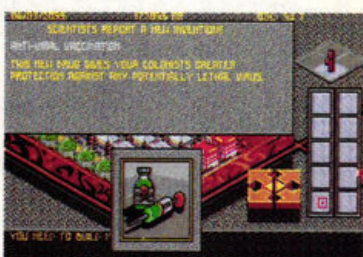
● Constructing a new building is as simple as choosing it from this menu and clicking where you want it to be built. Providing you're near a flux pod (energy store) and there are no other restrictions (a space moss convertor, for instance, can only be built on space moss), scaffolding is erected and soon you have a spanking new building.



● The map screen offers various ways of interpreting the planet. You can see the location of your buildings or your vehicles, the enemy's vehicles – if they're within your radar range – or physical features such as deposits of ore and fuel, so you can place your mines and chemical plants appropriately. The enemy city is never visible.



● Each scenario gives you a different sort of landscape to deal with. Some of them may be more mountainous than others, or have less space moss, for instance. Although finding flat land isn't restricting at first, as your colony grows you start struggling, particularly if there are huge great lumps of rock getting in your way all the time.



● If you (a) build enough laboratories, (b) provide enough scientists to work in them and (c) give them enough money, new inventions occasionally appear. Usually they are just improved versions of existing equipment, but sometimes things like this nifty virus vaccine pop up and do wonders for your all-important Quality of Life rating.

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# ATARI

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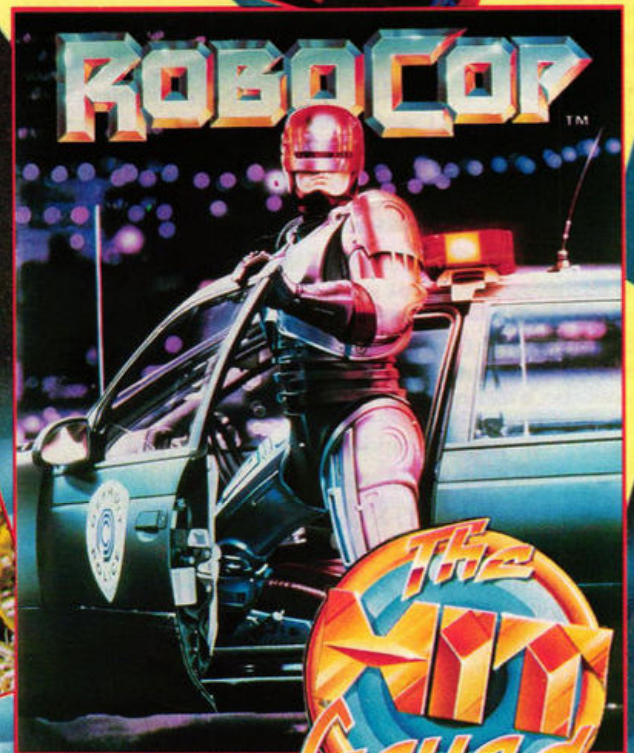
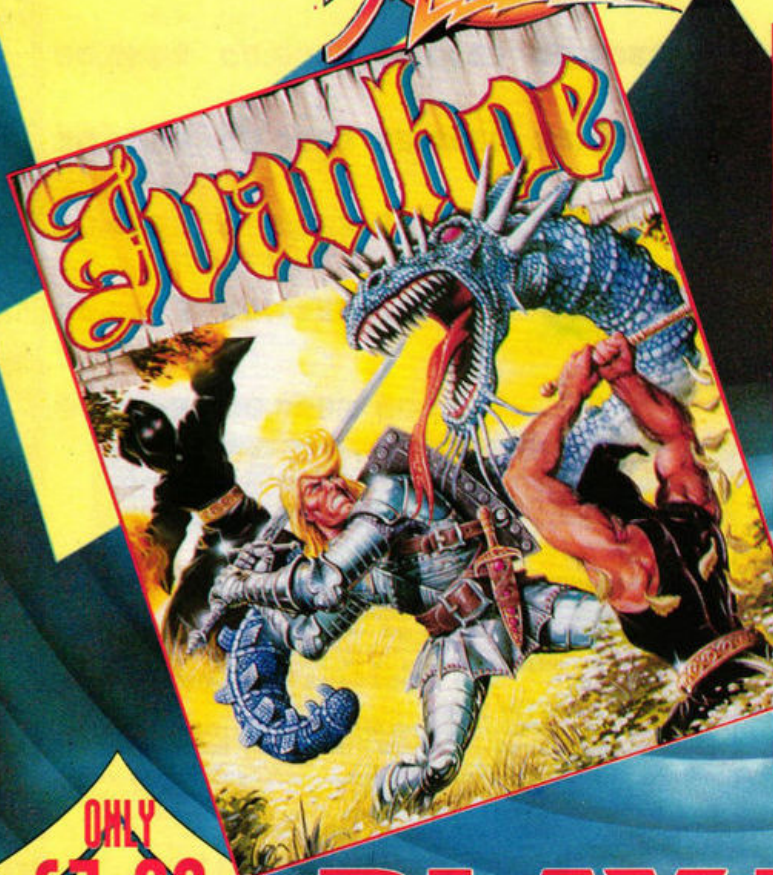
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● The real thing makes an appearance. Fast and furious, the MiG-29 SuperFulcrum is a fictional upgrade of Mikoyan-Gureyovich's superb MiG-29 Fulcrum. It can take on the likes of the F-16 Falcon with impunity, but can you handle one?

# MiG-29M SUPERFULCRUM

With the Cold War nonsense safely behind us, now's the time to find out what it's like to fly the latest in rebuilt Soviet fighters. Neil Jackson lifts off to the land of Déjà Vu...

## SWOOP FROM ABOVE

A good working knowledge of the rebel locations is all-important to the task of overpowering them.



● All missions begin (and, if you're lucky, end) on this screen – the campaign map. From your starting point on the left side, your best bet is to attack the only base without a big red radar circle around it. If you can destroy everything here, you can take over the runway and a UN flag is displayed on the map.



● The secret to successful enemy engagement is the destruction of important supply bases and depots. A fast dive-bombing run, using SS-240 unguided rockets, is usually the best method for dealing with storage buildings.

Once again, Domark take to the skies, with the sequel to their widely-acclaimed MiG-29. Created by the same programming team, known as the Kremlin, MiG-29M SuperFulcrum has a lot to live up to. With such a good predecessor, the judging standards are higher and the tests tougher. How do you improve upon perfection?

Initial impressions of SuperFulcrum are underwhelming. In fact, *FORMAT* readers may think they've paid nearly 40 quid for last month's Cover Disk demo. At first glance, the only differences seem to be the addition of a rather poorly drawn map and a short "fly-by" intro sequence with squeaky ST sound-chip accompaniment. Definitely not a spell-binding start.

Digging deeper – by hitting the start button – you find a program which, although still not looking overly tweaked since the demo version, has plenty of opportunities for the airborne joyrider. The landscape is laid out as per the demo, but there are many more buildings, runways, bridges and depots to fly over and bomb the hell out of.

At first, you look at it and think, "That's not so big – I can clear that up in minutes," but the truth starts to emerge once you've been bashed about a few times. SuperFulcrum is tough. Getting up is easy enough – just a matter of "hitting the heaters" and pulling back the stick. Even navigation is simple, with your three-range radar and target-designator (in the HUD) to show you the way. The only annoyance is the regular disappearance of the target designator after a short interval – why this happens is anybody's guess. Surely modern missile-targeting sys-

tems lock on and stay locked on until you clear them – not give up when they're bored. This problem appeared in the original MiG-29 and it's a real pain to find it's still with us.

The bombing and strafing of targets on the ground is a strangely satisfying experience, and I shall be consulting my psychiatrist about it later. It's suitably pulse-quickening to launch a death-defying dive-bomb attempt firing dumb, unguided rockets into a bridge while travelling at around 500km/h. The dry sensation in your mouth as you look out of the back window and see the cracked sections of the roadway fall into the water must be something like the real thing.

Engaging enemy aircraft is similarly realistic. Drop your airspeed to reduce the size of your turning circle and pull hard to loop round behind your opponent. Keep a lock on him, using the air-to-air missiles, and gradually pull in closer behind until the target designator turns red. Then fire with the mouse right button or the Spacebar and watch your missile explode as it hits. Great plumes of smoke pour out of your opponent's plane – a sure sign that he's heading fast along the "down" escalator. Don't be tempted to follow.

The hardest part by far is getting your bird down once you've made it back home (assuming you don't run out of gas on the way – the MiG-29M is a guzzler when the burners are alight). The gut-wrenching, sweaty-palms feeling you invariably succumb to on your final approach is second to none. On joystick control the plane is a bit more stable (though not so "chuckable" in dogfights) compared to the mouse, which reacts to your jittery fingers. With



# Out of luck in Outer Space

# SUSPICIOUS CARGO

Starring **JONAH HAYES**



When you need something transported in space, and you don't want inquisitive customs folk asking questions, or tiresome legal documentation, then 'Lady Luck' is the ship, and Jonah Hayes is your man ..... This time though he's bitten off more than he can chew - his cargo is alive (genetically speaking), dangerous and sought after by a rival company who'll stop at nothing to cripple his dodgy tramp freighter and take over the job!

An interactive adventure game set in the grand cyberpunk tradition with stunning action sequences, excellent animated location graphics, and a warped sense of humour thrown in for good measure.



Screenshots from various formats.



AVAILABLE ON  
AMIGA & ATARI ST.

Designed and Developed by:

IMAGITEC

Art by:

JULIAN HOLTON

A Gremlin Graphics Production



Programmed by:

EXILE DESIGN

Music and SFX

BARRY LEITCH

## KEEP THE PRESSURE ON

You've got to make sure your victories count.



● **MiG-29M SuperFulcrum** is full of targets, many of which are rebuilt by enemy forces soon after you've destroyed them. This bridge has been knocked down more times than the one in *Apocalypse Now* – and yet it's still standing.



● The outside view shows your MiG from all angles and highlights any locked targets. This truck is doomed because he's on his way to rebuild that darned bridge again. Stop him at all costs or you've wasted your time.

practice, you hear the squeak of tyres on the runway and still have time to kill the engines and hit the wheelbrakes. Then you can let out the breath you realise you've been holding in since you first saw your home base again.

**VERDICT:** The burning question on everyone's lips is, "Is it better than MiG-29?" The answer is not really a clear yes or no. Sure enough, there are parts which have been updated – the cockpit layouts and some of the new enemy objects. And there are parts which should have been updated that haven't been – the target designator and the colour of the HUD numbers, which conflicts with the ground colour.

Overall, *SuperFulcrum* is a great game with bags of excitement and tension, but it's seriously overpriced for what it is. Okay, so you can install it on hard drive and you get a free 50 page book on Military Jets (by military-book specialists Salamander), but nearly 40 quid is pushing it.

Considering that there is only one battle scenario – a big one, mind you – and it's essentially the same as its predecessor, *SuperFulcrum* is not as worthwhile as certain other Soviet "happenings" this year. Oh well, comrades, perhaps we need to explore the old capitalist ethic of "more bang for your buck" a little closer next time.

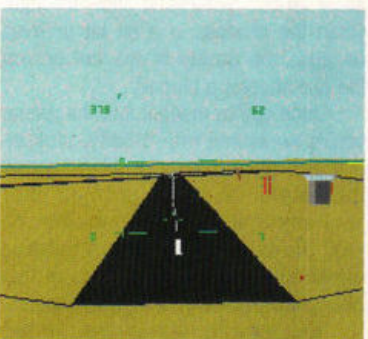
**NEIL JACKSON**



● Use the information screen to save your pilot's details as you progress through the game. Points are awarded for the runways you capture as well as the targets you destroy.



● This digitised shot of a MiG sitting by a runway is your reward for capturing a rebel base. Pretty soon the sappers and engineers come along to repair the damage you caused, and the base is then yours to call home.



● Getting your MiG back down on safe territory is often the hardest part to the mission. Tension causes slip-ups, and silly gambles can waste all your hard-earned scores. Use the joystick if you can't handle the mouse – it's safer.

## MiG-29M SUPERFULCRUM

DOMARK £39.99

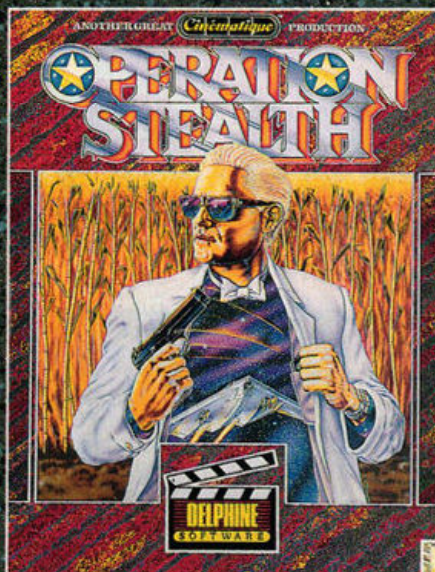
- Not enough advancements from the older MiG-29 game
- Lacks the "spit and polish" of *Falcon* or *F-19 Stealth Fighter*
- Superb flying and fighting action, with all the original MiG-29's controllability
- Exciting and accessible, but overpriced with it

**STF RATING 85 %**

# THE QUEST FOR ADVENTURE SERIES

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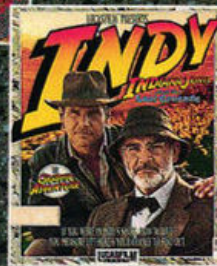
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The chase is on all the way to the greatest treasure in history, the Holy Grail. Developed by Lucasfilm Games, *Indiana Jones* offers superb graphics and a sensationally intriguing plot.

- A point 'n' click interface provides the player with quick and easy access to a combination of verbs, objects and locations.
- Over 100 different sound effects are available in the game.
- A 68 page copy of *The Grail Diary* details extensively the storyline together with hints and tips.



**MEAN STREETS™**  
The year is 2033. Your name is Tex Murphy, Private Investigator in San Francisco. You've been hired by the beautiful daughter of a university professor to uncover the facts about his death.

- Interact with more than 27 characters which animate and respond to questions, bribes and threats.
- Some characters actually talk, this spectacular effect is achieved by synchronising digitized animation with **REAL SOUND™** (PC Version)!



Available on Atari ST/STE, CBM, Amiga A500, A1000, A2000 Series and PC Compatibles VGA 256 Colour Hard Disk with High Density Drive Required.

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**U.S. GOLD**



● A detective's door-knocker is never silent for long. Except when people are giving things away, so I can't see how I blagged a free trip on the Karaboudjan boat.



● One of the smarter cabins on the boat, Fabiani's room is well kitted out. A far cry from the Dover-Calais ferry, but probably a bit more expensive.

# CRUISE FOR A CORPSE



● Hmm! Is this fishy or what? Wife of dead husband seen chatting in hushed tones to solicitor of family business. Something tells me that I'm living a predictable 1920s whodunnit lifestyle. I gotta get away from here!



● This is Hector's hovel. He's the butler, so what d'you expect? It's a shame though – the original wallpaper was Victorian and it cost the boss a fortune.

'Ere's summzing to get your leetle grey cells working – murder, mystery and suspense – and zat's just ze protection system. **FORMAT's** super sleuth, Neil Jackson, plays the fat Belgian detective at his own game...

**A**fter the success of Delphine's earlier adventures, *Future Wars* and *Operation Stealth*, you'd expect *Cruise for a Corpse* to be pretty amazing too. It is fairly amazing – relying as it does on the same mouse-driven system which made its stable-mates so accessible and appealing. But that alone doesn't mean you're going to have a good adventure.

The game starts off with a complex-looking protection system. You are subjected to at least two tests using a circular dial-wheel with slots cut in to allow various pictures to show through. Often the process is a bit hit or miss because the quality of the colours on the dial-wheel is a bit naff.

Once you've made it into the game, you're presented with a hefty, plot-setting animation sequence which shows the events occurring prior to your involvement with the murder case. Ah yes, *Cruise for a Corpse* is a true-blue whodunnit, in the best (or should that be worst?) traditions of Agatha Christie.

The intro is outstanding in two ways. First, the standard of graphics is excellent, beating Delphine's previous best hands-down. Characters move gracefully around several beautifully drawn backgrounds with their speech

over-printed in a clear white typeface. Gradually, you are drawn into the plot and become eager to get on with the business of being a detective.

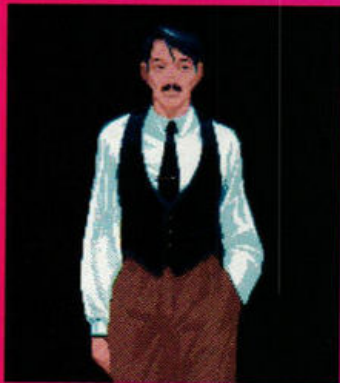
Sadly, the other outstanding aspect of the intro – and indeed the rest of the game – is the music. Not good, at all. In fact, it's positively intolerable on the old-fashioned ST. Rarely has there been such a mismatched collection of squeaks and warbles purporting to be music. Embarrassed faces are the order of the day when less tolerant members of the household ask you politely, "Is that you making that awful noise?" A shame, because the music should be a subliminal atmosphere-enhancing aspect of the game. There is an option to send the music data to a MIDI keyboard, but you don't find any reference to it in the manual.

Soon, you end up on the deck of a boat, owned by a rich and powerful man who meets his maker before meeting you. And thus, the game's afoot. But before you can get stuck into the crime-busting lark, you are clubbed from behind by a shadowy figure and drop to the floor unconscious. Not off to a great start really, are you?

Once you come round – and the amazing double-vision effects have worn off – you can, at last, begin the

## WANTED FOR MURDER

One of these docile-looking individuals could be a cold, calculating murderer. Do you know which one? Will you find out? Here's a brief low-down on what they're all about.



### RAOUL DUSENTIER

● A so-called detective, Dusentier has been seen trying door-handles and peering into wardrobes the length and breadth of the boat. What's he up to? Is he looking for a clue that he left at the murder scene? Hang on, aren't you supposed to be Raoul?



### FATHER FABIANI

● This is the priest with a problem. Fabiani is a close friend of Suzanne Plum, who was the murder victim's maid. But how close? He's also got several problems with dice, money and his church steeple. But where's the connection?



### DICK SCHMOLTZ

● Nobody knows much about Dick, and those that do aren't saying. What's his link with the Karaboudjan family and how come he's here on this ill-fated cruise?



### SUZANNE PLUM

● A sweet girl, but one with a dark side. By day a friendly, chatty individual, but by night a girl possessed. By the bottle, that is. Maybe she drinks to forget... something horrible... she did?



### JULIO ESPERANZA

● Suffering from a pseudo-Spanish speech impediment doesn't automatically make Julio a suspect, but there's something odd about his love for racing cars. And how he pays for them all.



### REBECCA KARABOUDJAN

● Wife of the murder victim, Rebecca seems to be too happy for a freshly bereaved female. What's her mourning-glory secret? And what on earth was she doing with that other bloke on the upper deck? Dubious, methinks.



### TOM LOGAN

● A hard-nosed businessman, Logan was the murder victim's solicitor. Why would a lawyer kill his client? Surely the fees do that on their own. Maybe there was something dark and despicable he needed to keep quiet.



### HECTOR THE BUTLER

● The devoted flunky to the murder victim, Hector is a big softie. Or is he? Why did he stay with his master for so long? As a debt of honour or to keep his shady past hidden?

adventure. Initially, this is an interesting task, carrying out the usual search and investigate operations common to Delphine and most other adventure games. There are oodles of things to click on, check out and come to conclusions about. Bookcases, skirting boards, boxes, bells, buttons and benches litter the entire ship, giving you ample room to get lost in the depths of trivia.

If you're lucky – or just a good detective – you occasionally come across a vital clue, which usually shouts, "I'm vital clue!" at you, just so you know you're on the right track. A small clock pops up and advances by a few minutes, letting you know that the plot has moved slowly, but inexorably, towards its final conclusion.

As you stroll around the ship's four levels and 31 locations, you're bound to meet one of the other passengers. Ah yes, the other part of being a crack Christie-type detective is the detailed questioning of all the suspects, culminating in the usual confrontation in the dining room. No surprises here – you must speak to each person individually and select a question (or several) from the list which appears.

You can ask people about themselves or others on the boat. You can dig for the dirt or delve for the details

of certain "happenings." In practice, you just go through the whole list of questions until either the clock pops up again (telling you you've hit a nerve), you get new questions on your list, or you draw a blank. As time goes by, and leads get less and less, this process becomes monotonous because it involves little deductive thought, just logical, repetitive actions.

And almost all the time, that damned music is still wittering on in the background.

When you've run out of things to ask, you can be reasonably sure that it's an object you are missing. You can elect to walk through the whole ship, room by room, and search each screen until you find something you missed. This usually causes more frustration than it cures, because you're bound to come across loads of new items, only to be told, "I can't do that without the right tools" or "I see nothing of interest." The initial messages regarding almost any object indicate that it may be of use or interest – but usually it's still a red herring. Once is fun, twice milder amusing, but to do it all the time is a put-off.

A quicker way to get around the ship is to use the map screen which you access using the right mouse but-

ton. A flat plan view of the ship is presented, with an X marking your position. There's a small image of you which you can move to another room with a couple of clicks. This cuts out a lot of unnecessary journey time when you know exactly where you want to be.

**VERDICT:** As a study in ST graphics and animation, *Cruise for a Corpse* is an exquisite piece of work. Clever animation techniques use a 3D polygon to represent your character – an effect which is surprisingly good. The background scenes are immensely detailed, and suitably reflect the artist's painstaking work.

But the two other key elements which make a game are gameplay and music. Sadly, neither of these factors is up to par in *Cruise for a Corpse*. The music has you reaching for the volume switch (unless you're a fan of 1920s pianola-style twiddlings) and the gameplay is not taxing for the right reasons. It should be a case of deduction, lateral thinking and calculated guesses paying off – not methodical, repetitive searches and interviews leading to... even more of the same. That's not any fun at all.

If you're after some brain-stretching entertainment, think twice about going

for *Cruise for a Corpse*. It's as much fun as operating a graphical spreadsheet – and about as confusing. After about two hours of playing you're desperate for the hint book and looking for a way out. However, if the prospect of hours of pedantic clicking and re-clicking over the most beautiful screens you may ever see on your ST fills you with delight, then that's fine and good luck to you. But don't forget you were warned, okay?

NEIL JACKSON

## CRUISE FOR A CORPSE

US GOLD/DELPHINE

£29.99

Hard drive installable

● Gorgeous background screens and animation, on a par with the legendary *Secret of Monkey Island*.

● Appallingly bad music – it's even worse than what you get in *Leisure Suit Larry*.

● Gameplay is too repetitive and frustrating, and lacks the humour of earlier Delphine masterpieces *Future Wars* and *Operation Stealth*.

STF RATING **76%**

# TERMINATOR 2



● Arnie rides back to face this beat-'em-up cum puzzle cum shootout game.

To date, *Terminator 2* is the most expensive movie ever made. On top of Arnie's humungous fee, the movie makers had millions left over to spend on special effects – and it shows. So, when Ocean got hold of the licence to the year's biggest seller, you'd expect nothing less than a game of the same epic proportions, right?

Wrong. *T2* is a multi-section game, with different game styles being used

to represent various scenes from the film. Our first encounter with this new breed of Terminator is for fisticuffs. Combinations of pressing <Fire> and jabbing the joystick in seemingly random directions cause a sequence of punches, kicks and head butts to be directed at the bad guy. You're also armed with a gun and six bullets. The best strategy is to plug your adversary full of lead, firing each time he recovers 'til you run out of ammo, and then close in for the kill. It's not difficult to beat him, just tiresome.

You lose energy whenever you're floored, and, though it's fairly easy to get through this section, injuries are carried through to the next level. It's frustrating that all you can do, pretty much, is waggle randomly and hope for the best.

Next Arnie's on a Harley, being heavily pursued by your worst nightmare in an articulated lorry. Arnie has to avoid debris that litters the raceway while avoiding being run over by the ten

tonner. If you succeed in escaping, you can move to a bonus level.

This enables you to claw back some extra energy. The mechanical innards of Arnold's wrists are exposed. You've got to sort the hydraulic components into the right order against the clock. It works rather like one of those plastic puzzles you always find in the bottom of your Christmas stocking, where you have to slide the pieces around to form a picture.

Then it's back for another beating. This time the baddie's twice as hard and uses his elastic properties to dish out some rather nasty head butts. Apart from that, it's pretty much the same as Level One, only twice as frustrating. Further levels include another puzzle, a shootout, a helicopter and car chase and another beat-'em-up section (yawn).

There are no complaints in the graphics department. They're excellent. The fighting sprites are large and well-animated with some neat effects. It's just that the game's so tedious! You only

have one "life" as such, and fighting your way through previously mastered sections is a real chore, especially when you get killed through carelessness.

**VERDICT:** *Terminator 2* is going to sell by the ton. Not because it's a great game, but because of the film and the fact it's got Arnie's phizog plastered all over the packaging.

If you're taken in by the hype that surrounds this film, then you'll have bought a poor quality game. It's strung together on a theme that follows scenes from the film quite closely, but isn't much fun to play.

**ADAM WARING**

## TERMINATOR 2

OCEAN £25.99

Double-sided drives only

- Excellent graphics and fluid animation, approaching *Prince of Persia* standards.
- Old-fashioned International Karate style gameplay.
- Boring and repetitive game themes – like so many other movie conversions.

**STF RATING 63%**

## I'LL BE BACK

The story so far: the future is a nasty place, where men fight against machines which rule supreme. Resistance leader John Connor is deemed such a threat by the mechanical menace that a Terminator – a human-looking mechanoid programmed to kill – is sent through time to murder his mother. That Terminator was Arnold Schwarzenegger and is eventually destroyed in the first film.

The lure of \$15m plus a \$7m Learjet was enough to tempt Arnie back to make the sequel. This time Arnie plays a good Terminator sent to defend the young John Connor from a technologically superior bad Terminator. But is this new killing machine any match for our Arn? Is it 'eck!



● Shooting this guy temporarily sets him back, rather than doing anything fatal to him. When you're out of bullets, you just have to go over and give him the jolly good kicking he deserves.



● Keep your eyes on the road! Actually, it's not as easy as all that when there's a psychopathic killing machine trying to squash you flat with the aid of a ten ton truck.

# TERMINATOR 2 JUDGMENT DAY



● The fourth level bears an uncanny resemblance to the first. It's a lot harder this time though, and you just have to hope that your wagging comes through when it counts.



● Give the bad Terminator a damn good hiding and he dissolves into a pool of molten metal. You can't keep a good man down, though, and he reappears for another pounding.



● Arnie's no ponce. If there's summat up he'd rather fix it himself than cause any fuss and go and see a doctor. This puzzle section gives you the opportunity to gain some extra energy.





Screen shots from various formats.

# UTOPIA

## THE CREATION OF A NATION



"The best game Gremlin has ever released." **94%**



"A cross between Sim City & Populous." **93%**



"Utopia is an excellent game."



**93%**

"The next Generation in Godgames"



Ace Rated **920**

Can you create Utopia? Now's your chance to find out. Leading a colonising party to a barren planet you aim to create the perfect society, where everyone has a quality of life rating of 100%. Do you spend your money on weapons or social research? Build hospitals or tank factories? The myriad of decisions to be made are yours, and the fact that there are over ten different alien races all bursting for the opportunity to wipe out the colony should speed up the decision making process. An icon driven game with the main playing area presented in isometric 3-D, Utopia breaks new ground in computer entertainment.



**Available on: PC (1992), AMIGA & ATARI ST/STE.**

Gremlin Graphics Software Ltd., Carver House, 2-4 Carver Street, Sheffield S1 4FS.



● The old geezer at the corner of the map always has a word or two for you, regardless of your popularity. He's a bit special actually. Ask him nicely and he gives you something useful.



● This bloke's getting a bit uppity about his island. Don't let him talk to you like that - show him who's boss. You never know, some good might come of it in the end.

# THE ADVENTURES OF ROBIN HOOD

First it was Batman. Then Dick Tracy (nearly). Now this year's big thing is Robin Hood. Ed Ricketts predicts that, in 1992, we'll all be going crazy about The Magic Roundabout. Can't wait for the film



● At the beginning of the game you have no way of accessing this map, but a certain old gent assists you with it if you ask him nicely. Just click where you want to go and Robin toddles off.

Come on, admit it. The thought had entered your head that Millennium are jumping on the Hood bandwagon by releasing this game. Not so. This graphic adventure has apparently been on the boil for two years. So what does "the most original real-time adventure ever produced" have to offer?

Just in case you don't know the legend of Robin Hood (ahem), this is the deal. Having been chucked out of his castle by the nasty old Sheriff of Nottingham, Robin is understandably miffed. To gain revenge on the Sheriff, he decides to become a Man of the People, robbing the rich traders who are in the Sheriff's employ and giving the dosh to the poor peasants. At the same time, his ambition is also to do away with the Sheriff permanently. Oh,

and possibly get Maid Marian all weak-kneed, too.

This is where you come in. At the beginning of the game you're languishing outside the castle walls, depressed, loathed by the common people, and with no idea what to do. Robin's world is displayed in overhead isometric 3D in much the same way as *Populous*. RH can be made to walk (or run) around using the scroll arrows or simply by clicking on the spot you want him to visit, though using this method Robin is more prone to ramble off on his own.

The world is inhabited by all sorts of characters: the Sheriff, his guards, the peasants, monks, a few deer and, of course, Marian. They all wander around and do their own thing - peasants kill the deer; the monks construct a monastery; hangings take place - and

it's up to you to find out how to use them to achieve your aims.

Apart from these aims, you're given no idea as to what you should do. Robbing from the rich might be a good

idea, but make sure you do it well away from the guards. Recruiting your merry men would also be useful, but where are they? And you could find some way of getting a map.

The main way to become involved with a character is to talk to him or her. You can't specify what you want to say - Robin just comes out with whatever he thinks is appropriate at the time. A speech bubble appears every time someone talks, and follows him or her around for a while.

How the other character reacts to what you say depends on what he is and how popular you are at the moment. Guards are unlikely to have a chat, but peasants might tell you something useful if you're in their favour.

Your popularity is measured by a bar next to the main display. The more



● The statistics screen shows you your energy, strength and money, as well as how brave/pessimistic/heroic you are. You can also load and save from here. If only there was some way of seeing other people's stats...

## A QUARTER OF ASSORTED ICONS, PLEASE

You start with a set of seven fixed icons. There are another seven that can appear if you do the right things. For these, you get no instruction at all, though it's pretty obvious what they do. When they've been used, most of them have a "recharge" time during which you can't use them.



### Lightning bolt

very useful and quite easy to get hold of, when you know what to do



### Eye

scrolls the screen to show more of the landscape in the direction Robin's facing



### Sword

click on this and then on a character to attack him with your sword



### Toadstool

toadstools can be nice or nasty



### Ring

has quite an abstract use and takes more effort



### Heart

makes Robin run rather than walk, providing he's got the energy (it's recharging here)



### Arrow

Robin fires an arrow in the direction he's facing



### Lips

use this to talk to someone. You can't specify what to say, though



### Hand

give money to someone



### Closed hand

take money from someone (recharging)



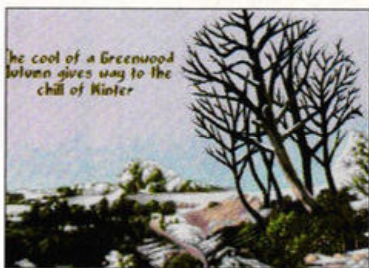
### Crystal

enables you to see the world in a different light

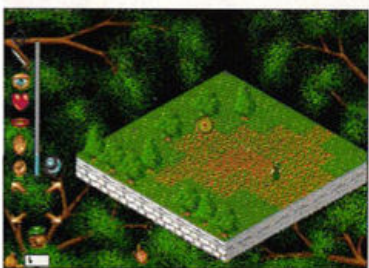


### Money

the amount of money Robin is currently holding



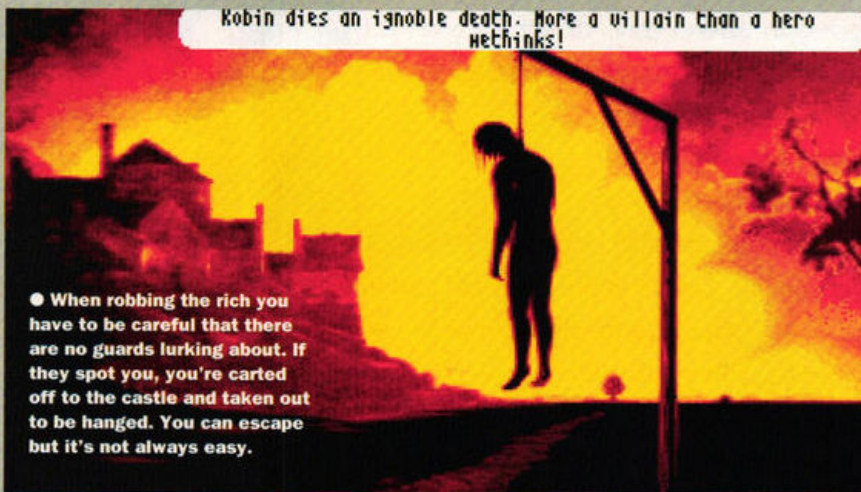
Although the seasons change regularly, they make little immediate difference apart from changing the appearance of the landscape. The exception is summer, when – well, something unusual happens.



Even Robin Hood needs some archery practice now and then. Letting off a few arrows here improves the time it takes you to reload. Anything in the game can be shot – guards, the Merry Men, Marian, and even the swan on the lake.

## ROBIN HOOD, ROBIN HOOD, ROTTING IN THE GLEN

Death features quite heavily in *Hood*, and not just other people's. Don't, for instance, try fighting a guard when you only have low energy since you die an ignoble death. Better to prang him with an arrow from a safe distance.



Robin dies an ignoble death. More a villain than a hero he thinks!

When robbing the rich you have to be careful that there are no guards lurking about. If they spot you, you're carted off to the castle and taken out to be hanged. You can escape but it's not always easy.



Man that is born of a woman hath but a short time to live...

Whenever someone is killed, the monks trundle up to the body with a coffin and take it to the monastery to be buried. You can go and watch if you're into that sort of thing (you sick twisted individual).

heroic deeds you perform for the common people – such as giving them money or saving them from hanging – the higher it rises. The masses are a fickle bunch though, and if you don't continually help them you soon revert to being a failure in their eyes.

Occasionally everyone is called to the Sheriff's castle to hear a proclamation. This may be something trivial, like the banning of deer hunting, or a more serious announcement like you've been outlawed. In this case, it's wise to avoid the guards altogether.

If you expect the rich greenwood and the mediaeval buildings to be displayed in graphic majesty, you're in for a disappointment. The landscapes and buildings are passable, but the characters are terrible. For a start, they're tiny and you need a monitor to see them

properly. Their size can cause problems when there's a crowd of people – you need to click on individuals exactly. As for animation, everything has a strict two-frame limit, which doesn't really inspire confidence in a game which is supposed to be a graphic adventure. Strange, then, that the intermediate and information screens should be so well drawn – some of the best static screens you're ever likely to see on your ST. Another minus point is the almost illegible character set used for the speech bubbles.

**VERDICT:** Looking on the bright side, *Robin Hood* could have been much worse (we could have been treated to a platform game starring Kevin Costner – after all), but, in the end, it's something of a let-down. The manual promises you

a huge world with endless possibilities and intelligent interaction. This is not what you get. There's actually very little for you to do once you've sussed the general aim, and the other characters never really react in surprising or intelligent ways.

It's also possible for the game to become confused. Try asking Maid Marian for a kiss and then immediately robbing her. She comes out with, "Of course I will, my darling," or some such thing, whereupon you rob her. She kisses you and then screams, "Help! Help! I've been robbed!" Are these the actions of an intelligent character?

Despite its boasting, *Robin Hood* doesn't have the flexibility or the graphics to live up to its claims. Not a complete failure, but disappointing.

ED RICKETTS

## THE ADVENTURES OF ROBIN HOOD

MILLENNIUM £25.99

- *Demoniak* has a similar, but more complex and rewarding, "real world" system.
- Graphics undeniably influenced by *Populous*, *PowerMonger* et al., but inferior to both.
- Like *Maupiti Island*, you're given only a few clues to start with.
- Original way to treat the subject. In that respect, it's like *Hill Street Blues*.

STF RATING 68%

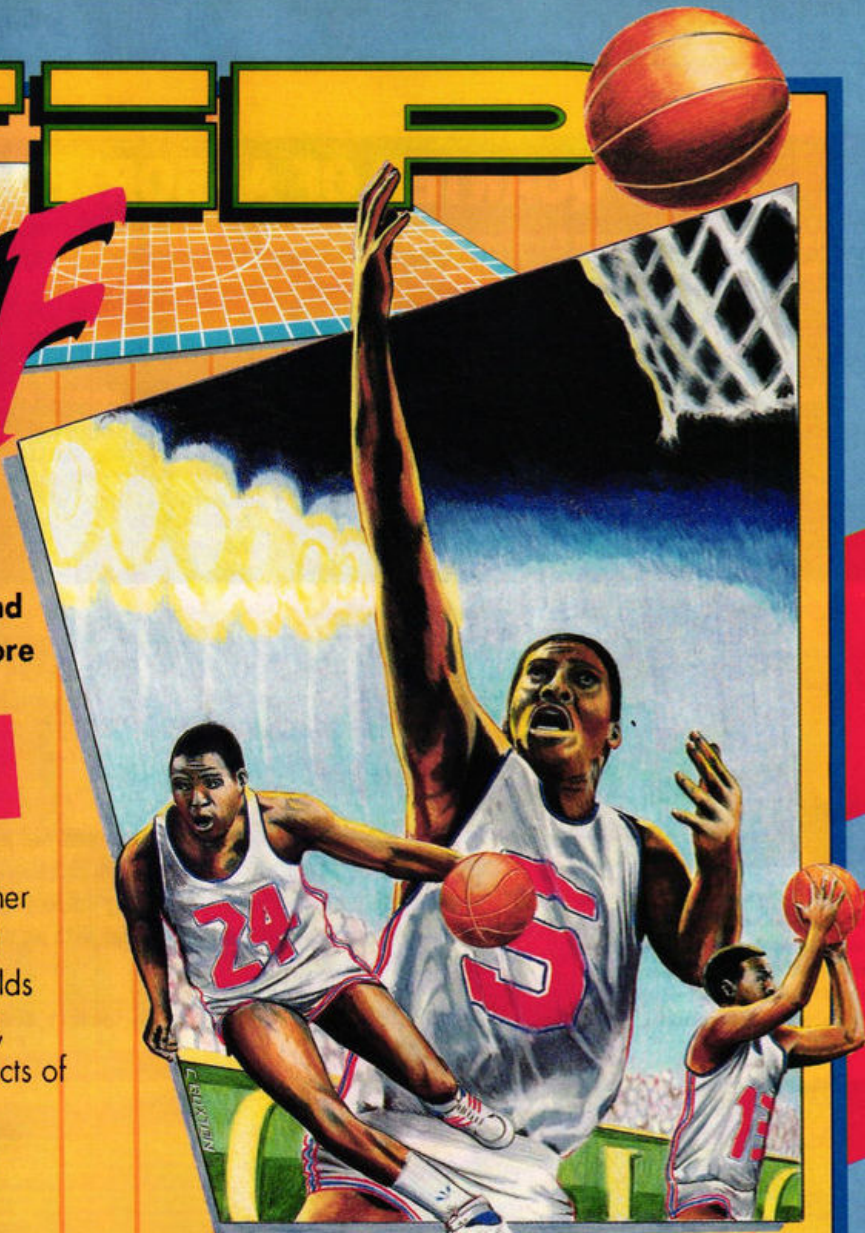
# TIP OFF

The sheer pace of the game, end to end action and tactical game play is the core of TIP OFF, a basketball simulation -

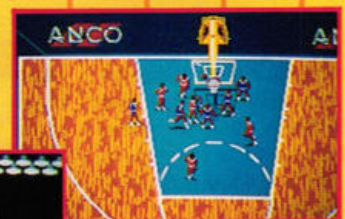
**A SIMULATION WHICH IS GREAT FUN TO PLAY**

Players' skills, attributes and fitness together with the astute substitution of players and change of tactics banks by the coach, holds the key to success in basket ball. TIP OFF, therefore includes some managerial aspects of the game. The main features are:-

- \* Multi directional scrolling screen
- \* Five skill levels. Skill level of both teams can be set independently.
- \* 1 to 4 players option. Option to play against the computer or another player or team up with another player against the computer or another player or two players.
- \* Facility to practice skills and tactics.
- \* Facility to create a team at all skill levels and design tactics.
- \* Instinctive Joystick controls to dribble, pass, shoot or do a dummy. There are two running speeds, two types of dribbling and passing and five types of shots at the basket (Jump shot, Hook shot, Skyhook, Running Jump shot and Slam Dunk).
- \* Each player on the court is an individual with a unique mixture of attributes (Age, Height, Flair, Pace, Stamina and Composure) and skills (Passing, Dribbling, Stealing, Shooting and Jumping).
- \* Two types of Leagues. Action Replay at 3 speeds.
- \* Extra moves are available using two independent button joysticks using the EXORLENCE System.



AMIGA, ATARI ST -  
(ATARI D/S DISC ONLY)  
IBM PC & COMPATIBLES  
**PRICE - £25.99**



Amiga Screenshot's Shown

© 1991 Anco Games

**EASY TO PLAY - HARD TO MASTER**

Published by

**ANCO** Software Ltd

# ELF

It must be tough being an elf. Even the youngest, trendiest dude of an elf can't escape the fact that he is, in fact, a mythical children's character and a twee one at that.

The particular elf in question here, Cornelius, is having an even worse time of it because his girlie's been kidnapped by some evil old git or other and he has to rescue her. This makes a feeble excuse to involve Corny in a platform game over eight levels.

The aim of each level is to, er, get to the next. But you can't just saunter through them to get to the end because there are many impassable barriers in your way. (Plus a gigantic end-of-level meanie.) Barriers can be removed by judicious use of the objects, herbs and buildings scattered about the levels.

For instance, your first barrier on the initial level is a locked door guarded by a harmless Chinaman. A quick chat with him reveals that he's partial to cooked chicken. So now you know what the uncooked chicken you've found is for – the only problem is how to cook it. It's simple – give the birdseed you've also found to the hungry bird, who gives you a feather in return. Give the feather to the Indian in the tent and he gives you some old newspaper. Give the paper to the unfortunate soul stuck

in the WC without any bog paper, and he gives you some matches. Now all you need to do is find the roasting spit and unlit fire, light it with the matches and cook the chicken. Bribe the Chinaman, and you're through the door.

Wandering about you can collect certain rare herbs and harmless animals – pets. These are used in the two or three shops on each level to buy add-ons, such as an extra life or a flying machine. Each item requires a particular combination and number of herbs and pets, so you can plan which item to buy next by collecting appropriately.

While all this is going on you're constantly harassed by unfriendly creatures (crawling, flying and walking), which, when dispatched with a few shots, leave behind bonus tokens and occasionally health top-ups. Right at the end of the game you're given a rating ranging from "Pleasant" to "Hell Spawn," depending on the number of harmless woodland creatures you have gratuitously killed.

The graphics in *Elf* are nothing short of superb. The first thing to hit you is their colour – everything's bursting with it, including the multi-shaded sky behind the action, achieved with a little clever programming. The creatures are well animated, nicely detailed



● It might look twee and cute, but underneath the delicate, soft, fluffy and slightly pretty exterior of *Elf*, there's a rock-hard platform game which stings like a cobra and sends you into frenzied cursing fits at the mere drop of a butterfly.

and move exceedingly smoothly. Although the screens flick rather than scroll, they do it very quickly and don't detract from the action. You can switch the sound between a bearable tune and even better effects.

There are other subtler touches to the graphics. When you die, a grave-stone marks the spot, which subsequently produces rather alarming ghosts of yourself which hassle you every time you enter the screen. When you shoot a harmless creature, a comment like "Boo" or "Shame" drifts off the screen just to make you feel bad.

**VERDICT:** *Elf* truly deserves the label "arcade adventure," since it combines traditional platform shenanigans with

exploring and experimenting. Just when you've looked everywhere, collected everything and are still stuck, you meet another character and it all falls into place. Although you begin with four lives, you have to be careful with them because you're constantly being drained of energy. An excellent touch is the Save Game facility – when you finish a level you can save it to disk and skip it altogether next time around. Finishing a level is no piece of cake, though.

It's refreshing to find a platform game that keeps you occupied for more than ten minutes, yet has wonderful graphics and addictive gameplay. So, for the inevitable pun, buy this game – it's good for your elf.

**ED RICKETTS**



● There are no object puzzles in Level Three, it's just a series of jumping tests. The whole level is played over a vast lake, so you have to be careful where you land. Of course, you have to work out how to get the platforms moving in the first place by setting the switches that are scattered around the platforms to the right combinations.



● Three Wolf potions and a packet of crisps, please, stout yeoman. To buy anything from the shop you need plenty of harmless animals and a combination of the herbs you have (or should have) collected. The more powerful effects obviously require the rarer herbs, so you have to work harder to buy them. They are worth it, though.



● At any time you can call up your interactive panel. This shows you which objects you're carrying and what you can do to them. Any option can be applied to any object, but not necessarily with any effect. It's impossible to use an object wrongly so experimenting is the order of the day. You can also talk to other characters from here.

## ELF

OCEAN £25.99

- The best platform game to appear since *Switchblade 2*.
- More involved than *Magic Pockets*.
- Has a graphical flair that makes things like *Monster Business* look awful.
- Tough, but not as hard as *The Killing Game Show*.
- Much more to do than in *Redland* (see page 73)

**STF RATING 89%**

## NO PIXIES, DWARFS OR NAIADS, PLEASE

Each level has a different graphical style. After the woodland scenes of Level One you're transported to a ruined castle on Level Two. Beneath these ruins is a series of underground caves containing, among other things, killer rats and several important objects you need to finish the level.

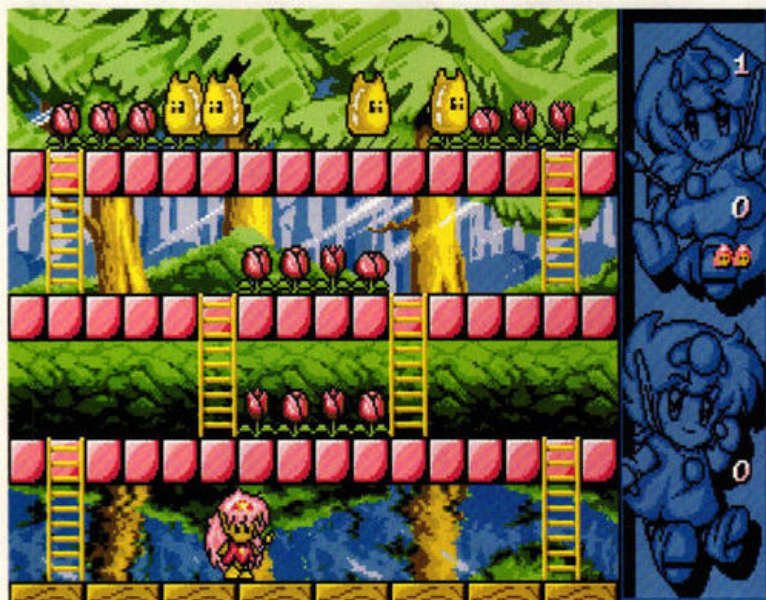


● This is the start of Level Two.

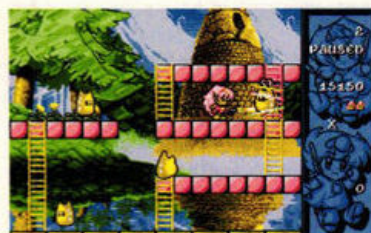
● Take this path to avoid the mines.

● The ladder leads to the caves.

● How to reach that herb? Carry on!



● **Rodland** is a button-cute arcade conversion featuring fairies, fluffy fiends, rainbow shoes and, logically, eccentrically-named rods. It's not all fluffy bunny cutey wutey though; there are plenty of horrible death-dealing head blows, too.



● Once you've got a meanie in the grip of your rod, pressing <Fire> swings him over your head and bashes him on the ground. Once you've inflicted three of these bashes on him, he's a gonner. If you let him go before that, he's stunned for a while – and temporarily inactive – but otherwise okay.



● When the meanies die, they occasionally leave behind a useful object, such as a missile or a bomb. When you collect these objects, they generally explode, killing any meanies in the vicinity, but fortuitously not harming you. Now, isn't that a really handy trick to know about?

# RODLAND

Cutesy games seem to be making a bit of a comeback after their recent lull, what with *Elf* (see page 69) and now *Rodland*. *Rodland* concerns the fate of a certain pair of peeps who are called Tam and Rit – or more exactly, their mother. She's been fairynapped by the once-nice-but-now-nasty friends of Tam and Rit and securely imprisoned in a tower. So...

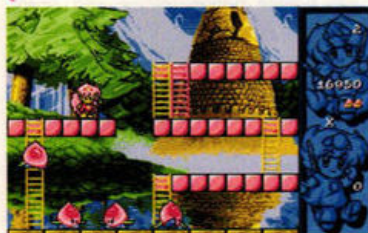
Playing Tam, or Rit, or both (with a friend), your job is to traverse 40 screens full of nasties and bash them on the head, so you can get to the next screen and, eventually, to Mom. You've been given the magic rod of Sheesanomo, with which you can kill the nasties, and also rainbow boots. Each screen is made up of platforms and ladders, but the boots give you the ability to create one temporary ladder going either up or down from the plat-

form you're on, creating a handy escape route from the nasties.

All this action is depicted with offensively cute graphics. Tam and Rit look like a cross between *My Little Pony* and *Barbie* – the monsters are far too bouncy to be horrible. Actually, the sprites are clear, bright and well-drawn, though not especially well-animated, as are the backgrounds. Unfortunately, there's no way to turn off the wibbly tune except to turn the volume down.

**VERDICT:** *Rodland* has a ridiculous plot, is odiously cute and plays like a dream. There are two faults that might put you off, though – it's perhaps a little bit tougher than it should be (the first screen is okay but by the time you reach eight or nine you're really struggling) and, after a while, you do tend to lose interest slightly because of a lack of variation in the gameplay. In other words, it's nice in short doses, but don't expect anything too engrossing.

**ED RICKETTS**



● When you collect all the flowers on a screen, the game goes into Extra mode. All the meanies turn into closed-tulip-shaped things (and why shouldn't they?) for a while. Bashing one while it's like this gives you a coin with one of the letters of EXTRA on it. Collect all the letters and you get an extra life.

## RODLAND

**STORM £25.99**

- Cuteness factor is equal to or exceeds *Rainbow Islands*
- Two player option is similar to *Flip-It and Magnose*

STF RATING 70 %

# OUTRUN EUROPA

**Outrun** – the game that didn't launch a thousand imitators. Except this one. Why do a sequel? US Gold obviously thought it was a good idea.

The game can be described in two words: fast racing. On each level you're in control of a high-powered vehicle and have to get to the end of the stage before your time runs out. There are loads of obstacles and tight corners in your way – crashing or losing control loses you time. You can pick up speed-boost tokens, and other

vehicles try to hit you. That's it. That's what you paid your £26 for.

The graphics aren't completely abysmal but they're far from being state-of-the-art. The track jerks rather than moves smoothly, and, while the roadside buildings are quite detailed, they don't move convincingly enough to fool the eye. Sound is, frankly, pathetic. You get the choice between a horrible sound chip concoction or effects. Unfortunately there aren't any – there's no engine noise, anyway, just a ridicu-

lous squeak which is supposed to resemble a skidding noise.

**VERDICT:** Great things weren't expected of *Outrun Europa*, and USG have certainly come up with the goods: there's nothing great here at all. There are worse racers, but there are also better ones – look at *Vroom* (page 78) to see how it should be done. *Outrun Europa* doesn't deserve a first look, let alone a second. A waste of time.

**ED RICKETTS**



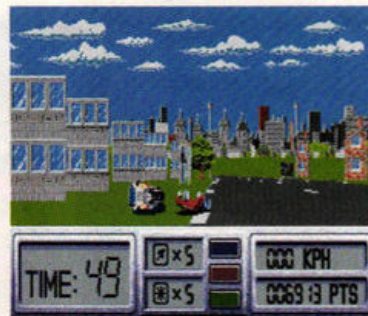
● The levels are separated by these short animated sequences, showing you climbing aboard your bike, boat, car and so on. These bits are probably the best things about the game.



● Remember *Outrun*? Well, don't worry if you don't because it wasn't particularly memorable. *Outrun Europa*, however, is a bit of an improvement. It's just that we haven't found out quite which bit yet.



● On Level One you race along a road on a fast motorbike. On Level Two you race along the sea on a fast jet-ski. On Level Three you race along a road in a fast car. On Level Four – well, you get the general idea.



● When you get fed up with all this racing – after about ten minutes, say – you can have a quick kip by the side of the road and hope the whole thing was a horrible dream. No such luck. There are still five levels of this to get through.

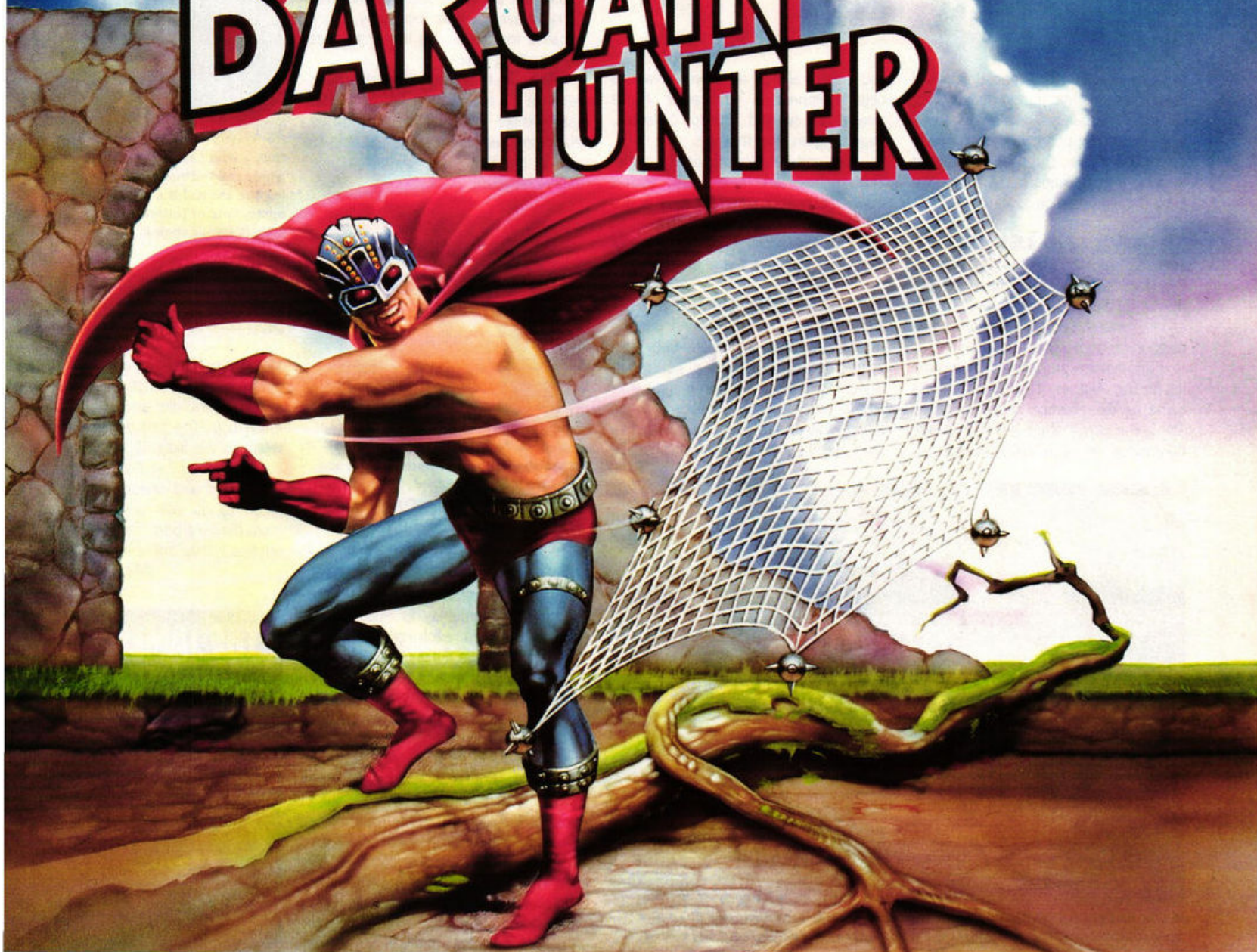
## OUTRUN EUROPA

**US GOLD £25.99**

- Almost any other racing game is better than this – except *Outrun* itself
- *Vroom* (page 78) has faster and more detailed graphics, tougher gameplay, more to do and longer lasting interest
- US Gold's own *Super Monaco GP* is a better bet than this for playability
- Effects are almost non-existent. Again, see *Vroom* for real meaty effects

STF RATING 58 %

# BARGAIN HUNTER



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SF/3

# THE JAMES BOND COLLECTION

**My name's Bond.** James Bond. And I'm not only in films, but in games, too. Domark have been translating my celluloid exploits onto floppy disk for a number of years now, and have re-released three in a compilation pack. Looks like a job for just one man...

## LIVE AND LET DIE

There are four sections to *Live and Let Die*; three are "training missions" but they're all the same really. Bond has to shoot various targets as he zooms along in his high-powered speedboat.

The mission proper has Bond chasing Mr Big. And, er, it's pretty much the same as the practice sections, really. The game plays rather like *Outrun* (see our review on page 70) on water. As

you race along the river, various objects appear in your path. These have to be avoided, shot or collected, depending on what they are.

*Live and Let Die* is a simple game. The controls are responsive, and it plays reasonably well. There is a distinct lack of variety to speak of, though. The training sections don't add anything, and you soon tire of them.

## LICENCE TO KILL

This one starts off with Bond chasing whatever-bad-guy-it-happens-to-be-this-week's getaway jeep in a helicopter. Bond has to blast the jeep a number of times – easy enough but it can only be done by flying fast and low. The action then switches to an on-foot sequence

where Bond must take on his enemies in a shootout.

There's a jolt more variety in this game, and the initial sections are quite tricky. Maybe a little too tricky, more because the bullets are harder to spot than anything else.

The first section is frustrating because it's too easy to get hit by the near-invisible bullets. The second is frustrating because it takes too long to aim at the bad guys, by which time they've hit you.



● *Spy Who Loved Me*: Negotiate the windy road without completely wrecking the car and it's speedboat time again. Lots of jetties to avoid, or crash into. It's your choice.



● *Licence To Kill*: Oi, come back 'ere! Chase the bad guy in your chopper and blast his jeep full of lead. Sounds easy? Not a bit of it! You're in the badlands, and they're shooting back.

## THE SPY WHO LOVED ME

Graphically, this is the best of the bunch. The gameplay is split into a series of scenes, each requiring a different set of skills. First of all, you have to race along a twisting track to beat a time limit. There are plenty of hazards on the road. Cones damage the car and have to be avoided though they do look good when you hit them and go flying off the road. Oil patches are even worse. They send you into a spin which can easily throw you off the road, doing even greater damage. Pedestrians are supposed to be avoided, but what the hell, mowing 'em down is much more fun, even if it does lose you points.

Certainly the most challenging of the set, but that doesn't really say

much. Playable and good-looking, but even so, not anything to bash your piggy bank open for.

**VERDICT:** Three games for the price of one may sound tempting, but they're all a few years old and not really that much cop. The sequences don't really relate to the films all that much, especially *Live and Let Die*, which is really very basic and doesn't have anything much to do with anything. Even the most die-hard Bond fans will sleep without this in their collection.

ADAM WARING



● *Live and Let Die*: There's nothing quite like a gentle punt down the river on a Sunday afternoon. Charging down the waterways in a high-powered speedboat, for instance, is nothing like it.

## THE JAMES BOND COLLECTION

DOMARK £24.99

Double-sided drives only

- *Live and Let Die* looks and plays like *Out run* on water. The other two start off like *Spy Hunter*.
- Other compilations are a bargain. This one isn't.
- All three games suffer from lack of gameplay – a bit like *Outrun Europa*, really.

STF RATING 57%

# FACE OFF

**Ice hockey** is one of the only sports to rival rugby for more on-pitch than off-pitch violence. *Face Off* aims to cover this sport with a management section, enabling you to plan strategies and buy and sell players, and an arcade game.

The arcade section plays pretty much to the formula of any bog-standard footie sim, only on ice. The rules are, of course, different, but the idea is pretty much the same. The player nearest the ball – sorry, puck – is under your direct control and your team-mates hover around, waiting expectantly for you to pass.

The pitch is a little small and the puck moves at a fair old whack, so the action is real end-to-end stuff. The puck is also very small and black, and it's often difficult to see exactly who has possession of it, hence the tendency to run away from your opposing number who's about to score.

**VERDICT:** The addition of a strategy section is interesting, and may add an extra dimension

when you've got tired of the arcade game. And you do get tired of it. Hockey may be fast, exciting and violent in real life, but this portrays it as an irritating game where you never know where the puck is.

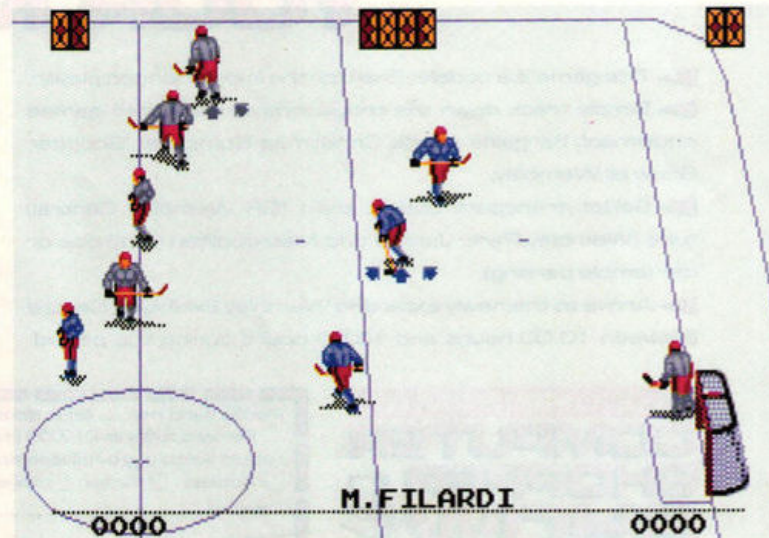
ADAM WARING

## FACE OFF

KRISALIS £25.99

- Manchester United like mix of strategy and arcade gives added depth
- Two player option makes for heated gameplay. Kick Off II fans will know the score
- Plays like any footie sim – only on ice!

STF RATING 65%



● The thrills, spills and chills are all part of the sport they're calling ice hockey. It may look good on the telly, but what's it like on your monitor?

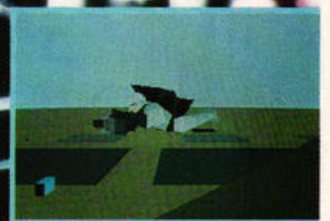


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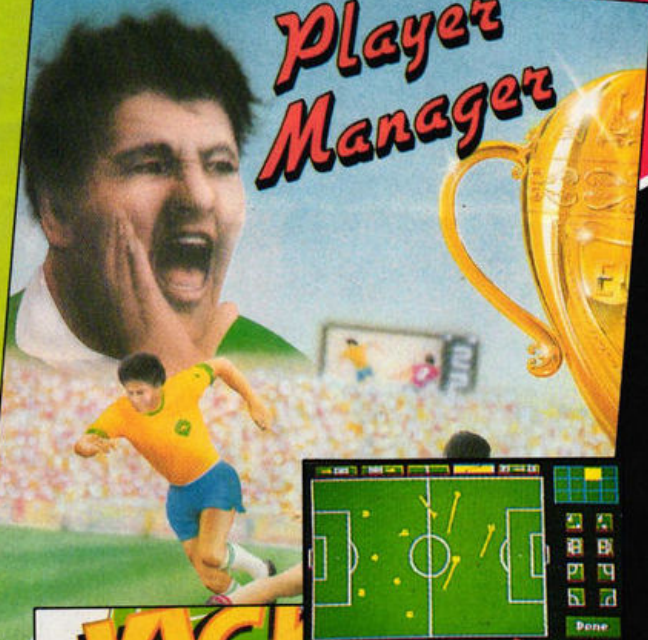
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# Player Manager



# KICK OFF 2



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- ST ACTION - The best game ever to grace the ST. Highest accolade I can give.
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- The One - Ultimate Soccer simulation

#### PLAYER MANAGER

- ST Action - A stroke of pure genius.
- The One - Exceptional. Most involved, rewarding and playable.
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#### FINAL WHISTLE Data Disk for Kick Off 2

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## ATARI ST - £25.99

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# THE BLUES BROTHERS

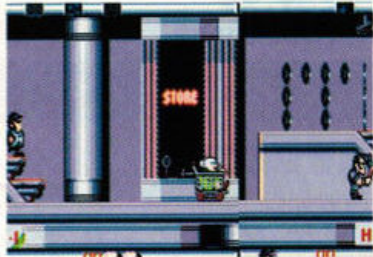
**It's a cult movie.** Everybody loves the Blues Brothers. It did wonders for the sales of Ray-Bans and, if it's not in your top five films of all time, you're classed as desperately untrendy. Certainly a tough act for an ST game to follow, but Titus have courageously had a go.

The game they've come up with is in a platform style, with you playing either Jake or Elwood Blues – or both, if you opt for two players. What you must do is make your way through five levels looking for musical equipment such as a guitar, a microphone and an amp. This plot remains similar to the movie's, where the Brothers are planning a big concert in Chicago.

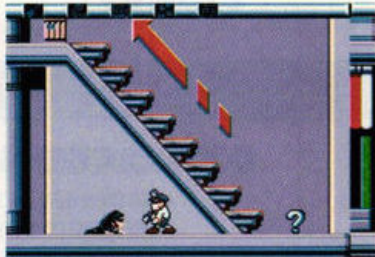
But really it's just an excuse for five levels of platform-hopping set in different locations. The character you've cho-

sen starts off downtown with the cops after him. He must crawl, leap, run and bounce his way past them, avoiding their gunfire, to get into what looks like a disused warehouse – but it could conceivably be any large, square, empty building. The obstacles in your character's path are arranged so you have the barest breathing space between them. There are traditional moving-back-and-forth baddies, plus the shoot-at-regular-intervals ones. The collision detection is harsh enough to force you to pixel perfect timing or you don't get very far.

The character sprites are brilliant. They've got the cool shades, the thin tie and the, er, interesting hat. As they run around they do look like small cartoons, and the bits where they dance are especially impressive. Things move very



● For some reason, Teddy Boys are the sworn enemies of the Bluesmen. So, better get your jumping trousers on and prepare to leap over 'em.



● The optimum way to progress quickly is by crawling everywhere. It doesn't slow you down at all and it repeatedly saves your skin – plus it looks terrific.



● Welcome to Bluesville! Each level of this platformer takes place in a different part of the town but sadly you don't get to ride in the Bluesmobile between them.

quickly, too. The Brothers run everywhere – unless they're crawling, but they do that at breakneck speed, as well – crossing the screen in a micro-second.

Titus have opted for a screen flipper rather than continuous scrolling. This makes the speed a disadvantage because it's possible to disappear off the other side of the screen before it flips and lets you see what's in store. The answer is to take it slowly, stopping whenever you can.

**VERDICT:** *The Blues Brothers* is a pretty nifty platform game. It's smooth, fast and big. It's difficult and contains quirks like the wicked collision detection. But it does lack atmosphere. Sure, the Brothers look good as little sprites, but apart from that there isn't any reference to the film. It doesn't feel Bluesy and there aren't many reminders of who you're actually meant to be playing.

If you aren't really too bothered about the plot or the licence, you might

find *The Blues Brothers* a nicely produced and challenging platform game. However, if you buy it because you're a fan of Jake and Elwood Blues the chances are that you're going to be disappointed. Even the soundtrack doesn't do them justice.

**JAMES LEACH**

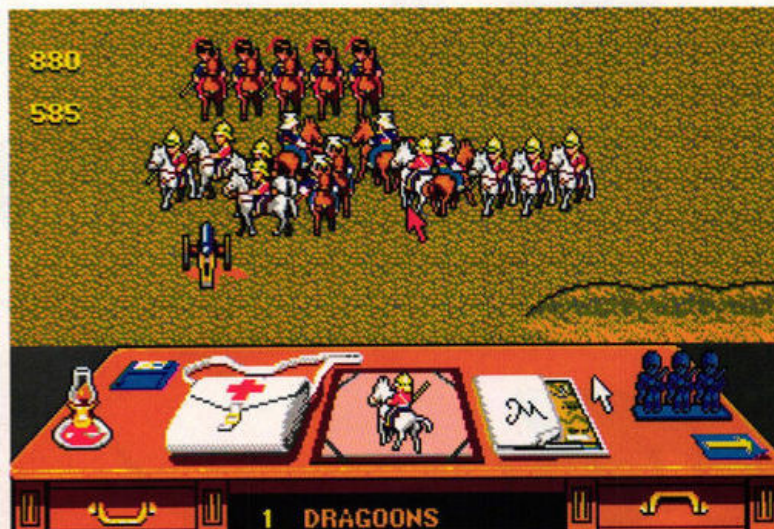
## THE BLUES BROTHERS

TITUS £25.99

- Fast, even furious platformer with cute cartoon-style graphics, a bit like *Rick Dangerous's*.
- Doesn't tie up well with the licence like, say, *Indiana Jones and the Last Crusade*.
- Soundtrack is disappointing for a game based on a musical film and featuring a band.

**STF RATING 72%**

# THE CHARGE OF THE LIGHT BRIGADE



● In this icon-driven strategy game, the Russians and Allies, with no end to their dispute in sight, resolve to continue it outside in the car park.

**Into the valley of death** rode a bunch of blokes who really should've known better. This strategy game gives you the chance to control either the Allies or Russians during the Battle Of Balaclava and avoid such fine British cock-ups.

*COLB* is totally icon-driven and takes place on two scales. There is a map of the whole of the Crimea, peppered with coloured flags, and a battle display showing individual units as appropriately dressed figures. All you do is click on each unit, or group of units, and either select a compass point for them to follow or click at the position on the main map you'd like them to trot along to. Then you wait. And wait.

Call it unprecedented realism if you must, but *COLB* takes so long to play that you reach your boredom threshold before battle is joined. Combat chugs past with light casualties each round. Viewing the battle display is hampered by a dreadful mouse-controlled scroller which drags you away from the action to some remote corner of the Crimea no matter what you do.

**VERDICT:** The graphics are really rather impressive and the icon control system – apart

from the appalling viewing scroller – is great, but playing *Charge of the Light Brigade* just isn't very exciting. With quite a bit more speed and a few more command options, it would have been a great strategy game, but as it stands it's just mediocre.

**JAMES LEACH**

## CHARGE OF THE LIGHT BRIGADE

IMPRESSIONS £29.99

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- Very similar in feel to *Ancient Battles*, but with better graphics
- Nevertheless, *Ancient Battles* is still quicker and more flexible.

**STF RATING 52%**

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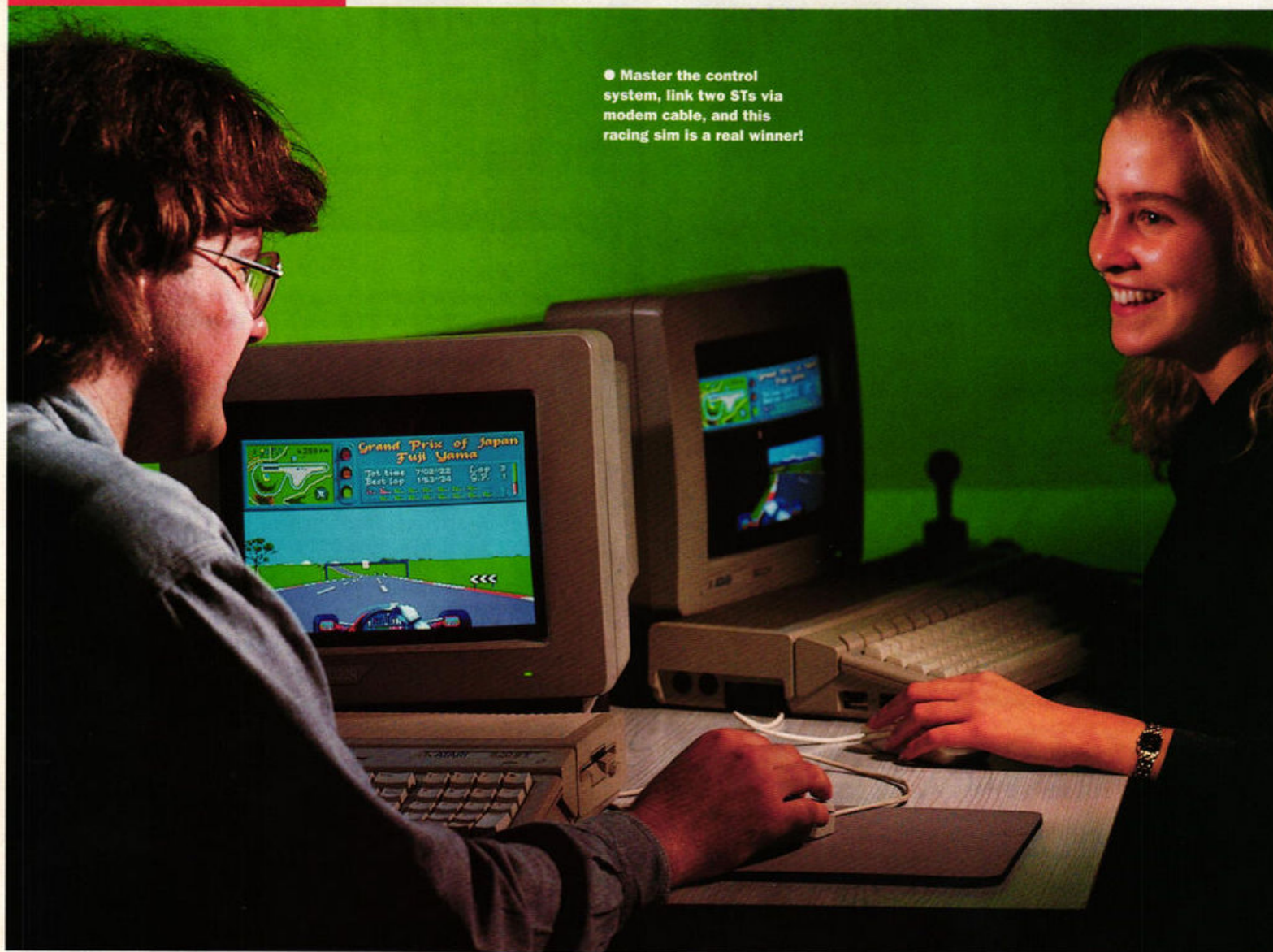
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● Master the control system, link two STs via modem cable, and this racing sim is a real winner!

# VROOM



**In the world of car racing, a silly name is no handicap – just ask Emerson Fittipaldi. Neil Jackson road-tests a surprising racer**

**S**top! Before you go rushing off, cynically cursing *Out-Run* rip-offs and assorted racing-game travesties of old, check this out. It may not be the classiest-looking racer, but it has hidden depths and plenty of faith-rekindling surprises.

*Vroom* (wow, eh? What a title!) is a six-track, multiple-ability Grand Prix game. There are four main modes:

- **Arcade** – where you need to pass a minimum number of cars to move on to the next circuit.
- **Training** – where you can just hurtle around for practice, dodging other cars.
- **Championship** – the real stuff! Finish in the top six for points at each circuit in the GP season.
- **Demo** – a nice extra. A driver's-eye view of how you should be doing it at each track.

Each mode can be tuned to a degree – in the arcade mode, you can even use a joystick to control the car (all others use the mouse). You can also select number of laps, automatic or manual gear-shift and which track or

tracks you race on. By far the best option is the comms link which enables you to connect two STs together by modem or cable. In this mode, you can spot your opponent's car among the pack and just race against that if the competition is too tough.

On the track, the car is a superbast and tough to control at first. Mouse control is by far the most effective – push forwards to accelerate, use the two buttons to control the gearshift (like the famous Ferrari setup) and pull backwards to slow down – the first few inches just drop the revs, but the last apply the brakes. Getting the balance right is hard work, especially since the brakes are a bit fierce and can make you skid helplessly towards the edge. Worse than this, any sideways movement of the mouse alters the steering – and you can imagine the results of this at 317 mph.

Despite these problems, it's worth taking some time to get used to the controls. *Vroom* pays back your investment as soon as you start to race. It's

## ON THE RIGHT TRACK



**TRACK 1** Fujiyama, Japan. Your starting circuit is fairly easy. Watch the first corner at the end of the long straight. Too much brake and you're into the barriers every time.



**TRACK 4** Silverstone, Britain. Good ol' Silverstone, seen here in its old guise without the new bits added this year. Nice 'n' fast, but watch out for the tight corners after the start.



● Watch out when you shoot through bridges – in one of *Vroom's* many nice touches, everything goes dark suddenly and the effect is very disorientating.

packed with some excellent atmospheric effects and effects – you begin to see most of these as you start crashing. If you catch a tree-stump in top gear, you can feel yourself being thrown forwards in your seat. What makes the difference is a simple trick – lowering the horizon line but not the tree – coupled with a resounding sampled crash and a couple of explosion sprites.

Other delights are the “whoosh” noises you only hear when you pass within a hair's-breadth of roadside objects – you know you only just missed them when you hear them! Skidding around corners, speedway fashion, is another neat sensation, as is the sudden darkness you get when you pass under a bridge. For the Cinemascope feel, you can zoom in on the road ahead to make things seem even faster.

There's a pit-crew which, although a bit short on animation frames, adds to the realism a bit. You may find you need them because the steering and handling change as your tyres wear out (see panel), and even the tweakable mouse-sensitivity doesn't aid you here.

But the pits can also be the cause of serious trauma. As you approach the pits on the main straight at nearly 300 mph, the sight of a re-tyred (soon to be retired) car sluggishly pulling away from the lane is a bit harrowing. A rear-end

shunt folds up both your front wheels and sends you flying through the air. And watch out – the side-objects properly detect collision even when you're in mid-air. If you make it back to the ground in one piece, you're probably on the grass. Just drop a cog or two (erm, change down a gear, that is) and you can keep going and stop the engine stalling. Then, look for a way back onto the track and count your blessings.

**VERDICT:** With this many subtle extras, *Vroom* is one of the best racing games in a long time. Okay, it's not perfect – the limited control options and the fixed number of laps in some competitions are annoying – but the problems are outweighed by the overwhelming sensations of the pedal-to-the-metal action.

First impressions were, admittedly, not good – the game-show-style intro music is laughable – but what the hell, it is a game! And when you spend a bit of time with *Vroom* you realise it's a major player. The competition is tough – well tough – but exciting and believable enough to make you want more. And if you're lucky enough to have a mate and a modem cable, it's ten times better to play. Buy it! You won't be disappointed.

**NEIL JACKSON**

## VROOM

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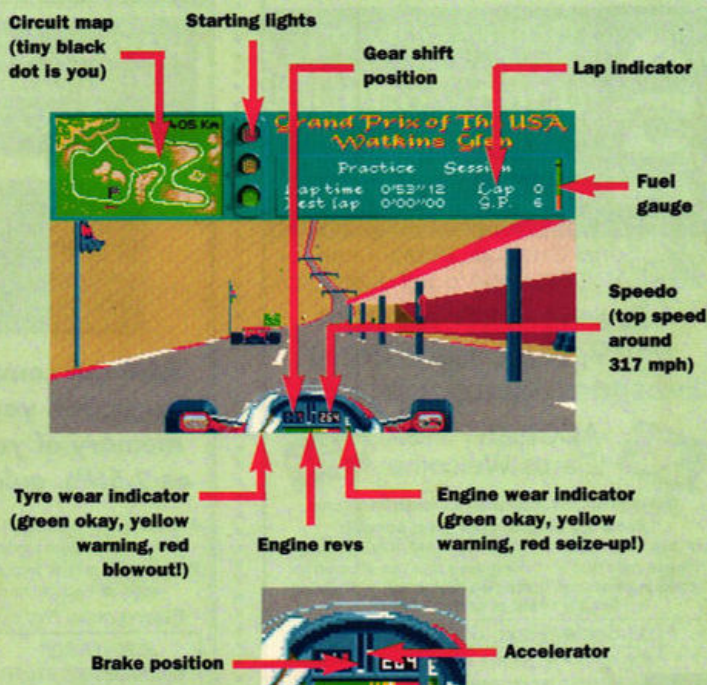


● Watch your wheels! A blowout can be a real bummer – you have to just sit there and watch the traffic go by. Pit in, before it's too late.



● Press “T” and a helpful attendant changes your tyres; hit “G” and he tops you up with eco-friendly, lead-free, non-toxic, odourless petrol.

...Then, back on the track, the display gives you complete control



You can pick the track to suit your own level of driving dexterity, from the relatively simple circuit at Fujiyama to the viciously sharp bends in Anderstorp and the speed of old-style Silverstone...



**TRACK 2** Zeltweg, Austria.  
This is a tad tougher than Fujiyama, so be careful. Watch out for the narrow section which creeps up on you before you have time to react.



**TRACK 3** Castellet, France.  
This one is a bit like Fujiyama, but more twisty. The narrow section is just after the start, and has a corner or two on it. Nasty!



**TRACK 5** Anderstorp, Sweden.  
Horrid, twisty, hairpin circuit, this 'un. Take care under the first bridge – it gets narrow in the dark. Watch yourself on all the 180 degree bends.



**TRACK 6** Watkins Glen, USA.  
A long, sweeping circuit with some gorgeous views ahead, thanks to the smooth hills. A few tight corners, but the main thing is that it's a biggie!

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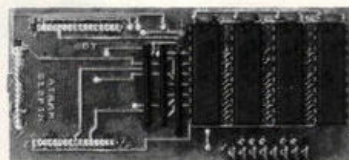
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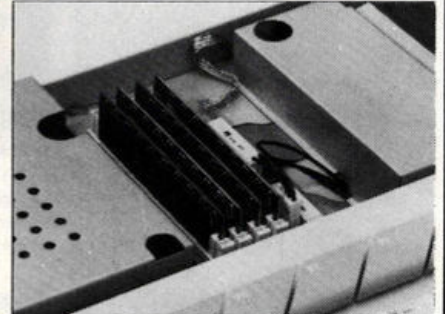
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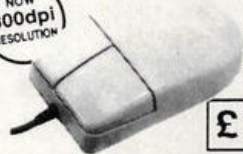
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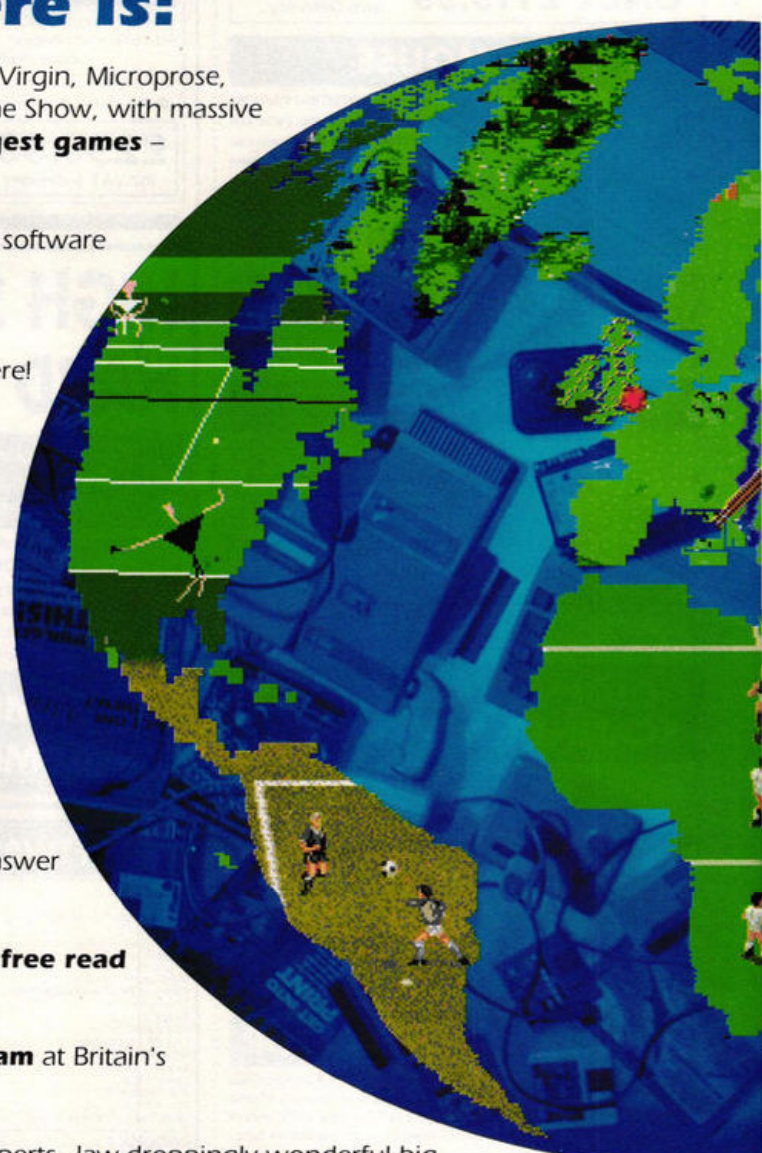
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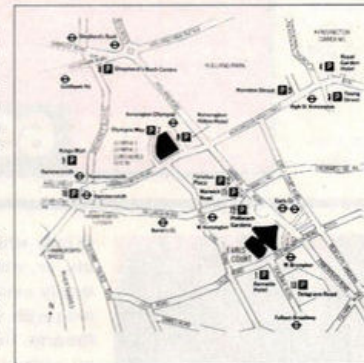
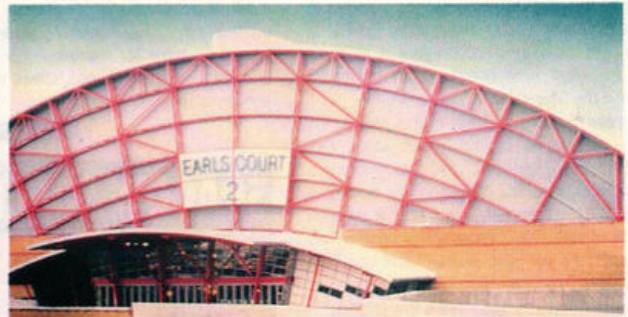
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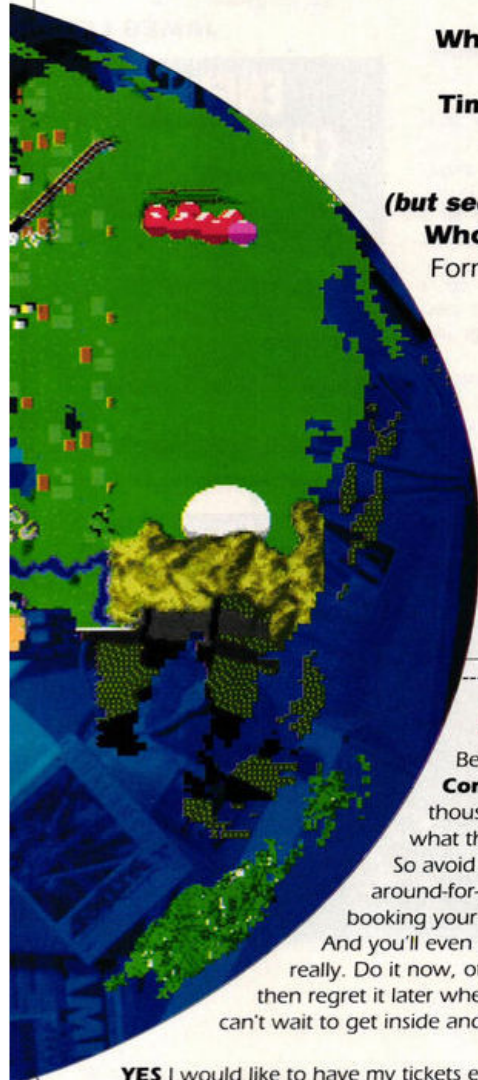
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● The party is introduced to Spiderman's parents at home.

## SHADOW SORCERER

It may be wishful thinking, but there seems to be a resurgence in thud and blunder games at the moment. *Dungeons and Dragons* is as popular as ever and *Hero Quest* – both the board game and the ST version – was a huge hit.

*Shadow Sorcerer* is firmly in this mould. It's an icon-driven game in which you explore a fantasy world populated by elves, orcs, monsters and estate agents. You command four heroes in "a real-time environment." You take a band of refugees to safety, and kill as many monsters as you can. There are also puzzles and traps. To win, you must keep the refugees safe, wipe out most of the creatures and solve some puzzles.

Everything is mouse-controlled and very complicated it is too. As well as movement on two scales of map, there are magic items, spells and weapons to consider, so you need to plough through rainforests of manuals.

**VERDICT:** *Shadow Sorcerer* is initially all but impenetrable. It's an official *D&D* adventure, which

makes it unnecessarily complicated, but if you're *au fait* with *Dungeons and Dragons* you could enjoy this game for months – it's definitely big enough. The graphics and speed are both well above par too.

JAMES LEACH

### SHADOW SORCERER

US GOLD £27.99

Can run on single sided disks

- Runs quickly and has good graphics but there are occasional tedious bouts of disk mungeing.
- Not as playable as *Hero Quest* – it's simply too complicated.

STF RATING 69 %



● Indy whips out his, er, whip and easily overcomes a man with a potent firearm. He is, after all, virtually a superhero.

## INDIANA JONES AND THE LAST CRUSADE

Indy starts this platform scroller dressed as a Boy Scout. He wanders from right to left avoiding baddies, setting off traps with his whip and climbing up and down ropes.

There are four levels, the first two set in the catacombs under a mountain and the others on an airship. As you get further into the mountain the screen gets darker, until you're thumping your monitor in disgust. Lateral thought provides the answer – touch the torches that line Indy's route. Unfortunately most of the other puzzles, aren't much better than this. The Indy sprite is a large affair which moves as if it's trying to over-

come rigor mortis. The rest of the baddies and all the moving scenery are similarly encumbered. Oh, and once you're used to the jerkiness, you have to pit your wits against the poor joystick response as well.

**VERDICT:** Indy plods along as you battle with the poor programming. It really would be far better to spend your dosh on hiring out the vid and giving your fingers a rest.

JAMES LEACH

### INDIANA JONES AND THE LAST CRUSADE

KIXX £7.99

Can run on single sided disks

- If you want a platform game, go and buy another one – they're all better than this.

STF RATING 26 %



● Italia! Italia! Gooooaaaaaallllll! (Translation – Italy appear to have scored.)

using real England players – digitised pictures of them appear in case you have trouble recognising them. Details of fitness, talent and stamina are also included, and your players actually do suffer on the pitch – they run slower.

You can enter a World Cup style championship, playing other teams whose abilities range between crap Third World countries and giants like Brazil and Germany. This takes care of skill levels, too, since you can play friendlies against whoever you want.

**VERDICT:** The team selection business is fun, but it doesn't elevate *ECS* to great heights. It's fast but just not playable enough, and doesn't bear close comparison with the *Kick Off* twins.

JAMES LEACH

### ENGLAND CHAMPIONSHIP SPECIAL

GRANDSLAM £25.99

Can run on single sided disks

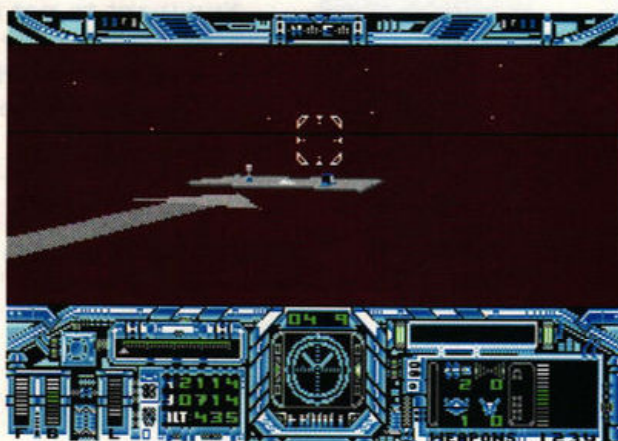
- *Kick Off* certainly provides better footballing action, with neater graphics and more sensible scaling.

STF RATING 56 %

This is certainly aiming at the *Kick Off* market. It features a top-view of the action, with one or two players waggling away furiously.

The sprites are larger than *Kick Off*'s, which means that you only see a tiny portion of the pitch at one time. There isn't a radar display either, so what the rest of your team are up to is anyone's guess. Possession seems to be a rather haphazard affair – you rush your player at the enemy and hope the ball careens off in your favour. Shooting is also hard to control – but, if you generally aim your team in the right direction, you should be able to rugby-charge your way into the opposition's box.

The game runs quickly, and the matches are exciting (mainly for their unpredictability). What makes *ECS* different is the detailed team selection and ability screens. You can pick your team



● Lo! A city beckons on the horizon, its lights twinkling like... well, city lights actually.

## MOONFALL

**Remember *Elite*?** A classic (especially on the old 8-bits). Well, *Moonfall* isn't anything like it. Actually, that's not quite true. *Moonfall* borrows many of *Elite*'s ideas and sets you down on a mining moon with only a hovercar and an enormous pile of weapons.

The idea is to trade with the cities on the base to gain enough dosh to buy it. Hmm. In order to get these Lunariums you must barter at the various cities you find scattered around.

Making things, erm, even more riveting are some aliens who are out to stop you. They seem to prefer staying in, though, so for much of the time your progress is unhindered.

**VERDICT:** The views are 3D, but your craft has stabilisers which very effectively stop it banking, diving or otherwise doing anything particularly interesting. Collision with any ground detail

results in you bouncing backwards. Ho hum. *Moonfall* is a non-starter. Exploring isn't much fun and trading is deadly dull, so if you're an *Elite* fan, play *Elite*.

JAMES LEACH

### MOONFALL

21st CENTURY ENTERTAINMENT £25.99

Can run on single sided disks

- Based on *Elite*, but without the gameplay, excitement or addictiveness.

STF RATING 24 %

# Disciples OF STEEL

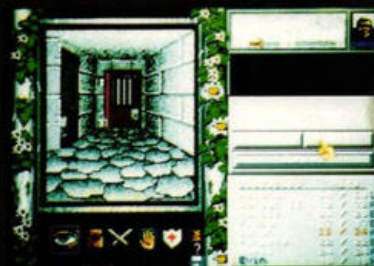
Enter the land of Lanathor, a land fraught with danger and peril. Evil forces, vile and malignant, threaten to overcome the people of Lanathor, forcing them into a new dark age, an age of dread and despair. The old heroes are gone, slain by the very evil that once again threatens the land. The Lords of Lanathor seek new heroes to defeat the hordes of evil.

Can you prove that you are the heroes that they seek? Will you be able to save Lanathor in time? The Evil horde gathers...

VICTORY or DEATH!

Disciples of Steel is a Fantasy Role-Playing Epic with full 3D dungeon exploration and detailed "Birds' Eye" tactical combat. As members of the DOS guild, you can control up to 8 characters, within 9 classes and 8 races. Use them to explore a richly filled world, in an attempt to unite the people of Lanathor in their struggle against the forces of evil that threaten to overcome them.

Contact your local Dealer or Call MegaSoft Direct in the US -- 0101 713 338 2231  
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# What will you ch

## FORMULA ONE GRAND PRIX

Have you ever wondered what it would be like to be one of those 26 drivers, revving on the grid, waiting for the Green light to start you off on a mayhem of crashing

gears, smoke, roaring engines and burning rubber as the Grand Prix season races off into another year? Well, now you can strap on your seat belt! MicroProse and Geoff Crammond, the author of 'Revs' and 'Stunt Car Racer', have teamed up to engineer the only complete Formula One Grand Prix simulation.

MicroProse Grand Prix is crammed full of features: 16 undulating 3D circuits from the street tracks of Phoenix and Adelaide to the glamorous Monaco harbourside and the choice of 26 independently controlled cars out of the current teams; from Jordan and Brabham to Williams and Ferrari.

Study the circuit in practice, adjust your car to achieve peak performance, then roar away for your fastest qualifying lap time to put you ahead of your rivals on the starting grid. Overtake the other cars by slipstreaming or outbraking them into corners, then watch them in your wing mirrors as they try to catch you. Be careful, you might have to avoid a shunt that's just happened around the next bend. It's tough, it's challenging, it's exciting, it's the most realistic Grand Prix simulation ever.

- Authentic cockpit controls with radio and adjustable wing mirrors.
- Realistic tyre and brake wear; judge when to make that vital pit stop.
- View the racing action from television cameras located all over every track and replay your greatest triumphs and worst disasters.
- Unpredictable weather patterns; the race may start dry but a sudden cloud burst may force you to change your tyres and style of driving.
- Four levels of difficulty, from novice to potential Champion, make this a challenge to all drivers.



- From the back of the starting grid to World Champion, MicroProse Formula One Grand Prix, it's all there bar the shouting!

**Formula One Grand Prix will be thundering into all good software stores soon for your Commodore Amiga, Atari ST and IBM PC & Compatibles.**

MicroProse Simulation Software is available at all good software stores. If you experience difficulty in obtaining any of the MicroProse titles they can be ordered directly from us at MicroProse, Unit 1, Hampton Road Industrial Estate, Tetbury, Glos. GL8 8LD. Tel: 0666 504326



## MicroProse Simulation software -

COMMODORE AMIGA AND ATARI ST SCREEN SHOTS SHOWN. ACTUAL SHOTS MAY VARY BY FORMAT.

# Change into tonight?



## MICROPROSE GOLF

Computer owners who like golf have been fortunate to have a wide range of games to choose from. Now, with MicroProse Golf, they've also got the definitive simulation. If you've been playing around, stop; and start playing a proper round.

MicroProse Golf accurately recreates the fairways and greens of each hole using stunning 3-dimensional technology which allows you to travel anywhere around the course. You can even follow the ball as it flies through the air and watch from numerous selectable TV viewing positions.

Accurately modelled club and ball dynamics take account of club selection, ball and foot position and swing, with varying course conditions adding to the huge range of effects that you can witness at first hand. MicroProse Golf is so true to life that it will actually improve your own golf game!

- Realistic 3-D landscape allows you free movement around the whole course.
- Animated "Televisual" presentation and camera positions, including a unique follow-the-ball option.
- Six challenging courses, each in a different style, including 'links', 'woodland' and 'water' courses.
- Options to change stance, swing, tee and ball positions and see their effects on your shots before, during and after each stroke.
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- Player profiles which change over time, including a full handicap system.
- A dozen game types including strokeplay, matchplay, best ball, skins and a full tournament option for 1 to 4 human players.
- Customizable computer opponents and replay facilities.
- Statistical and graphical hole-by-hole analysis of your performance.
- Easy to learn tutorial and 150 page manual packed with hints and tips to help your own game.



**MicroProse Golf will be teeing-off soon at all good software stores for your Commodore Amiga, Atari ST and IBM PC & Compatibles.**



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# Are not properly dressed without it.

# EVILUTION



● It was a dark and stormy night. Or should that be a dark and stormy knight? Well, whatever, it's time to go on an adventure.

**Evilution is a text** and graphics adventure. There are three windows through which you interact with the adventure world. A graphics window shows you what you can see. This isn't too helpful since it's sometimes not too clear what the pictures are supposed to be. Still, purists argue the picture should be in your mind, not on screen.

A smaller window gives your vital statistics. No, not your bust, waist and bum size, but things like your strength, money and whether you're currently alive – all things really worth knowing.

The remaining window is where all the "action" happens. Here, you type in your commands and are told about the consequences of your actions. It's a comprehensive parser, and attempts to make good convoluted sentences.

**VERDICT:** Adventures either appeal to you or they don't. The trick is getting

someone to whom they don't appeal and forcing him to play the thing. Despite the fact that *Evilution's* display really isn't all that hot – there aren't any fancy icons or pull down menus, for example – the plot is very well-engineered, logical and none too difficult to get into. You could well be pleasantly surprised by this game.

**ADAM WARING**

## EVILUTION

**NIGMA £9.99**

Double-sided drives only

● Not as polished as games like *Guild of Thieves*, but well-written and easy to get into.

**STF RATING 70%**

# DARKMAN

Since your face has been horribly disfigured by a gangster, it's only natural that you should want to seek revenge. Luckily, you just happen to be the cleverest scientist on Earth, and



● Before each section starts proper, it's time to get snap happy taking pictures of men across the street without them noticing. What are you, some kind of pervert or something?

have invented a machine to help disguise you as anybody you choose.

The first thing for you to do is take pictures of people you need to imitate in the forthcoming level. Aim the cam-



● Take that! Once you've got the pics back from Supasnaps it's time to go round kicking people's heads in and stealing their money. (And you're supposed to be the good guy?)

era, *Operation Wolf* style, over your subjects as they appear in windows. You've got 20 shots to play with, but time is limited...

After this, having donned your disguise, it's time to go out into the streets and beat lots of people up. The reasons for doing this are varied, but most of the levels have a run-along-and-give-'em-a-good-kicking-while-you're-at-it type of scenario.

**VERDICT:** *Darkman* is fairly typical when it comes to movie licences – a couple of based-on-the-film sequences strung together with a pretty pointless sub-game. Even if you do get all the pictures you need, each disguise only lasts about 30 seconds anyway. The

scrolling is fairly smooth and the graphics aren't too bad, but some of the animation's a bit dodgy. The gameplay is somewhat lacking, and, though not particularly irritating, it's one of those games you just can't be bothered with.

**ADAM WARING**

## DARKMAN

**OCEAN £24.99**

Double-sided drives only

● Batman style walk along cum beat-'em-up with inferior *Op Wolf* sections.

**STF RATING 61%**

# FOOTBALL DIRECTOR 2

Is there any end to the countless stream of football management sims? *Football Director 2* is a revamped ver-

sion of one such game that was actually originally released a couple of years ago. It runs pretty much to the



● The roar of the crowd, the end-to-end excitement, the tremendous shots at goal. Experience none of this with *Football Director 2's* dull static display.

same format as any other footie game that's ever been released – that is, having to balance the books and keep your team happy, win lots of matches and gain promotion.

There's not a lot to look at – apart from screenfuls of boring text, of course. There's little in the way of graphics. Most of the screens are dull, text-only affairs.

**VERDICT:** This game style has been done to the death. What's more, *Football Director 2* doesn't seem to be any better than anything that has already gone before it.

If you like this sort of game, then the chances are that you have half a dozen or so already in your collection –

but, if that's the case, you may be mad enough to add another one that's exactly the same as all the others.

**ADAM WARING**

## FOOTBALL DIRECTOR 2

**D & H GAMES £24.99**

Double-sided drives only

● No notable improvements over the prehistoric *Football Manager* (or any of the other billion or so clones).

**STF RATING 43%**



# FIRST SAMURAI



Long ago in a tiny village in Ancient Japan ...



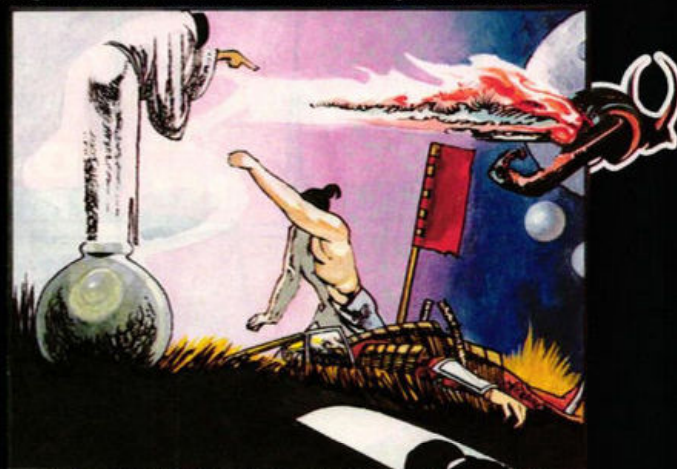
a young Samurai lived and studied peacefully with his master the Lord Akira, until .....



a Demon King descended from his mountain to destroy the village and all its inhabitants ...



slaying the Warrior Lord and leaving only the young Samurai to tell the tale.



He called upon the Wizard Mage who forced the Demon to flee into the future leaving the Land at peace.



However, the Samurai vowed he would have no peace until he had avenged his master's death with the aid of the wizard.



So armed with a magic sword our hero followed the Demon through time to year 2325 and ...

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MOUNTAIN BIKES COULD BE  
ALL YOURS!!**

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# FINAL FIGHT

This is a game where you have to hit people repeatedly and hard. But don't worry, it's all in a good cause. Y'see, the Mayor's daughter has been kidnapped by this gang called the Mad Gears, so the Mayor (who obviously believes in ruling at street level) sets out to rescue her, along with his two chums (of whom one just happens to be the daughter's lover and the other is her, um, friend).

But how? By sitting down and having a rational conversation with the adversaries? Of course not. By duffing up everyone they meet on the street. You get to play any of the three characters – Guy, Cody or Haggar.

The game is played across 19 backgrounds, such as the street, the subway, a park (including the toilets – yeuch!) and, oddly, a boxing ring into which you just happen to wander. The low-lives come in all shapes and sizes, but mostly big and ugly ones – except for the incredibly athletic, but decidedly antisocial, women you meet. Along the way you can pick up pipes, knives and bits of food that have been carelessly left lying about, and use them in indescribable ways on your opponents.

This is the sort of game which prompts comments like, "Look at the sprites on that!" And indeed they are rather large. Not too badly animated,



● Each character in this beat-'em-up has a special move. The Mayor's is best – it involves grabbing the other person, turning him or her upside down, jumping high into the air and smashing the perp's head into the ground. Hence, perhaps, the move's name – the piledriver.

either. They move very smoothly and, though there aren't a huge number of animation frames, the sprites' bigness makes up for this. Partly. Unfortunately, the backgrounds don't really match up to the design of the sprites. They're a bit amateurish and spoil the atmos.

**VERDICT:** There's not a whole lot you can say about games like these. They either do their jobs well or badly, and this one happens to do it rather well. The only slight flaw is the difficulty level. It's all too easy to play through most of the game on your second or third go.

So, the plot wouldn't tax the brain of an anteater and the action is as repetitive as – well, as being hit on the head a lot. But what's there is good fun. And in the end, Brian, that's all that matters.

**ED RICKETTS**



● From the street to the park to the – boxing ring? Why not? Here, Guy gets to grips with Sodom. That's the other geezer's name, by the way, in case you were getting any ideas. He's a tough basket, but that's probably because he's wearing all that bloomin' armour.



● In between the bouts of violence there's some nice soothing violence. In a bonus level, smashing up this car that's innocently parked at a garage gains you extra points and the undying gratitude of its owner – who was going to scrap it anyway, honest. Please don't hit me, Mr Mayor, sir.

## FINAL FIGHT

US GOLD £25.99

Can run on single sided disks

- Different style of game to Pitfighter – this is much better.
- Sprites are big, in a large sort of way, much more so than those in the likes of Barbarian.
- Easier than virtually any other beat-'em-up, such as Golden Axe or IK+.

**STF RATING 74%**

## FORMAT RATINGS REVIEWED

How did **FORMAT** rate the games reviewed over the last three months?

MICROPROSE GOLF	STF 27	95%
JIMMY WHITE'S WHIRLWIND SNOOKER	STF 27	94%
MEGA LO MANIA	STF 27	94%
RAILROAD TYCOON	STF 28	93%
EXILE	STF 28	92%
FLIGHT OF THE INTRUDER	STF 27	92%
VROOM	page 78	92%
THUNDERHAWK	STF 28	91%
MAGIC POCKETS	STF 27	90%
UTOPIA	page 54	90%
ELF	page 69	89%
MIG-29M SUPERFULCRUM	page 59	85%
VIRTUAL WORLDS	STF 27	78%
MANCHESTER UNITED EUROPE	STF 28	77%
CRUISE FOR A CORPSE	page 62	76%
BOSTON BOMB CLUB	STF 28	76%
FINAL FIGHT	page 91	74%
HOME CASINO POKER ETC	STF 28	74%
SARAKON	STF 28	74%
SUPERCARS	STF 27	74%
BLUES BROTHERS	page 75	72%
DOCTOR FOX'S 1991 FOOTBALL ANNUAL	STF 28	72%
MONSTER BUSINESS	STF 28	72%
EVILUTION	page 88	70%
RODLAND	page 70	70%
SHADOW SORCERER	page 84	69%
THE ADVENTURES OF ROBIN HOOD	page 66	68%
CLOUD KINGDOMS	STF 27	68%
WRECKERS	STF 27	68%
FOOTBALLER OF THE YEAR	STF 27	67%
GRANDSTAND	STF 28	67%
EUROPEAN SUPERLEAGUE	STF 28	66%
MADDOG WILLIAMS	STF 28	66%
FACE OFF	page 72	65%
PIT-FIGHTER	STF 28	65%
TERMINATOR 2	page 64	63%
DARKMAN	page 88	61%
THE JAMES BOND COLLECTION	page 72	57%
ENGLAND CHAMPIONSHIP SPECIAL	page 84	56%
Z-OUT	STF 28	53%
CHARGE OF THE LIGHT BRIGADE	page 75	52%
CHALLENGE GOLF	STF 27	52%
INTERNATIONAL CHAMPIONSHIP ATHLETICS	STF 28	49%
KID GLOVES	STF 27	44%
FOOTBALL DIRECTOR 2	page 88	43%
ZONE WARRIORS	STF 28	39%
INDIANA JONES AND THE LAST CRUSADE	page 84	26%
MOONFALL	page 84	24%

NOTE: Games in red are reviewed in this issue

# DataPulse

Hard Drives

## Quantum Mechanics

The cached Quantum Mechanisms used in the Data-Pulse range of Hard Drives are made to very high American Military standard and are covered by a 2 year manufacturers warranty (from date of manufacture). They are all 3.5" mechanisms with a height of just 1 inch and integrated SCSI controllers. They have an average access time of 11ms utilising a 64K look ahead disk cache.

All Mechanisms used are Autoparking reducing the risk of damage during transit. They are also very low power which means they can operate without the need for a fan, thus reducing noise.



Quantum™

## Data Pulse Hard Drives

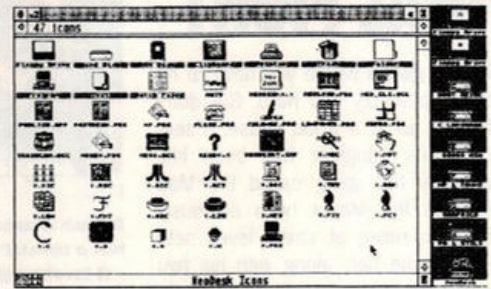
The Data Pulse range of drives come in a variety of capacities and include the following.

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## NEO Desk 3 Special Offer

Due to the popularity of our hard drives and bulk purchasing power, we can now offer NEO Desk 3, the replacement desktop which was voted "Software utility of the year" for 1990 by ST Format readers, to buyers of our hard drives for just an extra £24.99. We can also offer this perfect hard drive companion to all existing Ladbroke Computing Hard Drive owners (Phone for details).

"Neodesk 3 is truly invaluable for the ST owner"  
-ST Format-

NEO  
DESK  
3™

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Ladbroke Computing have been active in the field of ST Memory upgrades for a number of years and can offer upgrade advice and solutions for the entire range of ST's. In that time our engineers have gained experience in the field and have used that experience to research and develop our own range of upgrade boards.

We have developed our own 5/2/4Mb upgrade board using an in house designed, Multi layer circuit board which measures just 52mm x 62mm, smaller than a credit card. We have achieved this miniaturisation by utilising 4 Megabit memory chip technology. The result of this reduction in size is a reduction in cost and more reliable operation, due to the fact that the board resides under the ST's shielding protecting it from interference and reducing Electromagnetic emissions.

The board is manufactured in the U.K and hand assembled in our workshops by skilled technicians. The boards are then thoroughly tested before despatch.

The board now comes in three configurations, 5Mb, 2Mb and 4Mb. By using high density ZIPP RAM chips of different capacities it is possible to start with a .5Mb board and to upgrade it to 2Mb and then 4Mb at a later date.

The boards require some soldering, due to the instability of some plug in devices, but are very easy to fit and come complete with full instructions to fit ANY ST including Mega's(except STE's which use SIMM boards). If your shifter chip is not socketed, you will have to desolder it and install a socket which is supplied.

To check your board has been installed correctly we supply you with a disk which has a memory check program. If for any reason your upgrade should refuse to work we have skilled technicians on hand to offer technical support.

IMG Scanner for ST Still available. Requires 9 pin Epson compatible printer to operate. Best results obtained from Photocopiers. Now only £29.99

## Our 1/2Mb upgrade board can now be upgraded to 2Mb and then 4Mb

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512K Upgrade Board £42.99

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### Please Read: Terms of Sale.

Ladbroke Computing are the longest established Atari dealer in the UK. We have developed an extensive customer service policy which means that we test all Hardware prior to despatch to ensure that goods arrive in working order. Although our prices are not always the cheapest we do endeavour to offer consistently good service and backup. This isn't just our opinion, we were voted 'Best Dealer 1989' by the readers of ST World magazine, not for 'the number of boxes shifted', but for quality service.

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# Gamebusters



**Ah yes, I knew Gamebusters when it was just a lad. Three tips high it was then, and still wet behind the ears. How it's grown since then! Of course, it went through a bad patch during its teenage years, but is now happily married with 1.8 children and lives in a small semi detached house in Kent**

## FLAMES OF FREEDOM

RAINBIRD



Ian Bailey of Dorset has worked through the mammoth task of completing this follow-up to *Midwinter* and has shared the results of his labours with us. For his trouble he's won himself this month's £50 prize.

Actually it turns out that it's not so mammoth after all, because you only need to liberate eight islands. These key islands block off the supply routes

to each of the others, which then causes all 41 to fall. Naturally, the eight islands are some of the hardest ones: Djoum, Satara, Ghazal, Dhafra, Ndola, Lobos, Camargo and Makat. They have to be completed in that particular order in order to succeed. This is the way you do it. Note that these solutions are just one way to do each island and they're not necessarily the easiest.

### DJOURM - THREE SKULLS RATING

Get the documents at Manatoba Highlands. Go and rescue Dingaane Achebe from Malad Island. You should then see someone else on the short-range radar. Kill him - he's Hassan Hilmi - fulfilling Objective 3. Go to Tikako Tozer and get him to ambush the jeep unit. Accept his secret journey to Garan Achebe. You have already met Garan's condition - take all his help save the secret journey. Assassinate Lwamgira Baikie which completes Objective 2. Find Cadi Tozer close by at Gboko Lowlands. He sabotages Feraigat Fields for you - achieving Objective 1. (You can either do it yourself or go off and enlist more people before coming back to Cadi.)

### SATARA - THREE SKULLS RATING

Go to see Eli Kedourie at Salamadi. Use Charm to persuade him to help - take the documents from him. Visit Ghazal Midhat and Ariel Janvier at The Salamadi and use Charm to persuade the Ghazal Midhat. Then see Bosiu Bory at Glen Salamadi and use Charm once again - he tells you where Mulele Kouy-

ate is. Visit and recruit Mulele Kouyate, fulfilling Objective 1. Find Ujoni Mulele at Shanghaba Mountain to find out where Zwide Tozer and Kgari Gamoudi are. Do the business on Zwide to complete Objective 2. Then go to see Kgari; he wants you to get some documents. You already have them from Eli Kedourie, so Objective 3 is out of the way.

### GHAZAL - THREE SKULLS RATING

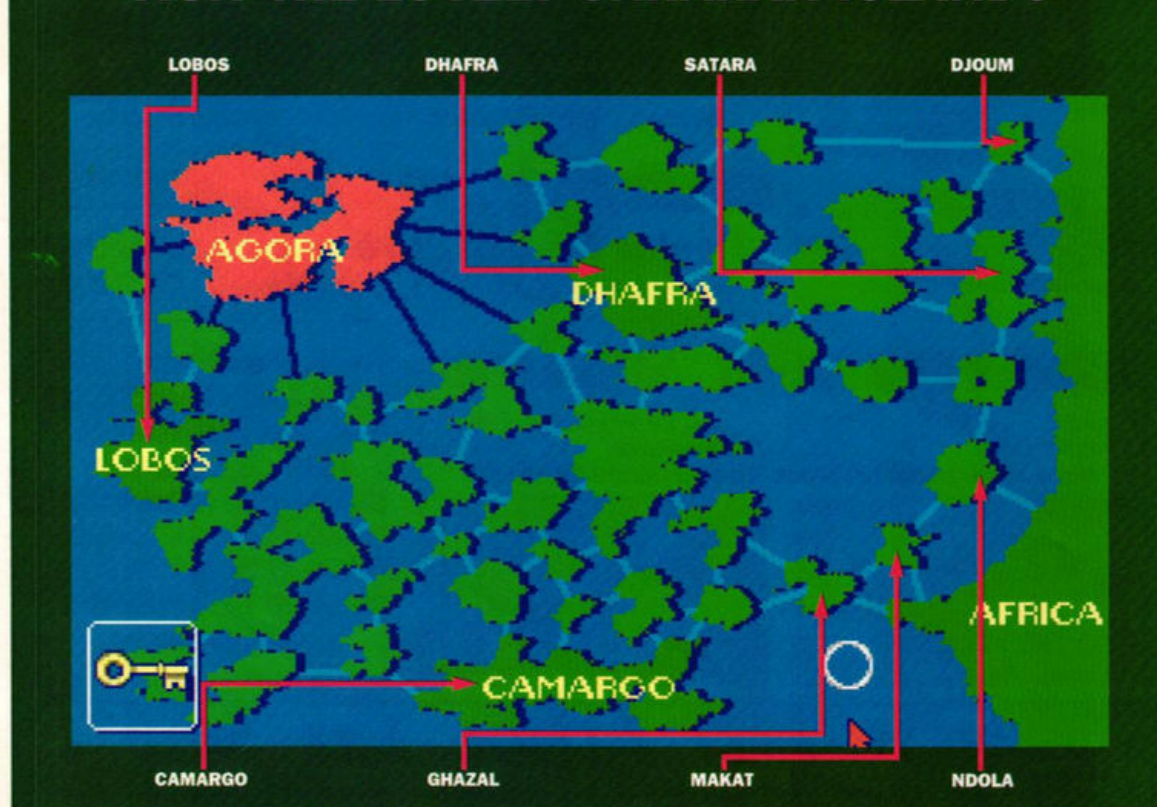
Visit Youssef al-Hdrisi at Malad Lowlands. Then kill him, so you can see Friedrich Miesler at Malad Highlands at the three shacks. Then visit your contact, Edouard Ghayder, to find out where Admiral Zufia Ibn Rushd and Bianca Fregona are. Go and kill Zufia - Objective 2. Next, visit Khadija Zaghlul. She tells Bianca Fregona to help you. Bianca betrays you, but in the long run this is quicker than having to fulfil her condition to get her to help you. Go and see Shireen Ibn Musa. You've already enlisted Friedrich Miesler, fulfilling Shireen's condition, so you can enlist her and complete Objective 3.

### DHAFRA - FIVE SKULLS RATING

Rescue Sulima Ziyad, the daughter of Habib Ayyub, at Rockford Moor. Get her to assassinate Colonel Maxim Mirek. Now visit Habib Ayyub at The Vale of Cizento at the mine. You have met his condition so enlist him and fulfil Objective 1. Get his dynamite and rocket pack. Then visit your contact Jafar Seljuks, who gets Jan Karlstaad to help you. Go and see Jan to complete Objective 2.

Now see George Davies at Cizento Reach. You've met his condition so enlist him and complete Objective 3. Next see Saad Ibn Rushd at Farus Plateau. He tells you where Black Ridge

## VISIT THE LOVELY SAHARAN ISLANDS



● **Hemet.** One of the islands that, er, you don't want to conquer. At all. Just leave it completely alone and get on with the important ones. We're showing it to you here so you can recognise it and not liberate it. We would have put in all the others you don't want to liberate but there wasn't room.

Plateau is. Then visit Remy Lanza, who gets Marian Hughes to help you. See Marian and she tells you about a secret place called Rockford. Go there to meet Yvonne White, who tells you Maxim Mirek is in Boulder Valley. This means you can now go and sabotage the Secret Police HQ at Boulder Valley to fulfil Objective 4. Finally sabotage the Enemy HQ and Radio Station at Black Ridge Plateau to liberate the island.

### NDOLA – FOUR SKULLS RATING

Assassinate Hans Abach at Hazara Fields. Now see Kitamonia Nahas at The Hazara. She tells you the location of Henri Dubrique, who you need later. Then kill Felix Siegler near N'gur. Next, visit Dingaam Hamza at Sayatin Fields to find out where Tutia Mobutu is. Get Dingaam to sabotage The Sayatin for you.

Now see Tutia Mobutu. Don't accept Tutia's secret journey – visit Rassama Reubeni at Jadawil Fields yourself. Enlist Rassama, then see Dora Lumas at The Gboko. She has two conditions but you've already fulfilled them. Next, find Zwide Tutuola at Jadawil Fields. You've also fulfilled his conditions, so take his help.

Next is Christophe Mirek at N'gur Fields, who sabotages Major Sinan's squadron for you. Now's the time to go back and see Henri Dubrique, whose conditions you've now fulfilled.

Find Maude Kreuter at N'gur Flats. You've fulfilled her condition so take her help. Call on Shaka Onadipe at The Jadawil, whose condition you've also met. Let him help. Finally, it's time to see Bosiu Aooma at The Qulat to complete Objective 1. Take his documents to complete the second objective and the island is finished.

### LOBOS – FIVE SKULLS RATING

Go to Jubilee Fields. You should see some buildings on the short range radar, one of which is a Control Tower. Blow it up with a hand grenade. Find Kiweti Achebe, take his info and the secret journey to Patrick Wilson. Get the limpet mines and take the secret journey to James Mitchell. You've met his condition, so he tells you where Deepwater Sound is. Don't take the secret journey, go to Fiona Johnson.

Fiona tells you the location of Charlotte Upton and also assassinates Martin Banks. Go to Charlotte to find out where Fariba Ibn Musa is, then find Fariba to find Anne Burton. Go to Anne, whose condition you've met, and get her to assassinate Amandu Dengal, thus meeting Objective 1. Return to Patrick Wilson and walk along the coast heading northeast. You should meet Susan Lawrence and Okbah al-Hamik. Okbah contacts Governor William Shaw, who you should go and see to find out where Outlook Island is. Sabotage the Underwater Base at Deepwater Sound



● Your contact today is Bernhart. Bernhart is 32 and his hobbies are picking flies off car windscreens and changing all the "i"s in *The Observer* to "f"s. Bernhart is not averse to new ideas and welcomes suggestions regarding gold lamé and wax.

and the radar on Outlook Island to liberate Lobos, Panao and Vicenzo.

### CAMARGO – FIVE SKULLS RATING

Rescue Zaid Sirhan at Cidade Hills to complete Objective 2. Rescue Henri Bruchen. Seize the documents at Dao Sister. Visit Fadi al-Hadi at The Mais-Bonito. You've already fulfilled his conditions, so enlist him and liberate Camargo.

### MAKAT – TWO SKULLS RATING

The quickest way to do this one is to see Hikmat Sutuz at Muqris Island and use the Matahari Capsule secret weapon on him to get him to help you. Leave him and use the Flying Fox weapon to blow up the underwater base, leaving one liberated island.

All that's between you and victory is the Armada. This is a list of the

Armada's squadrons that have to be destroyed by you:

Name of its Commander	Type of Vehicle
Baxter	Biplanes
(he reaches Agora first)	
Stanley	Submarines
(get one of his subs)	
Parry	Zeppelin
Holmes	Biplane
Atton	Helicopters
Namali,	Ships
Dvorak	Flying boats
Robinson	Speedboats
Shumacker	Biplanes
Sirhan	Hovercrafts
Smith	Flying boats
Amin	Crawlers
Marchetta	Flying subs
Czurma	Mini subs
Christiansen	Submarines
Murphy	Ships
Chayder	Speedboats

All the other units are destroyed by the islanders – and you've done it!



● The Colonel really is a very prolix sort of chap. Get him nattering and you never stop. Just the other day he came out with another side-splitting remark. Now what was it? Ah yes – "Good luck, Steel." We were in fits, I can tell you.

## BACK TO THE FUTURE 3

MIRRORSOFT

Chris Hilton from Sheffield suggested this tip – during the display of the story line, type ROTTEN CHEAT (Level One), LOUSY CHEAT (Level Two) and LOW DOWN CHEAT (Level Three) to give you infinite lives for that level.

## ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS

DOMARK

HC Wong of London has sent us this tip and the following three: hold down <Fire> and push your joystick up. It now takes 30 shots to kill you.

## LEMMINGS

PSYGNOSIS

If you type FQUIGGLY on the title screen you might think there would be no effect, but actually your lemms are suicide-proof. You can, of course, still lose a level.

## MANCHESTER UNITED

KRISALIS

While playing a one player game, press the button for two players. The other team freezes and you can score hundreds of goals.

## PANG

OCEAN

On the map, type WHATANICECHEAT. The screen should go blue or purple. You can now go to any stage.

## RICK DANGEROUS 2

MICROPROSE

Not the old POOKY tip! Type JE VEUX VIVRE in the high score table to gain infinite lives, suggests Chris Hinton from Sheffield.

## ROLLING RONNY

VIRGIN

Well, it's not actually for the game, but for the STF demo on Cover Disk 27. Maria Bate of Runcorn has discovered this cheat: press C to turn cheat mode on. This means you can fly anywhere without dying. Not only that, pressing F10 enables you to shoot the cars and F9 boosts your score as high as you like. Woo!

# → MEGA LO MANIA

## KEY

- GATHERABLES
- PIT MINE
- OPEN CAST MINE
- BEST STARTING SECTOR

## EPOCH 1

### ALOHA

ROCK	☉
SLATE	☾
SOLARIUM	
HERBIRITE	
WOOD	
PARASITE	
BETHLIUM	
MOONLITE	

### BAZOOKA

BONES	ROCKS
PLANETARIUM	BONES
HERBIRITE	PLANETARIUM
VALIUM	YERIDIUM
SLATES	WOOD
BETHLIUM	MOONLITE
HERBIRITE	ARALDITE
PARASITE	

### CILLA

BONES	MOONLITE	
SOLARIUM	SLATE	
VALIUM	PARASITE	
AQUARIUM		
ROCKS	WOOD	SLATE
ARALDITE	PLANETARIUM	BETHLIUM
YERIDIUM	SOLARIUM	ARALDITE
	PARASITE	YERIDIUM
	WOOD	
	SOLARIUM	
	AQUARIUM	

## EPOCH 2

### ETCETRA

WOOD	PLANETARIUM	ROCKS
BONES	SOLARIUM	MOONLITE
MOONLITE	ARALDITE	ARALDITE
AQUARIUM		AQUARIUM
	MOONLITE	
	BETHLIUM	
	PARASITE	
	SLATES	BONES
	PLANETARIUM	MOONLITE
	ONION	YERIDIUM
		VALIUM
	MOONLITE	
	PLANETARIUM	
	SOLARIUM	
	ARALDITE	

it's not only hard playing gamers that have been sending in their cheats and tips. This month, Mirrorsoft themselves have come up with this excellent guide to playing their massive god-game *Mega Lo Mania* at least as far as the fourth Epoch. We reviewed it back in issue 27 and awarded it a *FORMAT* Gold with a stunning 94%.

### GENERAL TIPS

1. Pick a starting sector with the best elements for the inventions you wish to make at any given point.
2. Learn from experience which elements are best for each design (or check the list on page 99).
3. If you design something and the designer says it's "ergonomically terrific" (or "tewwific" even), note down the sector it was in, then look under the blueprints for the design. You see a hand showing an okay symbol to show that the design is indeed ergonomically terrific. Note down the components of this design. This is one of the perfect ways to design this object and reduces its design time by half. If you see another sector later in the game with the same elements available, then you know that this design can be knocked out in next to no time.
4. Sectors with many gatherable elements are often the best to produce weapons fast for a quick surprise attack.
5. Sectors with mostly gatherables are not as desirable if the game has gone on to the later stages. Particularly in Epoch 3, it is advisable to find a sector with some more sophisticated elements. See the maps for a suitable site.
6. Eventually, you should be able to learn the best seams to mine and the ones to leave alone in order to achieve the chance to design whichever object you're after.
7. Whenever a new seam is mined it's always best to check the design menu first, in case a new design has become available.
8. If a seam or element is totally used up, thereby making a design impos-



● You can't leave them alone for five minutes without them getting into trouble. Come on, who's responsible for the hole? We're not going home until I find out. I can stay here all night if necessary - I've got plenty of marking to do.



● And as the sun goes down over the isle of Bazooka, the distant sound of little Mega Lo Maniates bashing hell out of each other faintly drifts through the ether and plops gently, almost gracefully, on the ear.

9. If you want, say, an army weapon, and you have only shields and building weapons, these sometimes shift you up a tech level. This, in turn, makes another element available, which could well lead to the design you want.
10. In order to produce designs that are quick to either make immediately or manufacture, try making as much as possible before starting any mining, because inventions made from gatherables save valuable time and manpower.
11. Always wait until clocks have ticked down to zero before changing the factory to produce a new object. Likewise, think twice when designing. Aborting a design halfway through just wastes time.
12. Knowledge of the different elements available in different sectors can help you read what your opponents are likely to arm themselves with.
13. Try to keep your men balanced between tasks to maximise efficiency. Only throw all your men into doing one thing if you are in a emergency.
14. If time is on your side, try to leave as many men as possible to reproduce in the tower. Men are your currency; bank wisely.
15. If you are under fire but with time on your side, designing shields from just gatherables can be a life-saver.
16. Play sensibly. Do not send unarmed men to attack buildings because they have no effect whatsoever. Only do this to send one or two lambs to the slaughter as a tester to see what sort of armies they have hidden away.
17. Use the map to see what your enemies are doing.
18. Remember, a building weapon man is twice as strong as an armed man on the ground from the same area.
19. If you're next to an opponent at the start of the game, try to ally with him immediately to stop him attacking you.
20. If your backs are against the wall and you are about to die, try allying with your aggressor. After all, you have nothing left to lose.
21. Play an island with loads of men to suss it all out and then play it again with fewer and fewer men - see how low you can go. Remember the golden rule: *use as few men as possible!* Use the table below to find the



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TOTAL RRP: £224  
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**£129**

+VAT=£151.58 ref: PRI 2120

## 9 PIN PRINTERS



- FREE! COLOUR KIT**
- 192 CPS 80 COLUMN
- Citizen Swift 9 - 9 pin - 80 column
  - 192cps Draft, 48cps NLO
  - 8K Printer Buffer + 3 Fonts
  - Parallel Interface
  - Graphics Resolution: 240x240dpi
  - Epson and IBM Emulation
  - FREE Colour Kit
  - FREE Silica Printer Starter Kit

RRP: £239  
COLOUR KIT: £38  
STARTER KIT: £25  
TOTAL RRP: £282  
SAVING: £123  
SILICA PRICE: £179

**£179**



- Colour Option Extra - See Accessories
- 192 CPS 136 COLUMN
- Citizen Swift 9x - 9 pin - 136 column
  - 192cps Draft, 48cps NLO
  - 8K Printer Buffer + 3 Fonts
  - Parallel Interface
  - Graphics Resolution: 240x240dpi
  - Epson and IBM Emulation
  - A3 landscape printing
  - FREE Silica Printer Starter Kit

RRP: £329  
STARTER KIT: £25  
TOTAL RRP: £354  
SAVING: £105  
SILICA PRICE: £249

**£249**

## 24 PIN PRINTERS



- NEW!**
- FREE! COLOUR KIT**
- 216 CPS 80 COLUMN
- Citizen Swift 24e - 24 pin - 80 column
  - 216cps Draft, 72cps LQ
  - 8K Printer Buffer + 6 Fonts
  - Parallel Interface
  - Graphics Resolution: 360x360dpi
  - Epson, IBM & NEC P6+ Emulation
  - FREE Colour Kit
  - FREE Silica Printer Starter Kit

RRP: £365  
COLOUR KIT: £38  
STARTER KIT: £25  
TOTAL RRP: £428  
SAVING: £169  
SILICA PRICE: £259

**£259**



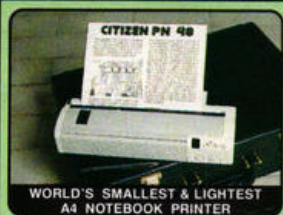
- NEW!**
- Colour Option Extra - See Accessories
- 192 CPS 80 COLUMN
- Citizen Swift 224 - 24 pin - 80 column
  - 192cps Draft, 64cps LQ
  - 8K Printer Buffer + 2 Fonts
  - Parallel Interface
  - Graphics Resolution: 360x360dpi
  - Epson and IBM Emulation
  - Colour Option Available
  - FREE Silica Printer Starter Kit

RRP: £269  
STARTER KIT: £25  
TOTAL RRP: £294  
SAVING: £95  
SILICA PRICE: £199

**£199**

+VAT=£233.83 ref: PRI 2484

## NOTEBOOK PRINTER



- WORLD'S SMALLEST & LIGHTEST A4 NOTEBOOK PRINTER
- 64 CPS 80 COLUMN
- Citizen PN48 Notebook Printer
  - Non-Impact Printing On Plain Paper
  - LASER QUALITY - 64cps
  - 4K Printer Buffer + 2 Fonts
  - Rear and Bottom Paper Loading
  - Parallel Interface
  - Graphics Resolution: 360x360dpi
  - Epson, IBM, NEC P6 & Citizen Emulations
  - Power: Mains, Battery or Car Adaptor
  - FREE Silica Printer Starter Kit

RRP: £325  
STARTER KIT: £25  
TOTAL RRP: £350  
SAVING: £101  
SILICA PRICE: £249

**£249**

## 24 PIN PRINTER



- Colour Option Extra - See Accessories
- 192 CPS 136 COLUMN
- Citizen Swift 24x - 24 pin - 136 column
  - 192cps Draft, 64cps LQ
  - 8K Printer Buffer + 4 Fonts
  - Parallel Interface
  - Graphics Resolution: 360x360dpi
  - Epson, IBM and NEC P6 Emulation
  - A3 landscape printing - FREE Colour Kit
  - FREE Silica Printer Starter Kit

RRP: £489  
STARTER KIT: £25  
TOTAL RRP: £514  
SAVING: £165  
SILICA PRICE: £349

**£349**

## 24 PIN PRINTER

- GOLD AWARD**  
Best Budget Printer 1990  
Micro Decision
- Citizen 124D - 24 pin - 80 col
  - 144cps Draft, 48cps LQ
  - 8K Printer Buffer + 2 Fonts
  - Parallel Interface
  - Graphics Res: 360x360dpi
  - Epson and IBM Emulation
  - FREE Silica Printer Starter Kit

RRP: £249  
STARTER KIT: £25  
TOTAL RRP: £274  
SAVING: £105  
SILICA PRICE: £169

**£169**

## ACCESSORIES STARTER KIT

- FREE!**
- Worth: £25 +VAT=£29.38
- To get you up and running with your new printer from Silica:
- 3 1/2" Disk - Amiga & ST Drivers
  - 3 1/2" Disk - Drivers for Windows 3
  - 2 Metre Parallel Printer Cable
  - 200 Sheets of Continuous Paper
  - 100 Continuous Address Labels
  - 5 Continuous Envelopes
- If you already own a printer, and would like to buy a kit, you may order one (ref: KIT 5500) for £24.95 - £5 off RRP!
- SHEET FEEDERS**
- PRA 1200 £200
  - PRA 1228 1240/224 Swt/24/24a £242.00
- SERIAL INTERFACES**
- PRA 1189 1200+ £56.45
  - PRA 1209 1240/224 Swift 9 £32.25
  - PRA 1709 Swift 24/24a £28.38
- 32K MEMORY EXPN**
- PRA 1753 1240/224 Swt/24/24a £13.10
- PRINTER STAND**
- PRA 1242 1240/224 Swt/24/24a £24.00
  - PRA 1274 Swift 9a/24a £30.66
- ORIGINAL RIBBONS**
- RIB 3520 1200/24 Swt £2.91
  - RIB 3949 Swift 9x Black £7.15
  - RIB 3924 1240/224 Swt/24/24a Black £4.20
  - RIB 3938 Swift 9/24/24a Colour £15.63
  - RIB 3248 PN48 Single Strike £3.61
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- COLOUR KITS**
- PRA 1238 Swift 9/24/24a £35.25
  - PRA 1240 Swift 9a/24a £35.25
- PN48 ACCESSORIES**
- PRA 1148 PN48 Battery £19.70
  - PRA 1155 PN48 Cable Extn £ TBC
  - PRA 1162 PN48 Car Adaptor £ TBC
- All prices include VAT and Free delivery.

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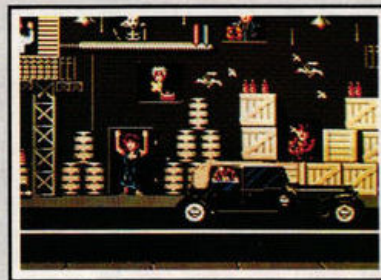
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# PURE FIREPOWER

## TROJAN PHAZER



The Enforcer



Aliex



Firestar

Screen shots from Amiga Software

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LOOK OUT FOR OTHER PHAZER SOFTWARE TITLES BEING RELEASED FOR CHRISTMAS '91 FROM TROJAN SOFTWARE.



Unit 7, Dafen Park, Llanelli, Dyfed. SA14 8LX.

## COMPUTER COMBAT FOR THE NINETIES

## DRACULA

BONES	WOOD	BONES
PLANETARIUM	SOLARIUM	SOLARIUM
HERBIRITE	HERBIRITE PALADIUM	ARALDITE
MOONLITE BETHLIUM	ROCKS SLATES	
HERBIRITE PARASITE	ARALDITE	

## FORMICA

MOONLITE PLANETARIUM	ROCKS SLATES
PALADIUM	MOONLITE
	ONION
	WOOD BONES
	HERBIRITE YERIDIUM

## EPOCH 3

## GAZZA

WOOD	ARALDITE AQUARIUM TEDIUM
MOONLITE BETHLIUM	
AQUARIUM	
SLATES	MOONLITE PLANETARIUM
HERBIRITE	ONION
MOONLITE	
PALADIUM	
	ROCKS BONES
	VALIUM
PLANETARIUM	WOOD BONES
ARALDITE VALIUM PARASITE	MOONLITE

## HERNIA

PARASITE PALADIUM ONION	ROCKS SOLARIUM	SLATE MOONLITE
	VALIUM	HERBIRITE PALADIUM
ROCKS	SLATES	BONES
MOONLITE BETHLIUM	ARALDITE PARASITE PALADIUM	YERIDIUM AQUARIUM
WOOD	WOOD BONES	PLANETARIUM
MOONLITE		HERBIRITE
PARASITE	ARALDITE AQUARIUM	TEDIUM

## IBIZA

WOOD SLATE	ROCKS PLANETARIUM
SOLARIUM	ARALDITE TEDIUM
ONION	
BONES	BONES
MOONLITE BETHLIUM	PLANETARIUM SOLARIUM
ONION	TEDIUM

number of men you should aim to complete the islands of the first three epochs with:

Island	No of men
ALOHA	5
BAZOOKA	10
CILLA	10
DRACULA	15
ETCETERA	15
FORMICA	20
GAZZA	20
HERNIA	20
IBIZA	15

## ELEMENTS AND THE DESIGNS THEY'RE USED FOR

● **ROCKS, WOOD AND BONES** Rock weapon, catapult, spear, bow and arrow, crossbow

## ● VALIUM, PARASITE

Bow and arrow, boiling oil, musket

## ● SLATE, MOONLITE, PLANETARIUM

pike, longbow, giant catapult, stick weapon, spear, musket

## ● AQUARIUM, PALADIUM

giant catapult

## ● BETHLIUM, SOLARIUM, ARALDITE

catapult, pike, longbow, cannon, boiling oil, crossbow

● **HERBIRITE, YERIDIUM** Longbow, giant catapult

● **SHIELD DESIGN** sectors with these elements are most likely to be able to produce these designs. All elements can be used in all designs with the exception of rock and stick weapons, but the listed weapons are more likely to be designed from these elements.

## ROCKS, WOOD, BONES

Epoch 1: Shield 1, 2 and 4

Epoch 2: Shield 1, 3 and 4

Epoch 3: Shield 2, 3 and 4

## SLATE, MOONLITE, PLANETARIUM

Epoch 1: Shield 1 and 3

Epoch 2: Shield 2

Epoch 3: Shield 1

## BETHLIUM, SOLARIUM, ARALDITE

Epoch 1: Shield 2

Epoch 2: Shield 1

Epoch 3: Shield 4

## HERBIRITE, YERIDIUM

Epoch 1: Shield 3 and 4

Epoch 2: Shield 2 and 3

Epoch 3: Shield 1 and 2

## VALIUM, PARASITE

Epoch 1: Shield 4

Epoch 2: Shield 3

Epoch 3: Shield 2

## AQUARIUM, PALADIUM

Epoch 1: Nothing!

Epoch 2: Shield 4

Epoch 3: Shield 3 and 4

That's it! Best of luck in getting that far!

## POWERMONGER

ELECTRONIC ARTS

If you're finding the role of god-type being in *Powermonger* slightly difficult, Ian Lyall from Aberdeenshire has sent in some help.

1. Find a settlement with plenty of sheep, select minimum aggression and go there. In this mode nobody attacks you unless you attack first.

2. Kill as many sheep as you can without going into the village boundary. Killing one inside the boundary constitutes an attack on the village.

3. Once your food stock is high enough, select another village with the same number of men as your army or less. Go there and attack it, still with minimum aggression.

4. After the victory cheer, select maximum aggression and "get men" and click on the village. Then select "get food" and click on the village. It's worth checking at this point that you have taken nearly all the men and food from the village.

5. If the village is not near a forest then find one that is because you need the wood. Select "invent" and click on the workshop. Your men should now leave the village to chop down some timber. Watch carefully and, as soon as the last man leaves the village boundary, click on the workshop again. Do this correctly and you should be the proud owner of a shiny new catapult. If your men invent bows or swords or something, jack it in and start again on a new village. Only the catapult is worth inventing.

6. Once you have the catapult you can kick some ass! You should have little trouble with most villages. The safe route, of course, is to start with the smaller ones, always attacking with minimum aggression in order to leave as many survivors/conscripts

as possible. Once your army is big enough, attack on maximum aggression and kill everything.

**Feeding your lot:** in order to boost your food stocks once you have the catapult, search for enemy armies marching around and attack on maximum aggression. The vanquished foe always leaves behind a stockpile of food - seldom less than 500 points and often in excess of 1,000. This stockpile looks like a grey

sum aggression in order to kill him. Somewhere a unit of troops responds by going back to the good life in one of the vacant villages. Any time another commander joins you at the table, ignore him. Take any food and troops he may have and get on with it. Other commanders are more trouble than they are worth.

**Travelling:** you may often need to sail somewhere. Don't waste time



● You've got your men, you've got some food, you've given yourself an unpronounceable name. Good. You're now ready to monger power in a big way. Just remember to ignore those troops in the forest with the sheep and the big grin.

sack. Select "get food" and click on the sack.

**Fighting:** you occasionally come across huge armies. Worry not, simply attack as normal and you invariably find that one unit breaks off to fight you and the rest go about their business. You also sometimes come across a commander standing about on his own. Attack him with maxi-

menting boats - either wander round the shore picking up any boat that has been left lying around, or attack an army. As well as leaving a stockpile of food they leave boats. Be warned though, boats can seriously slow your progress and you can't simply drop some boats, especially if you're carrying the catapult as well.

# LAZER SOFTWARE

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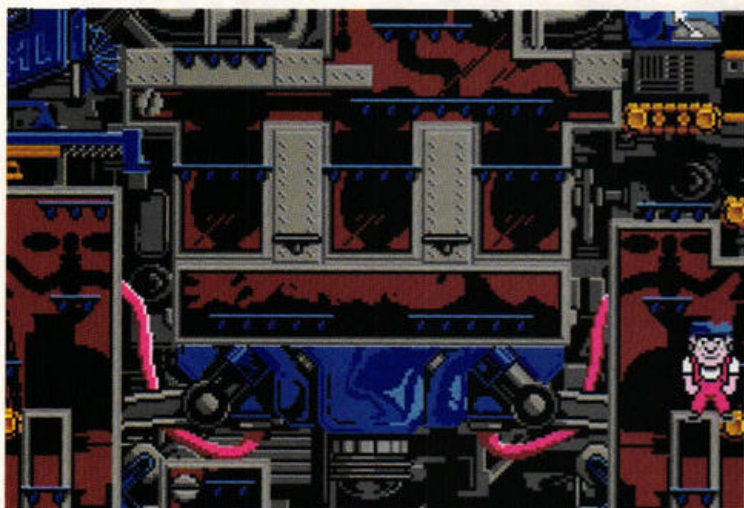
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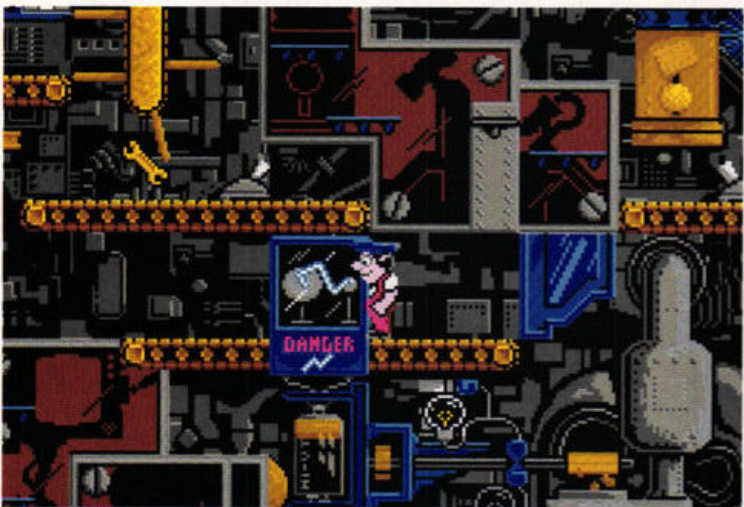
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● **Paint Vat and Paint Shop** – stick with the colours you are assigned. Red, yellow and blue dolls are simple to make. Other colours take more thought. A multi-colour mixture in the bath causes the showers in the paint shop to cease working. So, before starting new mixes flush the system and turn the taps back on again. In the paint shop ensure that the paint taps are turned on and the shower units are operating correctly. The driers should also be operational. Turn on the fans by flicking the nearby switch.



● **Bonding Unit and Lower Conveyors** – the bonding unit is completely self-sufficient and uses only the highest quality adhesives. The lower conveyors must be moving in the correct direction. If the bonding unit is joining parts incorrectly, you can change the flow of the moulded pieces by flicking the switches of the conveyors.



● **Upper Conveyors, Mould Castings and Unit Counter** – the direction of the upper conveyors can be reversed by flicking a simple switch. You'd be well advised to make them flow towards the garbage collection point, changing the direction as the plastic begins to appear from the resin maker. The unit counter is preset in earlier levels. On later levels jumping on the springs changes the production rates. Make sure both of the levels are the same.

## NIGHTSHIFT

LUCASFILM

If you've been having difficulties working your way around the Beast in *Nightshift*, take a look at this guide that Jamie Russell from Orkney has been very busy compiling. Isn't that nice of him?



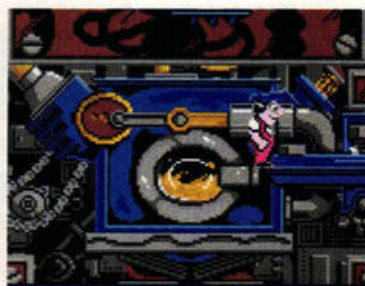
● **Furnace and Battery Generator** – one of the first things to do is jump on the bike and pedal crazily. The lights flash frantically. When the battery is charged the furnace should be lit. If not, find your box of matches and light it.



● **Quality Controller** – this unit only checks for correctly assembled products. If the colours are wrong you've only yourself to blame and, even worse, your wages are docked. To turn it on, simply flick the switch.



● **Solidifier Supplier and Bunsen Burner** – before the Beast can be operated the solidifier supplier must be plugged in. Next make sure the Bunsen burner is lit. Set the supply of gas so the solution is kept simmering. To achieve this put the gas on full power until the liquid begins to boil. Then flick the lever until it rests in the vertical position.



● **Resin Maker** – converted from an old tumble-dryer, the resin maker is a simple component to maintain. Ensure the screw in the side is tightened. Lemmings do tend to loosen it, so keep an eye on it.

## FORMAT NEEDS YOUR TINTS AND HIPS

Yep! Tints, hips, peaks, chokes – all those silly words you type in to get infinite blanchmange and higher scores – we want them all! If you've got a tip, a cheat, a short cut, an infinite lives poke, a password, a map – anything at all you've found that helps you get more from your ST game-playing – we want to hear about it! That way you can share your tips with well over 70,000 fellow ST enthusiasts, and possibly win *FORMAT's* monthly prize of £50. It doesn't have to be a complete solution or anything – whatever you've got could be the answer to a fellow ST game-player's prayers!



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Please complete this form and send it with your tip to: **Gamebusters, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW.**



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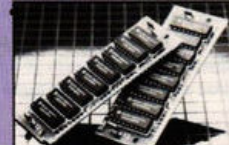
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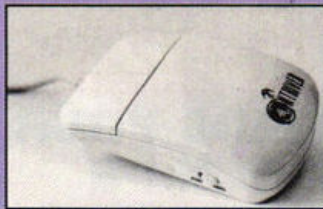
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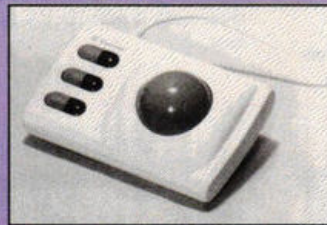
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● All the books reviewed here are available from bookshops and computer stores or can be ordered from Computer Manuals ☎ 021 706 6000



# A good read

Your ST is a friendly little beast, but one thing it can't do is tell you which key to hit next when you don't know *what you don't know* – and for many applications the manual isn't enough. Whether you're a complete beginner on the ST or a veteran programmer, a frustrated artist or just someone who wants to know more about what your ST can do, there's almost certainly a book to help you. Derek Clarke has been reading all about it

From programming to desktop publishing, from art to graphics, the ST has many applications, each with its own little trap for those lacking the know-how. To overcome these pitfalls it's now possible to arm yourself from an impressive arsenal of books. Some can help you with your first tentative steps, while others are advanced enough to have the more experienced running backwards with their eyes shut.

Why should you bother with books when these days most programs offer some sort of help mode? Well, what if you don't know enough about what you're doing to know what question you should ask? And what about applications like programming, where there's no neatly-prepared path to follow and you have to understand the principles behind what you're doing?

There are other advantages of books too. Despite the best efforts of databases and indexers, books are still easier to look up for reference purposes, and they can explain what happens behind the scenes. So, no matter what your ST interest, read on!

# → Programming books

STs run programs – fact of life. Even when they appear to be doing nothing, some program is ticking away. It is therefore not surprising to find so many books are available for programming.

For the novice, ST BASIC has all its secrets revealed in *Elementary ST BASIC* and *Atari ST Basic*, among others. For an absolute beginner LOGO is an excellent teaching language and is given the rundown in the *ST LOGO User Guide*. For the more able programmer, *Atari ST Tricks and Tips* and the *Technical Reference Guides* can shine light into the darkest corners of your ST's internals. There is at least one book available for every popular programming language.

## TECHNICAL REFERENCE GUIDE VOLUME 3: TOS

Publisher: Compute!  
ISBN: 0-87455-149-8  
Price: £22.95  
Tech Level: Medium – High



To write programs it is necessary to talk to the outside world at some point, through such devices as monitors, printers, disk drives and so on. There are two distinct ways of achieving this:

either talk to the device direct, or use the software interface within the ST called TOS. The first method is extremely fast, but results in incompatibility between different machines, the classic example being the differences between the ST and STE. To maintain program compatibility, TOS supplies a set of functions

which, as far as a program is concerned, work exactly the same from machine to machine.

Programmers in BASIC don't have much use for accessing TOS directly, because BASIC commands tend to take care of all their needs. But for people using C, TOS is more effective than some C commands and on the whole easier to use. And for people using machine language, there is no alternative to TOS.

This book is two sections, the first being an overview of the TOS structure and its bodily functions. These functions are described at length, with examples in C and machine language. Section two is a quick reference guide, listing the functions, the parameters and any associated return values. The book also gives details of the "Line A" primitive graphic functions within TOS – the fastest method of drawing onto the screen while maintaining compatibility.

**STF RATING 93%**

## TECHNICAL REFERENCE GUIDE VOLUME 2: AES

Publisher: Compute!  
ISBN: 0-87455-114-5  
Price: £19.95  
Tech Level: Medium – High



Application Environment Services (AES) are all the routines within TOS that take care of the nitty gritty of the Desktop. Any use of a pull-down menu or window is performed through the AES. The book is written in the



same style as Volume 3 (see above), with as much attention to detail. Examples of using the routines are given in ST BASIC, C and machine language, making this book invaluable for the more competent programmer.

**STF RATING 92%**

## ATARI ST TRICKS AND TIPS

Publisher: Abacus  
ISBN: 0-916439-47-X  
Price: £18.95  
Tech Level: Medium



Programming tips and utilities galore can be found lurking within the covers of this innocent-looking book. Make the most of ST BASIC and get hold of those useful utilities which always come in handy. Not only are programs given, but also their secrets and instructions on how to use them. The examples are written in a mixture of machine language, C and ST BASIC. An understanding of programming is required, but if you have that you can start performing all sorts of nifty programming.

**STF RATING 90%**

## THE GAME MAKER'S MANUAL

Publisher: Sigma Press  
ISBN: 1-85058-158-4  
Price: £12.95  
Tech Level: Low

STOS BASIC is a game-writer's tool, having commands that make light work of producing games on the ST. This book not only covers STOS itself, but also

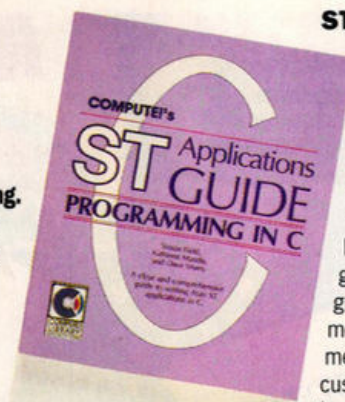
game design techniques. The use of pseudo code is encouraged as a stepping stone between the design and the program itself. A number of game types are covered – shoot-'em-ups, simulations, role-playing and adventures – with examples of each. A must for all starters in game programming, with styles of program design being applicable for all types of programs and languages.

**STF RATING 89%**



## ST APPLICATIONS PROGRAMMING GUIDE: PROGRAMMING IN C

Publishers: Compute!  
ISBN: 0-87455-078-5  
Price: £19.95  
Tech Level: Medium – High



For programmers in C, this guide covers how to write programs under the GEM environment. It introduces windows, menus and Desk Accessories, discusses them all and demonstrates them with examples. The book takes a look at the use of graphics within a window, the use of slider bars around the window and how the

programmer can make the most use of these features. The book is full of examples, with the last being a machine language disassembler which traps errors and shows the command responsible. To anyone with a knowledge of C, this book can open new avenues of pursuit on the ST, furnishing you with a collection of very useful programs.

**STF RATING 89%**

## ATARI ST MACHINE LANGUAGE

Publisher: Abacus  
ISBN: 0-914639-48-8  
Price: £18.45  
Tech Level: Low – Medium

Machine language is the language the ST's processor speaks. This means that incredibly fast and compact programs can be written using it.

A knowledge of the basic concepts of programming is assumed, with over a third of the book being dedicated to describing the constraints, considerations and commands in machine language. Program examples are then given, illustrating in detail how to make use of this knowledge.

This is a very detailed tutorial. Some might think it doesn't go far enough, but it's sure to give you a thorough grounding in the fundamentals.

**STF RATING 88%**

## ATARI ST LOGO USER'S GUIDE

Publisher: Abacus  
ISBN: 0-916439-50-X  
Price: £18.45  
Tech Level: Low

LOGO was originally intended as an educational language, reading more like English than BASIC. This book is a complete manual and introduction to ST LOGO, which is now readily available in the Public Domain. (And for ST FORMAT's comprehensive directory of PD libraries, see page 49.) It starts with the LOGO programming environment and moves on to making the best use of the powerful (strictly





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→ non-mutant) turtle graphic commands of the language. The often neglected non-graphical commands are also covered, with excellent examples provided throughout the book.

**STF RATING 86%**

**ELEMENTARY ST BASIC**

Publisher: Compute!  
ISBN: 0-87455-034-3  
Price: £14.95  
Tech Level: Low

A beginner's guide to ST BASIC, introducing commands and then incorporating them into frequent examples. Subjects covered include graphics, sound and data and how to handle it.

The book assumes no previous knowledge, but does assume the reader is American. This doesn't detract from the value of the examples, and gives the beginner another project to attempt.

**STF RATING 82%**



**THE ELEMENTARY ATARI ST**

Publishers: Compute!  
ISBN: 0-87455-024-6  
Price: £18.45  
Tech Level: Low

An overview of the ST is the first topic to greet the reader, including hardware, Desktop and their respective uses and operations. ST BASIC for beginners occupies most of the book. Instructions, program design, graphics, and sound are all covered. Small examples are used to illustrate new commands, proving useful and concise for reference. Brief primers in ST LOGO and Forth programming languages, coupled with help and hints on programming, round it all off.

**STF RATING 79%**

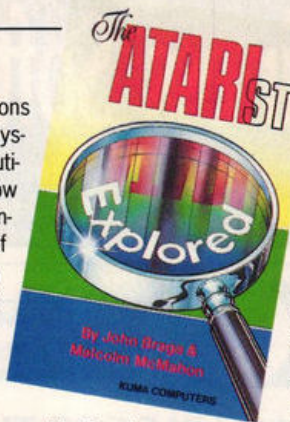


**THE ATARI ST EXPLORED**

Publisher: Kuma  
ISBN: 0-7457-0141-8  
Price: £9.95  
Tech Level: Medium

A mixture of BASIC, C and machine language is the flavour of this book, explaining how to make use of

the ST's internal functions using TOS, its operating system. The Desktop is scrutinised, with examples of how to use the GEM environment from the point of view of a programmer, and different languages are discussed to help you decide which suits your needs best. A good starter, but far from a complete reference guide for the able programmer.



**STF RATING 78%**

**ATARI ST DISK DRIVES: INSIDE OUT**

Publisher: Abacus  
ISBN: 0-916439-84-4  
Price: £18.95  
Tech Level: High

There is no stone left unturned as this comprehensive guide looks at disk formats, files, RAMdisks, floppy disks and hard drives. It also explains the construction of each and how to create programs for them, with a complete listing of a disk monitor included within the examples. This book is for the hardened programmer, who is looking to squeeze that bit more out of the ST's drives.

**STF RATING 74%**

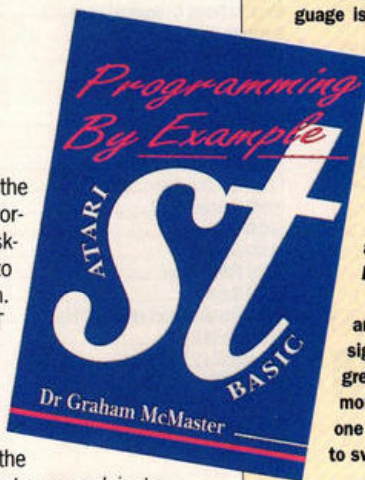


**PROGRAMMING BY EXAMPLE: ATARI ST BASIC**

Publishers: Kuma  
ISBN: 07457-0142-6  
Price: £14.95  
Tech Level: Low

A tutorial in ST BASIC for the beginning programmer. A thorough investigation of the Desktop, menu options and how to get the most out of an icon. Then the book takes the ST BASIC environment apart in a similar manner.

The book moves along at a pace that may prove too quick for most beginners, with the examples tending to demonstrate several instruc-



tions at once, and it could therefore prove confusing. Graphics and sound are not covered – data manipulation is the main theme.

**STF RATING 74%**

**ST BASIC TO C**

Publisher: Abacus  
ISBN: 0-916439-58-5  
Price: £18.45  
Tech Level: Low – Medium

Teaching C by comparing it to BASIC is a nice idea – shame about the application, though. The author used a pre-release version of Alcyon C, so some of the C library functions are either missing or work incompletely. These quirks are pointed out, with the examples compromising to achieve the end result. These are mainly annoying but could prove confusing to the inexperienced programmer. Still, a wide range of topics get covered, and if you bear these points in mind it could be quite useful.

**STF RATING 68%**



● These books are available in the UK from bookshops, computer stores or Computer Manuals ☎ 021 706 6000

**BOOKS FOR BEGINNING PROGRAMMERS**

For complete starters ST LOGO as an educational language is probably one of the best. It is well covered by the *Atari ST LOGO User Guide* and is available in the Public Domain (see STF's comprehensive PD library directory, page 49).

Another PD language, ST BASIC, is more common and is supported by numerous texts. *The Elementary Atari ST* is very good for beginners, while the more adventurous may find *Programming By Example: Atari ST Basic* more worthwhile.

One thing to check for is who the books are aimed at. There are many books designed specially for beginners, but an even greater number are really suitable only for the more able programmer. Trying to learn from one of these books is likely to leave you trying to swim out of your depth.

● Want to know how both the professionals and your fellow ST artists do it? For regular tips on how you can create your own graphic masterpieces on your ST, you mustn't miss *ST FORMAT's* Gallery pages every issue – this month, page 123

**Graphics books**

The ST is renowned for its impressive graphics capability. Making use of its features can prove daunting to beginners and experts in art alike. *ST Artist* from Compute is a tutorial in graphic art, full of tips for all levels of ability. *3D Graphics Programming and Real Time 3D Graphics For The Atari ST* can stretch your ST into three dimensions. Each of these covers the same fundamental techniques, but for slightly different purposes.



**ST ARTIST**

Publisher: Compute!  
ISBN: 0-87455-070-X  
Price: £18.95  
Tech Level: Low

For anyone wanting to use the ST with art in mind, this book could be for you. There is extensive use of Neochrome,

*Degas* and *Degas Elite*, and the methods used are just as applicable on other available graphic programs. In fact, the USS Enterprise would have difficulty covering as much ground as this book. Its illustrations show pictures at different stages of completion, complemented with a running commentary and tips on how to achieve various results.

It encourages creative design by instructing readers to attempt their own ideas and not to be scared to make mistakes – the ST is more forgiving than a



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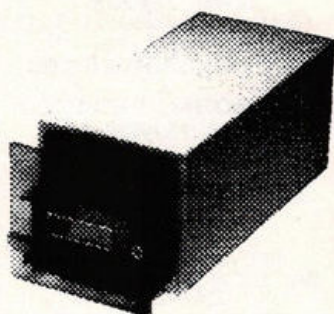
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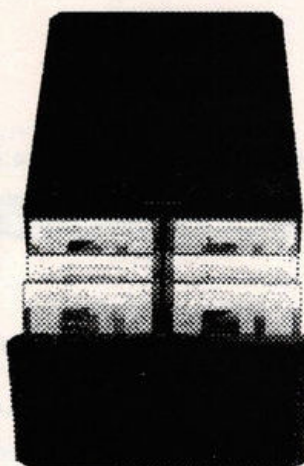
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piece of paper, with the UNDO feature proving an excellent eraser. Practical ideas such as house layouts and various greetings cards are covered. Again the book gives many examples of each, offering enough insight for you to tackle making your own.

This book is the artist's equivalent of an art encyclopaedia on the ST – the only obstacle standing in your path to replacing Rolf Harris is the beard and a strange taste in shirts.

**STF RATING 86%**

**REAL-TIME 3D GRAPHICS FOR THE ATARI ST**

Publisher: Sigma Press  
ISBN: 1-85059-217-3  
Price: £17.95  
Tech Level: Medium



The question of 3D graphics for games requires special consideration because you need speed for effective animation. This book provides a step by step tutorial through the principles and illustrates each with programming examples. The same concepts are used as in 3D Graphic Programming (below), with a knowledge of machine language assumed. Each program consists of modules which are used in more than one program, reducing wear and tear on the keyboard and encouraging good programming style at the same time.

**STF RATING 81%**

**3D GRAPHICS PROGRAMMING**

Publisher: Compute!  
ISBN: 0-916439-69-0  
Price: £18.95  
Tech Level: Medium

The fundamentals of 3D graphics are not for the faint-hearted and this book presents all the tricks in its first chapter. This leaves a lot to digest in one go, especially the maths involved, but referring back to it can make it all easier. The book assumes a knowledge of machine language programming and includes many examples of how to use the fundamental techniques by themselves and in conjunction with one another. The examples are quite extensive and demonstrate their point effectively, with many complex shapes on view.

**STF RATING 73%**

**COMING SOON**

An imminent release targets the branch of mathematics known as Chaos Theory, which is used for forecasting weather, predicting populations and computer graphics, together with the closely related subject of fractals. If you enjoyed *ST FORMAT*'s special cover feature about fractals last issue and want to learn more, it could be just what you're looking for. (But if you missed that special chaos issue, you should look for *STF*'s back issue service on page 130.)

*Chaos, Fractals and Computers* by Sigma Press is suitable for all levels, with BASIC listings giving insight into this fascinating branch of computing. It is due next month and should cost around £12.95.

**For beginners**

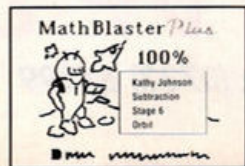
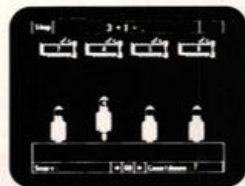
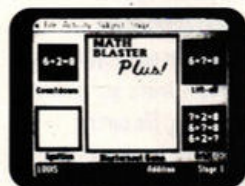
**GET THE MOST OUT OF YOUR ST**

Publisher: Future Publishing  
ISBN: 1-872666-01-9  
Price: £10.40 (inc. P&P)  
Tech Level: Low

Written by *ST FORMAT*'s own Editor, Mark Higham, and presented in the same style as *STF*, this wide-ranging guide covers a diverse range of subjects such as games, education, graphics, desktop publishing and much much more. It explains what is involved in each subject, how it works and what



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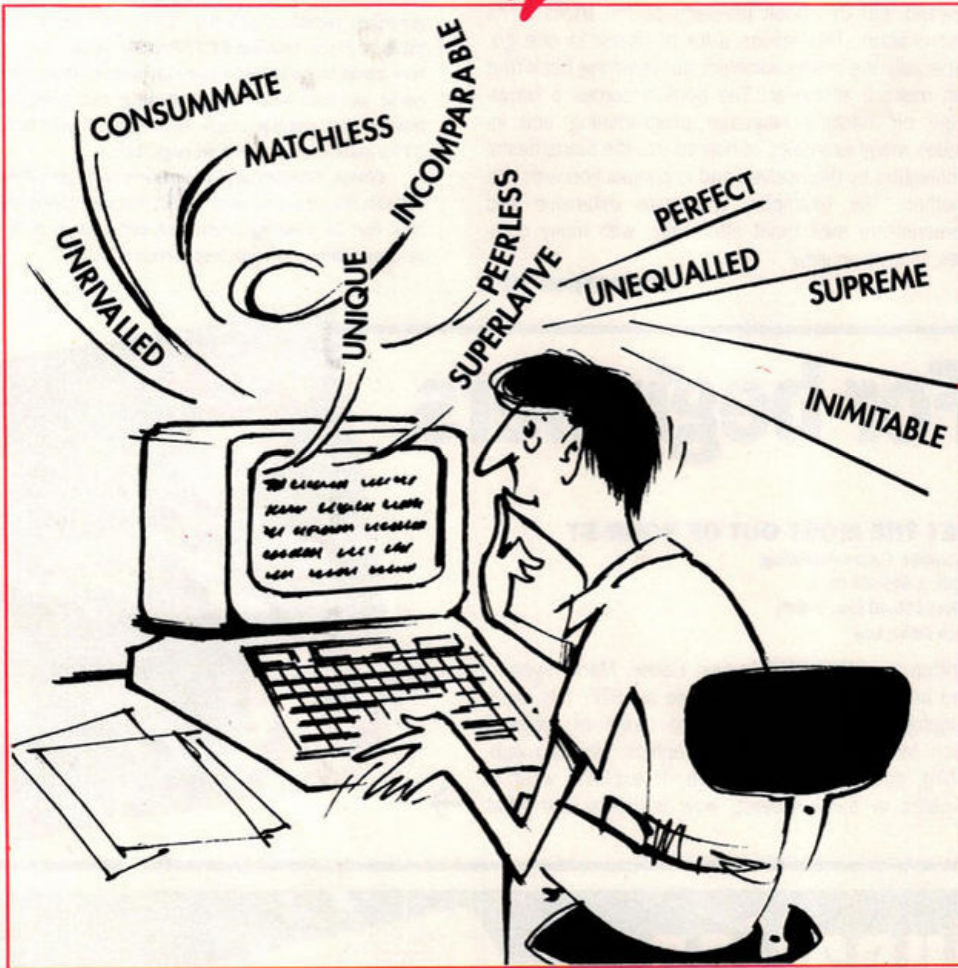
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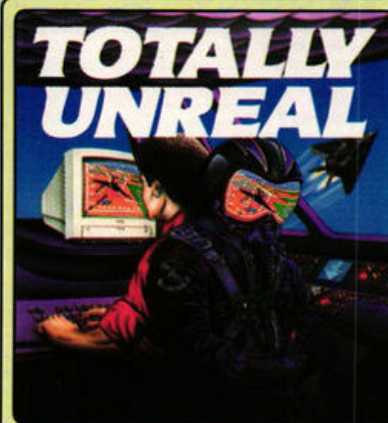
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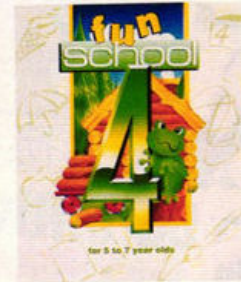
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L i m i t e d

# THE KANDY KOLOURED TANGERINE FLAKE STREAMLINE PICTURE SHOW



ST art, eh? Ha! In my day all we had was Etch-a-sketch and a thump round the ear-hole if we were lucky. Now you lot and your STs get up to all sorts of incredibly-brilliant creative efforts. Bring back the rack, I say...

**P**hoaar! Look at the pixels on these! Fancy your chances? Got a masterpiece hidden under the mattress? Come on, get it out and let's all have a look. As well as your finished pic, we need plenty of intermediate stages and explanations of how the work was thrown – oops, sorry, put together. Tell us which package you

used, how you built up the picture, any special tricks or tips you want to share and anything else you can think of. Put it all on a virus-free floppy and send it to Gallery, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW. You and your ST's efforts may appear here – you may even win yourself a few quid! Go on, you know it makes sense. **stf**

## TOP PRO TOUCH-UP TRICKS

Wanna see how the pros do it? This set of screens was put together by Herman Serrano, a professional ST artist who produces jazzy graphics like this for *ST* games. (For more about Herman and about *ST* graphics, see our special graphics feature in issue 27. If you missed that, race to page 130.)

Herman uses the old American *ST* program *Art Director*, which is no longer available, but the techniques are applicable to whatever *ST* art package you've got.

"Recently I was asked by Audlogenic to design a cover for *Exile*. I decided to create it as a loading screen and then paint the result. Normally this would be done the other way round, so the project appealed to me. I started with pen and paper, doing a few rough sketches. From there I took to the *ST*.



1 "I pick colours to reflect the mood I want, but tend to mess with the brightness and intensity of colour as the picture develops. I do a quick layout in blocks of colour, using a large brush, and move things to get positions right. Here, the visor goes to the edges of the picture, giving a feeling of claustrophobia.



2 With a smaller brush, I paint in the basic dramatic lighting effects for the face. I find that if you get the eyes in the right position everything else falls into place. To check that I'm happy with the position of the face, I finish off the eyes. This gives a better impression of how it is going to turn out.



3 I finish off the face. Although I only have three definite flesh tones, I stipple in greys, orange and purple. This gives an overall uniformity to the picture's colour. Then, working outwards, I fill the inside of the helmet. I don't go overboard here because most of this will be masked by reflections on the visor.



4 Keeping it simple so it doesn't detract from the face, I stain the helmet surface, to suggest that the spaceman has been out of his ship for some time. Then reflections go in, placed so as to enhance the feeling of being cramped. Combined with his expression, they tell the story behind this picture.

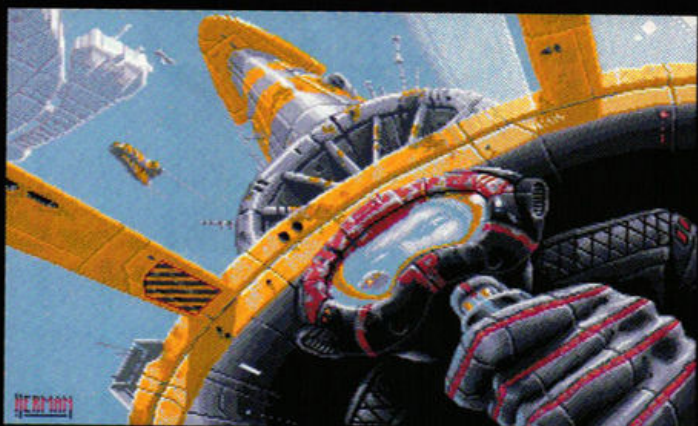


5 For the background, I work from the distance, using light tones, to the foreground, with dark, menacing tones. It's all placed in roughly, then I pick out some of the detail. Interestingly, the tall plants are based on shapes I found exploring the Mandelbrot set. [Check out *STF's* fractals feature last issue.]

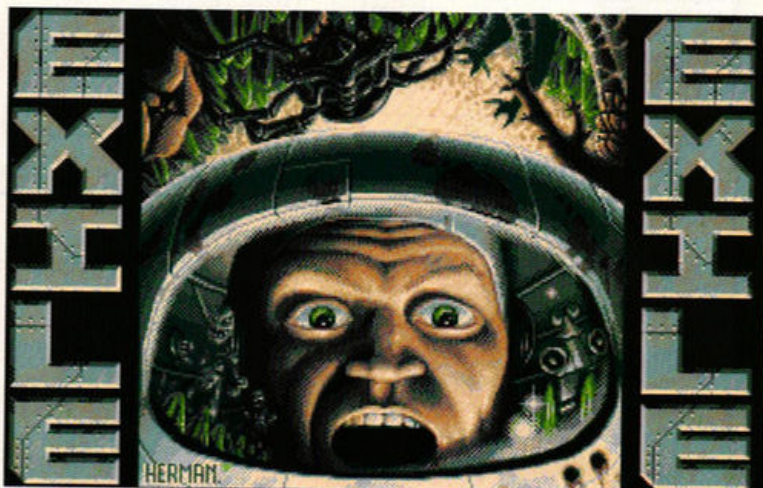


6 In goes all the rest of the floral detail. Who said that flower arranging was boring? I only hint at the spider, using stark white pixels against the black to give it a nice sheen. I use that sheen in order to suggest its form, leaving most of the work to the viewer's imagination.

## EXODUS? GET AWAY!



● This atmospheric piece of *ST* artwork, also by Herman Serrano, is called *Exodus*, and it's a breathtaking example of what you can achieve on an *ST*.



7 Finishing off, I work the staining effect used on the helmet into the lettering, with a bit more detail. That's the finished screen. All that remains to do now is to sign it. Not much to it, really, just some patience!"



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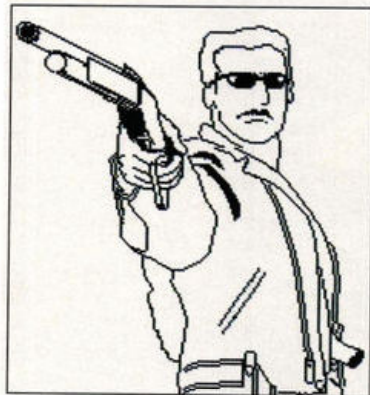
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## AH'LL BE BACK, PROBABLY

He gets everywhere, doesn't he? In films, on T-shirts, in your breakfast cereal, and now – thanks to Nigel Bulley from Aldershot – in *STF's* Picture Show. Nigel is studying art, graphics and computer science at college. He has drawn several pictures on his *ST* and reckons this is the best so far. He says it's the result of two evenings work with *Degas Elite*, and it earns him our monthly prize of £25. ● *Degas Elite* is £24.99 from Electronic Arts ☎ 0753 549442.



1 "I began by sketching a basic outline, using K-line and Freehand Draw. I used a picture from a local newspaper as a reference – but I found that if I copied too closely, somehow the proportions didn't look quite right."



2 Next I added the black background and then filled in parts of Arnie and his jacket with solid colour. Then I used Magnify to begin the fine detail work. First I shaded his face, being careful to get his features right."



3 For realism, I used many shades of the same colour. More fine detail work. I used a very dark shade of red under the face look more solid, and a pale blue to show where light was hitting it."



4 I began work on the jacket, adding creases and folds, using shades of blue and black on the sleeve and lighter shades on the rest. I finished off using a small airbrush to spray areas of dark blues to make it look more like leather."

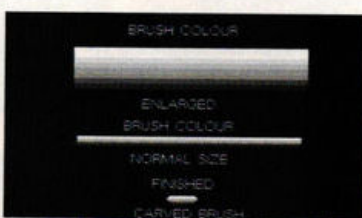


5 Finally, I designed two titles on separate screens. I began these by using Magnify to produce simple lettering in red and, when I was sure they looked correct, I added highlights in order to create a sort of chrome effect. After this, all I had to do was cut and paste the two screens together."

## BEYOND THE FINAL FRONTIER

This intriguing starship by Rob Turner from Shrewsbury shows good use of the brush effects in *DPaint*. As Rob explains: "I wanted to break away from the normal draw-the-outline type start, so I decided to design a brush that would give a picture an instant solid look. Copying other pictures is okay and often shows a great deal of skill, but I really think it's best to experiment and just let the picture flow..."

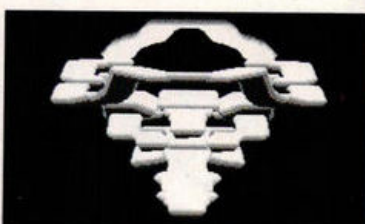
● *Deluxe Paint ST* is £49.99 from Electronic Arts ☎ 0753 549442



1 "Colour palettes are not my strongest point, so here I have gone for the basic shades of grey. First, I drew the brush enlarged in order to show the colour details. The design looks like a tube – it has that solid look. Now I simply use the Carve Brush function and there it is, the finished brush."

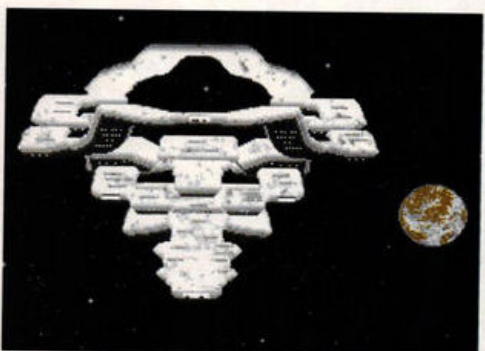


2 Here I have experimented using the K-line and Draw functions, to see what effects the brush would give. If I draw from bottom to top you can see the underside of the objects, while if I draw the other way round you can see the top of the objects."



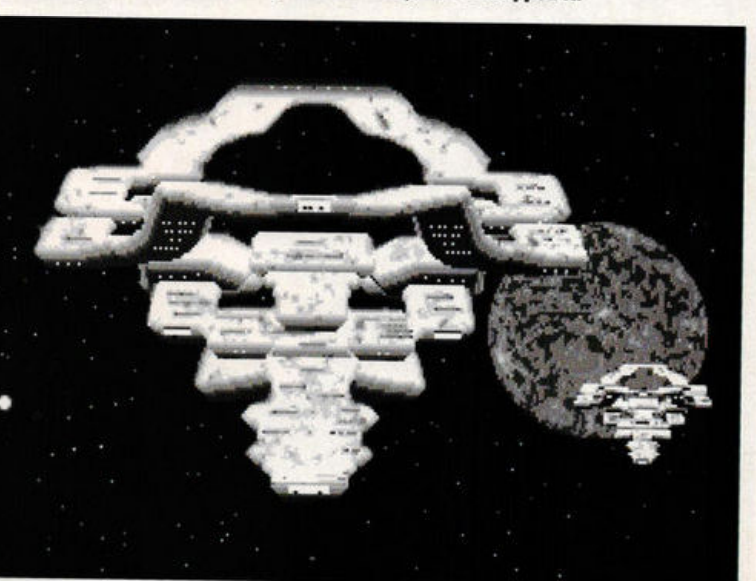
3 Using *DPaint's* Draw and Mirror functions it was easy to create the spaceship. I think a spaceship was the most logical thing to draw, considering the colours I had chosen – that bleak outer space feel. It has taken about two hours to get to this point."

4 Now for the detail. I wanted the ship to look gigantic, so it was just a case of putting tiny lights or windows in using the Draw function, but this time with a normal brush set to its smallest size. The ship also had to have a worn look, so with the Draw function again I put in small lines and dots, then used the FX Smooth function to get the marble effect."



That's the ship finished – now for the background."

The starfield mostly consists of single pixels in varying shades to give some impression of depth. The planet I was never very happy about. I used Circle, then Fill and then put down the cloud cover, drawing and smoothing in Magnify mode. I tried numerous colours for the planet surface, then I scrapped it!



5 Finally! For the small ship I used the Brush function. I carved around the big ship, half-sized it twice and was left with a ship a quarter of the original. For some perspective I drew the moon the same as the planet in picture four, and since I had carved the big ship and made a brush of it I pasted both ships over the top."

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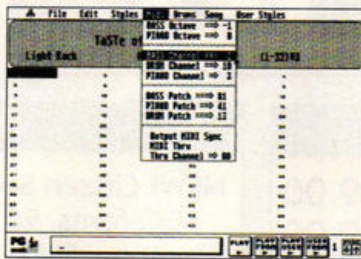
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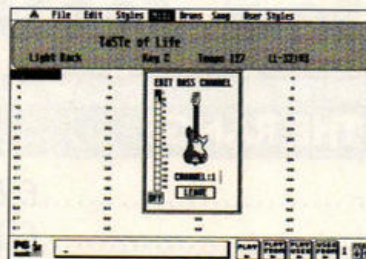
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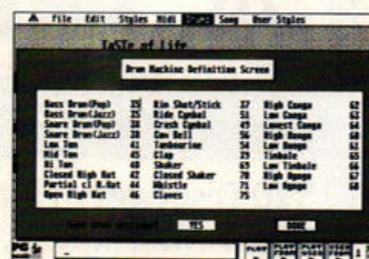
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● On this MIDI options screen you can set the channels and patch changes so you can hear your composition...

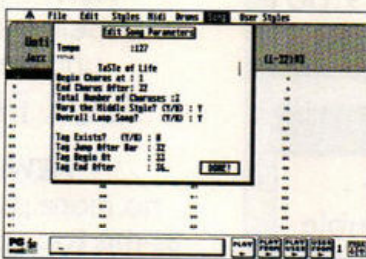


● You could change the MIDI Bass channel, for instance, simply by clicking on the correct box.

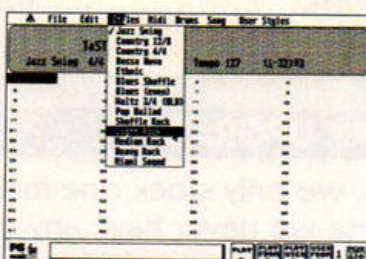


● On the Drum Machine Note Definition screen, you can change the MIDI note numbers for the drums if you need to.

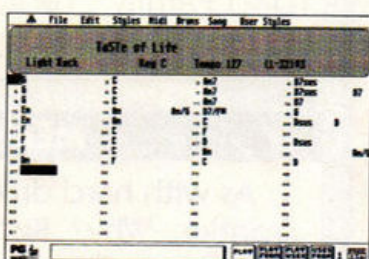
The program gives you control over chords, key and tempo and enables you to select the "style" of the song



● When you're on the Song Parameter page - reached by hitting the <Tab> key - name your song, set the tempo and...



● Choose the style you want to work with from the Preset Styles menu - there's a total of 26 options on offer.



● Type chords for the intro, verse and chorus. If you don't know the full chord names, the program can add notes.

# The DIY karaoke kit

Fancy creating your own musical backing tracks with your choice of chords, key and tempo?

Vic Lennard explores the many abilities of the *Band in a Box* auto-accompaniment program



## Band in a Box

**MACHINE:** ALL STs (520 version cut-down)

**PRICE:** £45 (£69 for *Band in a Box Pro* with an extra 52 user styles)

**FROM:** ZONE DISTRIBUTION

**CONTACT:** 081 766 6564

The main problem with buying a sequencer program for your ST is that you need some musical ability to get decent results. All you may want to do is sing along to a backing track of your favourite songs (karaoke-style), but if you haven't the musical background to play in the parts via a keyboard, you're stuck.

Alternatively, you may have a cheap synth with an accompaniment section. Most of these can only hold a few songs and aren't capable of transferring the notes over MIDI to your ST sequencer. So, having spent time creating songs you then have to bin them to create further selections.

Enter *Band in a Box*. It generates auto-accompaniment on any ST, Mega or TT. You can still create a musical result because the program gives you control over musical aspects such as the chords, key and tempo and also enables you to select the "style" of the song. It saves the result as chords rather than notes, so song files are small in size - you could fit 100 or more full songs on a single floppy disk!

There's no copy protection, so you can install the program on hard drive or simply make a copy of the disk to work from, stick it in the drive and load the program. The main screen presents itself as a blank

page with 64 bars; up to four pages can be used for a song, giving a total of 256 bars - enough for anything short of a symphony. You build up songs by moving the black block cursor around on-screen and simply typing in the chord you want.

To hear a song as you create it, set up the MIDI channels for piano, bass and drums. You don't have to use piano sound for the accompaniment - brass or strings may suit you. Under the "MIDI" menu, you can set the MIDI channels for the three parts, the octave for the bass and piano, and a patch change for any of the instruments. The patch change enables you to automatically select the correct sound on your MIDI sound module(s) when you load up a song.

Once the MIDI settings are complete, load in a song from the program disk - there are 50 to choose from - and play it. If the drums sound chronically wrong, you probably need to change the drum mapping selection. This assigns the drum sounds of your module to specific MIDI notes and BB defaults to the Roland MT-32 note numbers. You can change this to the Yamaha RX drum machine or Korg M1. Or you can create your own drum map, save it to disk and then load the different kits whenever you need them.

With these settings complete, you're ready to write a song. It's useful to know the structure of the song you're going to create. How many bars is the intro going to be? And how about the rest of the song? You're not sure? No problem. Starting from a blank page, hit the <Tab> key to enter the Song Parameter page. From here you can type in the name of the song and the tempo (and come back to deal with repeating parts of the song later). Next, choose a style from the 26 on offer - say, "Light Rock." This

can always be changed later if the style doesn't fit the composition.

Now type in the chords, using the "#" for a sharp sign and a lower case "b" for a flat sign. Each bar can have up to four chords placed inside it. Using a comma between two input chords places both of them in the current half-bar and hitting the <Return> key moves onto the next half-bar. You can use the ST's cursor keys to move around the page, and most menu options have keyboard equivalents to minimise mouse travel. Not sure of your chord shapes? Type in any chords the program can't recognise and it simply ignores them - although with a chord vocabulary of over 120 types this shouldn't happen very often.

The manual reckons you can write a song in two minutes flat, and that's not too far off the mark. Let's follow a typical structure: a four bar intro, which is typed in next, followed by the main body of the song for 32 bars - 16 for the verse and 16 for the chorus. You can play it through any time and change the style or the sounds being used - it really is that easy.

Now, let's say you want a verse two followed by another chorus, an instrumental verse and a third chorus. This effectively means repeating the section between bars 5 and 36 twice over. You can do this either by using the copy function or by going back to the Song Parameters page and setting the start and end of what the program refers to as the "Chorus" - a little unfortunate, this; perhaps it should have been called the "Main Part" or something similar.

The song now plays through from bar 1 to bar 36 and then repeats from bar 5 to bar 36 twice. It would also be nice to incorporate an ending, commonly called an "end tag," to give you a different end-





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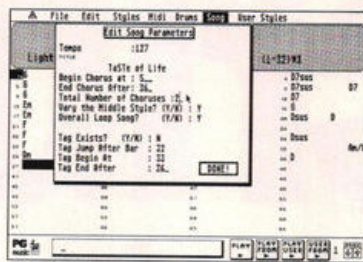
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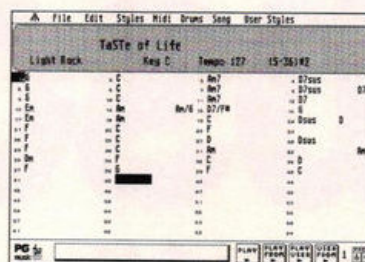
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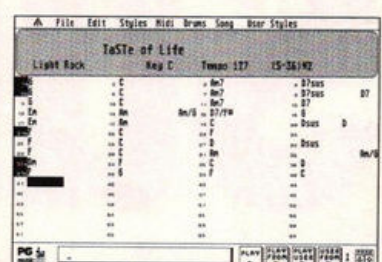
**With the Style Editor you can create your own styles, design a pattern and even vary it (between high and low conga, say)**



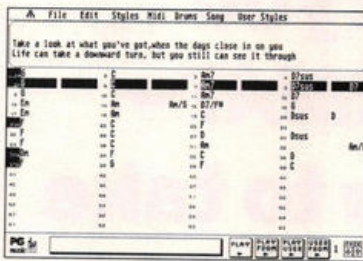
● To start creating a typical structure, set the song parameters so that the verse and chorus repeat twice.



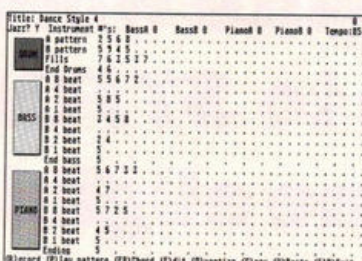
● Type in something different for the last four bars (an "end tag") so that your song finishes the way you want.



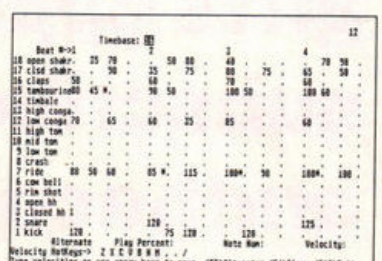
● Decide which sub-style, A or B, you want for each part of your song. The drum fills are created automatically.



● Want to add some lyrics to the song you're composing? Just type them into the box above the score.



● Create your own styles with the Style Editor. The higher the number, the more likely that pattern is to be used.



● The Drum Pattern Editor is just like a drum machine display – the higher the number, the louder the sound.

ing to the last chorus. Instead of the last four bars being Dm, F, C, D, let's have F, G, F, C with the last chord holding for two bars. Type in these last five bars. The "Tag Exists?" message in the Song Parameters now becomes "Y" and the relevant bar numbers are put in.

That completes the basic song. How about some fills? Easy. Go to the bar after the place where you want the fill to be and press the "p" key. A small "a" or "b" appears, showing that you have selected sub-style A or B for the coming part, and the preceding bar gains a drum fill. Play it through (you can set a count-in of between zero and four bars and can also start playing from any bar number), listen carefully, and make any final changes.

Admittedly, this example may be straightforward in that it doesn't have a middle section, but that can easily be dealt with. You can use the repeat facility for the verses and choruses before the middle, which you then type in. If a further verse or chorus is needed, it can be copied from one of those already typed in – BB enables you to copy a block of bars from one place to another. You can also insert and delete bars if you find a mistake, and change styles and time signature anywhere during a song. If your musical knowledge doesn't stretch past the basic chord shapes, don't worry. There is a feature called "piano embellishment" which can intelligently add notes to your chords to follow the flow of the chord progression, especially in the jazz oriented styles.

The only problem with supporting so many chords is that many of them take up more than the four characters allowed for in the space within the bar. This means that you can type in three or four differently named chords but still have the name in the bar looking the same. Perhaps the programmers should consider the use of compressed lettering in these circumstances, or maybe some kind of code.

If you want some lyrics, you can type these in and they're shown in the top box as you move down through the lines on the screen. If you've programmed your drums on an external drum machine, you can turn the drum part in BB off and turn on the external sync option to have your drum machine playing in time with BB. Your backing track can also be saved as a Standard MIDI File, which can then be

loaded into your main ST sequencer (so long as it supports MIDI Files), where you can add top lines and any other instrumentation you wish. The drums, bass and piano appear as individual tracks in your sequencer, so editing is not a difficult task.

You can also print out the chords over bar lines for your song. BB supports both nine and 24 pin dot matrix printers (the latter via the excellent Screen Dump 24 auto-program included), although this isn't likely to win any prizes for speed – about ten minutes per five-stave screen on a Star LC-24.

The latest version of *Band in a Box* (v4.2) has one further feature: it enables you to create your own styles. In this respect, BB has taken one very large step forward. The main page for User Styles is in the form of a dotted grid where each dot represents a pattern and you can program sub-styles A and B independently. Once a pattern has been designed, you can allocate it a "weight" to have a degree of control over the probability of one pattern occurring over another.

Drum patterns are created via a drum grid. If you have used the ST drum program *MIDI Drummer*, or any drum machine with an LCD display, this is instantly recognisable. The 18 available drum instruments can each be set to play on any sixteenth (or twelfth if you are working in triplets) within the one bar format used for drums, with the velocity value for each "hit" taking a value between 1 and 127. To make life easier, there are ten velocity "hot keys" to save you the bother of typing in numerical velocity values all the time.

You can also have variation within a pattern. Take the example of programming high and low conga – on a particular beat you may want high conga most of the time, but low conga occasionally. This is handled by assigning a high percentage value to the high conga and naming the low conga as the alternative instrument. Other facilities include Playback Bar Mask, where you can control whether a pattern plays or not according to the bar position, and Late Triplet, where you influence the position of the third triplet in a jazz feel. All good stuff – very flexible and powerful at the same time.

Bass and piano patterns are recorded over MIDI from a MIDI keyboard or similar. You can set the key signature and control the chords from the main page

of BB, so all MIDI notes played in are based on a C7 chord so that BB can transpose your information. PG Music have also included macros to deal with common bass runs and jazz chords without you having to handle the notes directly. Creating styles is easy, although it takes a bit of work to put together good ones. The secret is to have various similar patterns per sub-style with a few quite different ones and to set the weights accordingly.

*Band In A Box* is very impressive just using the preset styles – and it's quite astonishing that so powerful a tool as the Style Editor is included in a program at this price. If you are still running on a 520, don't worry – there is a version for you as well, although that offers only 14 styles and no User Style capability. There are a couple of "fakebooks" available – two disks with 500-odd songs on each – but these are going to be replaced with new "books" with melodies and lyrics in time for the next update, which should also have two extra parts, sequencing capability and auto-harmonisation on melodies. The big boys of sequencer software had better watch out! **stf**

## BAND IN A BOX

£45 Zone Distribution ☎ 081 766 6564

### FEATURES: 90%

An impressive list of facilities, including three part accompaniment, printout, lyrics, user styles and MIDI file compatibility.

### SPEED: 92%

Write your first song within five minutes of booting up. The manual is pretty good and gives actual examples for song writing and style creation to help you on your way.

### EASE OF USE: 95%

Key equivalents for most functions and only one main screen make *Band in a Box* a doddle to use.

### RESULTS: 95%

Music without the suffering! Instant Karaoke time.

### THE COMPETITION

*Freestyle* by Frohlich (£149 from Zone Distribution) is the only other program of this kind; *STF* review coming soon.

### STF RATING: 94%

Cheaper than practically any ST sequencer but with facilities belying the price.

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# Stereo replay

When God gave you two ears, He probably intended that you use both of them. Why suffer the monotony of monophonic samples on your ST, then?

Neil Jackson looks at Microdeal's new stereo sampler and listens intently

## Stereo Replay

**MACHINE:** ALL STs/STEs

**PRICE:** £90.95

**FROM:** MICRODEAL

**CONTACT:** 0726 68020

After so long without it, most ST owners have become resigned to the fact that the only way to get stereo is to buy an STE or one of those Amiga games-machine things. *STF* reported in issue 22 on two cartridges that offer stereo playback on a basic STFM (see page 130 if you missed that), and now you can both play back and create stereo samples with *Stereo Replay*.

Like its predecessor – known as *Replay 8* – *Stereo Replay* can play samples through the monitor's speaker. The output is mono on an ordinary ST but STE owners are luckier – they can play back in stereo using the internal DMA chip and alter the volume levels at the same time. But the addition of stereo inputs and outputs to the plug-in cartridge enables both types of machine to play stereo samples through a normal household hi-fi.

Conversely, *Stereo Replay* can sample in stereo (or mono) at any frequency between 5 and 48kHz. At 22kHz (8-bit, MONO format), you can squeeze in ten seconds of sound on a 520ST, 30 seconds on a 1040ST and 160 seconds on a Mega 4. Stereo samples are around half as large again as those in mono.

The system, which includes a sophisticated sample editor, can give 8- or 16-bit resolution. Sample quality is improved by a Chebyshev anti-aliasing filter and four A-D and D-A converters inside the cartridge, which give a bandwidth of 50Hz to 12kHz.

Creating samples is much easier than it was with the old *Replay 8*. The editing software is completely different and looks like a version of the ST Desktop. Samples appear as icons and to access them you simply double-click on them like a normal program. When opened, they appear in a normal GEM window, which you can move around the screen and resize as you see fit. Depending on the stereo or mono setup,

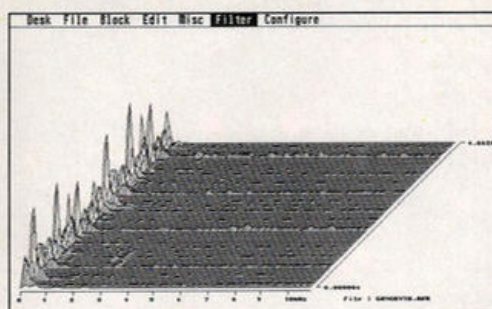
each sample display is a line or two lines, with the sound-waves laid on top. You can have several samples opened at once, enabling you to compare and work on them with the minimum of fuss.

To take a sample, you first create space for it and open it up – a small RAM gauge constantly shows the amount of memory left in your machine. You use menus to set up the sample type – mono or stereo, 8- or 16-bit, sample frequency – and then press the video-style Record button on the panel below. A dialogue box appears and enables you to set input volume to the optimum level. You can check what's coming in from your sound-source graphically and audibly. When you're happy you just press Sample, and the system begins storing the sample data.

The fun starts once you've "grabbed" your initial sample. Usually you need to clean the whole thing up a bit – by slicing off the empty gaps at the start and end, and perhaps isolating a particular section from the middle. *Stereo Replay* uses a pointer which can be positioned anywhere in the sample at the touch of a mouse-button. You can even select a block of data by click-dragging a rubber-band box (that is, one you can alter later) onto the desired area. This area is highlighted and combinations of keypresses and mouse-clicks can make the pointer jump to the start or end points. If you desire, you can set "hard markers" which can be used to speed up block selections and manipulations. It sounds complex, but in practice it's very easy to master and remarkably quick.

Once you have your blocks marked, there are numerous functions you can apply to the sample data within. All block functions are now both icon- and menu-driven to speed things up. These include the usual cut and paste operations, plus fade, volume-shift, reverse, overlay, repeat and loop and cross-fades. Advanced effects enable you to echo sounds and create reverb, flanging and phasing effects.

*Stereo Replay* also contains a digital filtering sub-routine which uses four configurable filter algorithms. These can change the frequency responses to isolate, for example, just the high-frequency part of a sample, or make it sound like a voice on an old radio. There are low pass, notch, high pass, and band pass



● No, not another fractal mountain. It's a 3D graph of the frequencies in a sample – a drum track, which explains why most of the sounds are low frequency.

filters which can be set to any cut-off frequency by entering a figure into a standard dialogue box.

Also included in the package is *Stereo Beat*, a MIDI-compatible drum program. This uses samples saved from the editor and it can fit up to 15 in your ST at once. You write in the usual pattern and song structure common to most drum machines. You can store 50 patterns (each containing up to 100 events) and ten complete songs in memory at once.

For the price, *Stereo Replay* and *Stereo Beat* represent great value for money. Together they make the business of creating sample-based music incredibly simple – as simple as writing with a word processor, in fact. The results are as compact or as hi-fidelity as you want, and can be incorporated in to most sample-sequencers like *TCB Tracker* and *Noise-Tracker*. And above all, you have the benefit of balanced hearing at last! *stf*

● Want to try it out for yourself? There's a fully useable demo of *Stereo Replay* on this issue's Cover Disk! For details, turn to page 22

## STEREO REPLAY

£90.95 MICRODEAL ☎ 0726 68020

### FEATURES: 93%

It oozes features! Stereo cross-fading is sure to have the rappers clamouring for it.

### EASE OF USE: 95%

Simple icons as well as menus make everything twice as accessible. It's like using your ST's GEM Desktop.

### RESULTS: 96%

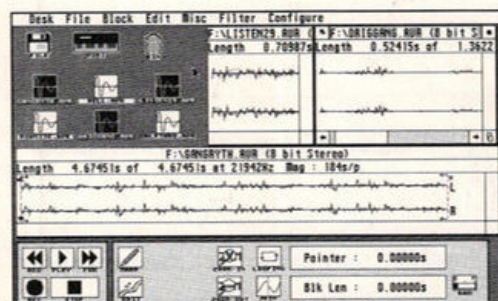
Good output results from just your monitor, but they're even better through a stereo hi-fi.

### THE COMPETITION

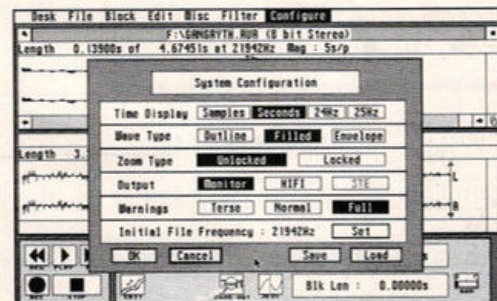
For stereo replay only, *Monster Stereo* cartridge (£24.95 MPH ☎ 0603 503382) – see *STF* 22. At the amateur or semi-pro level there are no other stereo sampling cartridges yet, though MPH are working on one at the moment. Mono cartridges on offer: *Replay 8* £79.95, and *Mastersound 2* £39.95, also from Microdeal.

### STF RATING: 89%

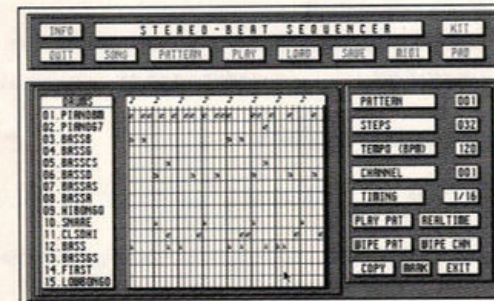
Perhaps a little expensive on the face of it, but worth it just for the superb features and excellent results.



● *Stereo Replay*'s editor, based on the ST Desktop, uses icons to represent samples. Each sample can be displayed inside a GEM window and then worked on individually. Learning is easy and you can get good results without any prior knowledge of sampling.



● The configuration menu – one of *Stereo Replay*'s many menu-operated functions – enables you to set up the screen displays and the playback output. *Stereo Replay* is so powerful and versatile that you can even get stereo samples from an old STFM.



● When you've created a bunch of short rhythm-samples, you can link them all together with *Stereo Beat*, a rudimentary but functional pattern and song editor that's great for creating drum tracks. It makes the package even better value for money.

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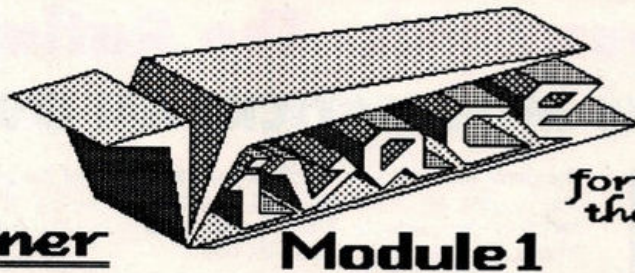
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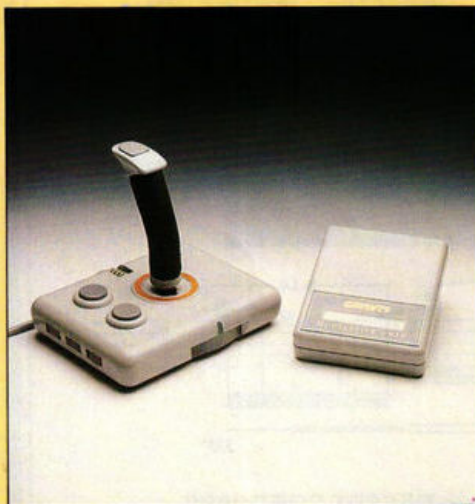
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## The Gravis MouseStick: The Ratings say it all! THE GRAVIS MOUSESTICK, AN OVERVIEW



The Gravis Mousestick is a totally unique device in that it is possible to be configured in almost any way that you choose. It is a full sized joystick with a choice of 8 tension settings and three buttons. The handle is foam padded. The base does not tip when in use and it is comfortable when held in the hand. It has a resolution of up to 1200 line count.

It will work on both the ST and the CBM Amiga and can be configured as a joystick in either port. Because it contains optics for calibration it does not click and the response is incredibly smooth with an adjustable centre (null) zone. It is also easily programmable to have varying amounts of "turbo" fire for any of the three buttons. It is even possible to reverse the up and down stick movements for certain games.

In its mouse mode the Gravis Mousestick is in a class of its own. It is supplied with a little box that it plugs into which contains a 16k microprocessor and an LCD display. By pressing the button nearest to you four times and then holding it, you enter an editor which is controlled by the joystick handle and fire button. Having entered this editor it is possible to alter ANY aspect of the mouse behaviour and in doing so produce PERFECT proportional control for any flight program or racing car program that contains sensible mouse routines. To this end we supply a sheet with the optimum settings for a number of popular programs. We also provide free of charge a help line for those who require it.

The mouse stick is made of the highest quality materials and is backed by Gravis's own 1 year warranty. In addition to this R.C. Simulations provide a help line during normal business hours.

### ST Format Ratings 90%

<b>Features</b> More modes than a kitchen blender	<b>95%</b>	<b>Results</b> Flawless! No compatibility problems, no quirks, just total control.	<b>98%</b>
<b>Speed</b> More responsive than a joystick and more precise than a mouse	<b>96%</b>	<b>The competition</b> There's nothing comparable.....	



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# The tablet to take?

In a professional design environment, a mouse is just not good enough for precision drawing. Neil Jackson looks at a cure that could be just what the doctor ordered

## Cherry Digitiser Mark 4

**MACHINE:** ALL STs

**PRICE:** £534.63

**FROM:** CHERRY ELECTRICAL PRODUCTS

**CONTACT:** 0582 763100

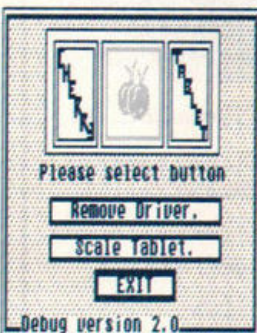
If you've ever attempted to copy a picture using a mouse and an art package, you know how hard it is to produce good results. For a start the movement range of the mouse is usually fairly small – an inch or two up and down gets your cursor banging against the edge of the screen. This makes the perfect copying of anything larger than a mouse-mat virtually impossible; you have to rely on your own artistic ability – something designers cannot afford to do when precision is important.

The alternative is scanning, but even that's not a perfect solution. Scanned images, be they flatbed or handheld scanner-generated, are usually full of tiny imperfections, especially where there is shading on the original drawing. Often the designer needs the line-graphics which make up the image, drawn to the correct scale without superfluous shading or colour.

The solution is a digitising tablet. Cherry's Mark 4 Digitiser is a large, flat device capable of holding an A3 sheet of artwork. It has a clear plastic cover you lay over the artwork and secure with a Velcro strip. The drawing tools – a puck and a pen – are connected to two ports at the rear of the tablet.

The puck is rather like a mouse, except that the tablet detects its position without using a ball. There is a clear plastic cross-hair at one end of the puck which you trace over the artwork – as you do so, the position of the cross-hair is worked out by the tablet, regardless of the puck's degree of rotation. On the main body of the puck are four buttons, although only two of these are detected when you use the tablet

● The program which drives the tablet from the ST is a no-frills, two-option Desk Accessory. This isn't a bad thing because it makes it very easy to get the tablet working. The setup is retained in the digitiser when the power's off, so there's no need to do anything except click on the Accessory and begin.



with an ST. These are set up to emulate the mouse left and right buttons.

The pen is similarly detected by the tablet, but, unlike a normal pen, it doesn't make any marks. It exists simply as a handy alternative to the puck and feels more comfortable for certain styles of work such as cartoon drawings or freehand sketches. A small button near the tip mimics the left mouse button. This is mainly used to tell the tablet whether the pen is drawing or just moving around. When you want to draw a line you push the button and sketch away.

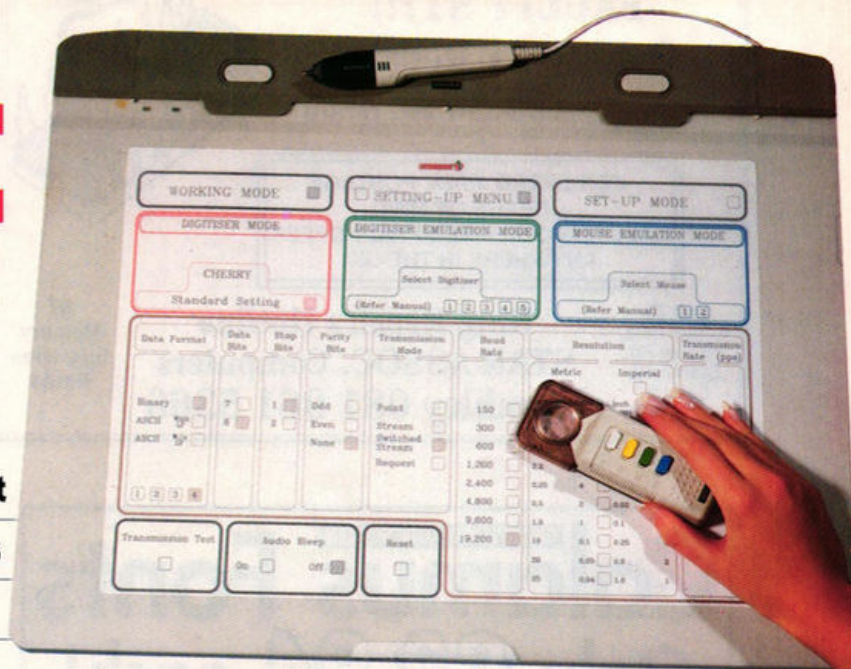
The Digitiser Mark 4 communicates with the ST via the serial port, using an RS-232 cable. The unit is supplied with a cable that terminates in 9-pin D-type plugs rather like those on a joystick. When ordering the tablet you must specify that you're intending to use it with an ST – Cherry then include a special 9-pin to 25-pin cable which you simply join to the supplied one. You can then plug the whole lot into your ST's serial socket.

Another reason for ensuring that you have the ST interface kit (which, surprisingly, is supplied absolutely free) is the software driver. When the tablet is used with PC-contemptibles, it can hook itself into the mouse-drivers directly. With the ST a Desk Accessory is required to do the same job. You install this in the root directory of your working disk and then set up the digitiser to communicate with it.

The set-up procedure is straightforward – you simply hold one of the buttons down on the puck while switching on the digitiser's power. This puts the tablet into setting-up mode rather than drawing mode. Using the puck or the pen, you click on five areas of the tablet marked out by a paper "setup sheet" which is supplied. These selections affect the speed of the communications link and the data protocol used, matching the tablet to the Desk Accessory. Finally, you click on the area marked "working mode" and the tablet returns to normal drawing functions.

At the ST end, all you need to do is select the Desk Accessory and instantly the mouse is locked out. From then on, you move the pointer around the screen using either the puck or pen. You can use the Accessory to re-scale the tablet, so that only a portion of the surface area corresponds to the screen. This is so that you can trace small drawings, but still make them appear as full-screen images on the ST.

The Cherry Mark 4 works with any program that uses the GEM interface (that's anything with the standard Desk, File and Menu bars at the top). Programs like PageStream and Degas Elite are immediately compatible since they give you access to the Desk



## ● The Cherry Digitiser Mark 4

could be the answer to designers' cries for better input devices. You can reproduce images up to A3 size easily and accurately. It knocks the old mouse into a cocked hat, but takes its toll on your wallet.

Accessory menu. Some programs which don't use standard GEM can still be used with the tablet, thanks to a special keyboard patch. Normally, because of the way GEM works, tablet-control is dumped when you load a program, and mouse-control returns. If you enable the tablet driver and hold down the <Alternate> key while double-clicking on the offending program, the driver is held in memory. Thus programs like Cyber Paint, which offers no Desk menu, can still be used with the tablet.

Probably beyond the budget of the amateur, the Cherry Mark 4 only really represents good value to a professional designer struggling with the ST's mouse. It's great to use – going back to the normal method of ST control seems slow and inaccurate by comparison. It's built to last, but Cherry offer you a great deal of after-sales service, just in case. So, if you're in need of a precision drawing tool for CAD/CAM and you already have an ST, why move to a PC-contemptible or a one-button Mac? You can do just as well with a Cherry. **stf**

## CHERRY DIGITISER MARK 4

£534.63 Cherry Electrical Products  
☎ 0582 763100

### FEATURES: 80%

The rescaleable tablet is great for all sizes of image, but two buttons on the puck are redundant. The ability to use all four for different functions would make it better.

### EASE OF USE: 94%

Setting up is a doddle, but you must read the supplied instruction sheet to get the communications protocols right. With the Accessory installed, you'd never know it wasn't a built-in ST controller.

### RESULTS: 95%

Obviously, you need some level of artistic ability to start with, and a fairly steady hand – but the results are faster and better than anything you could hope to knock up with a mouse.

### THE COMPETITION

None known at the time of going to press.

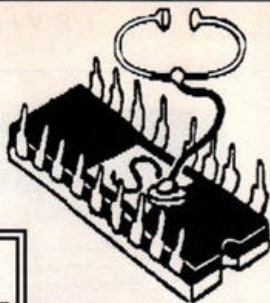
### STF RATING 88%

Expensive – serious artists and designers may be able to afford it, but it's certain to be out of the range of most of us. A pity, but it is worth its high price-tag.

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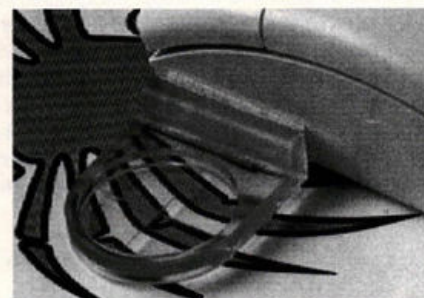
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We're sorry, but we are contractually bound not to say what will be appearing on this Disk next month. However, what we can say is that we're giving away a complete music package and a graphics package which are still available in the shops for over £100

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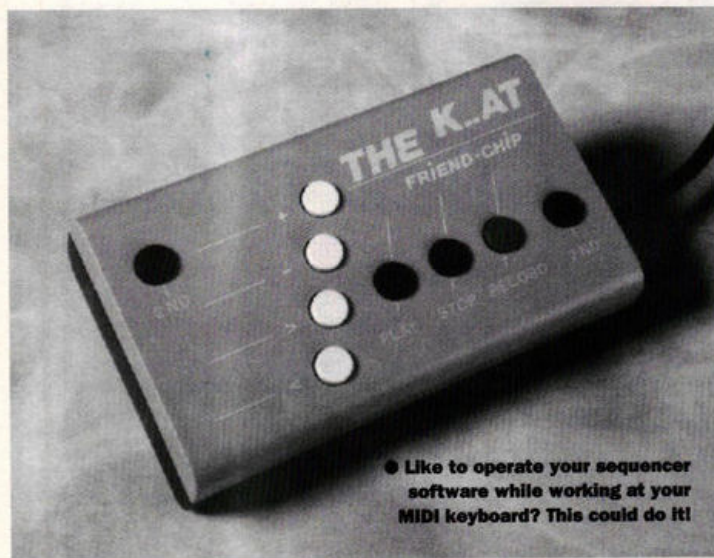
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# The key to control

Although mouse control is great, keyboard shortcuts are often easier. But what if you're using a sequencer or MIDI instrument and can't reach the keyboard? Vic Lennard checks out a handy new remote control device



"Stop" and "Record" emblazoned on the top panel. The other four buttons have "+," "-", ">" and "<" next to them. The buttons are even colour coded, with "Record" being red, "Play," "Stop" and "2nd" being black and the remainder white. All have a positive feel even though rubber dome switches have been used, not micro-switches.

How do you configure which keys on the ST are remotely controlled by which buttons on the K..AT? You use a Desk Accessory supplied with the K..AT. When you drop down the Accessory, the first configuration is for C-Lab's *Creator* sequencer, shown by the name

and number in the "Actual Configuration" box on-screen. The two boxes underneath this show the K..AT button and the ST key to which it is mapped. For instance, pressing the "Record" key shows that this is equivalent to hitting the Spacebar of the ST, while the "Play" key relates to the "0" on the numerical keypad.

Set the "rept" option in the K..AT's ST key box and you can have a button press sending out the ST key message continuously. In the "Creator" configuration, the K..AT ">" key operates the fast forward function on the sequencer, where a key repeat is useful. The Desk Accessory has recently been altered to include the use of <Alternate>, <Control> or <Shift> with another key stroke. You can tell that it was programmed in Germany: the key equivalent for fast forward should be "J" but is shown as an "ä" – with the two dots on the top. Still, it works fine.

There are currently configurations for C-Lab's *Creator/Notator* and Steinberg's *Cubase*. In setting up a configuration for Hollis Research's *Trackman* (reviewed in *ST FORMAT* in issue 24 – and if you missed that, turn to page 130), the <Right>, <Left> and <Down> cursors are used for playing, recording and stopping respectively, which is no problem. Similarly, the <Insert> and <Clr Home> keys operate the

rewind and fast forward functions. So with these five functions set, you can operate the transport controls. Once you have set up or edited a configuration, you can save it to disk. There are 32 configuration slots available, so it is unlikely that you're going to run out of space with your programs.

In one respect, K..AT falls short of the ideal. Many menu options within any program require two key presses to access them. For example, to set up a new sequence in *Trackman* requires you to enter <Alternate>-N, but the K..AT can't access more than a single key press. A shame, this – there are unlikely to be 14 useful functions accessible from a single keypress in most programs. Perhaps Friend-chip will take this into consideration in an upgrade. Also, it is awkward having to remember what functions each key controls – a small strip of white plastic which could be written on and re-used would be welcome.

Quite often in the course of using a sequencer, you wish you could operate the Record function by foot. For this, there is a 3.5mm jack socket in the side of the K..AT which takes any non-latching foot-switch and is specifically made for punching in and out of record – a kind of remote remote! Nice idea.

The only other problem stems from the fact that the K..AT and another sequencer, Hybrid Arts' *SMPTETrack*, both use the joystick port, making the K..AT unuseable for this program. However, no others spring to mind where this problem occurs.

Of course K..AT can be used with programs other than sequencers, as long as menu options are accessed by single key presses. *Degas Elite* and other drawing programs use key equivalents, although if you are sitting in front of your ST you might as well just press the keys! No, the K..AT is aimed very much at programs where you are likely to be away from the keyboard, and this means predominantly sequencer software. For such a program, the K..AT works well, so if you're using your ST for sequencing, the K..AT is well worth considering. **stf**

## The K..AT

**MACHINE:** ALL STs

**PRICE:** £69.00

**FROM:** Q LOGIC

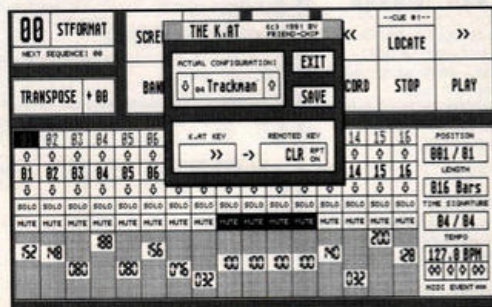
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Out of the many advantages the ST has over other home micros, its mouse-controlled Desktop has to be one of the best. Some other machines have only recently discovered how big a benefit it can be to have a control environment like the ST's GEM. No more typing in letters to select an option – simply point and click. Great. But there are some drawbacks. The major one is that you have to drop down a menu, point at the selection you want and click on it. This means a great deal of movement around the screen – not quite as much if you use a trackball rather than a mouse, but the main drawback of having to go to the top of the screen and drop a menu remains.

Most programs offer keystroke equivalents for most commands, so pressing certain keys automatically selects a menu option. This is fine if you're near your ST but impossible if you're away from it – working on a MIDI keyboard, for instance. Distance away from your ST is also a problem if you need to click on an icon on-screen – anyone who plays guitar is aware of the hum problems a monitor gives when interacting with the guitar pickups. To get around all of these problems, enter a rather feline solution – the K..AT.

Designed and built in Germany by Friend-chip, the K..AT is a keyboard remote which enables you to select any key on the ST keyboard from a small plastic unit connected to the ST's joystick port via a five metre cable. The unit also draws its power from this port. The top of K..AT has seven buttons along with a second function button, giving you a total of 14 possible selections of ST keys.

The layout of the buttons is aimed primarily at sequencer users, with three of them having "Play,"



● To set which buttons control which ST keys, you use the K..AT Configuration Editor. Here *Trackman* has its fast forward function mapped to the ">" key.

## THE K..AT

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### FEATURES: 75%

Controls 14 menu or screen options – fine as long as the function you want has a single key equivalent.

### EASE OF USE: 95%

Programming the configuration couldn't be simpler.

### SPEED: 90%

Once the configuration is programmed, just press the buttons! Works in a way a mouse or trackball can't.

### RESULTS: 80%

Great for sequencers, but of limited use for other programs.

### THE COMPETITION

None which carry out the same job.

### FORMAT VALUE: 82%

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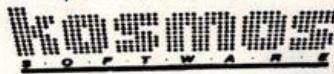
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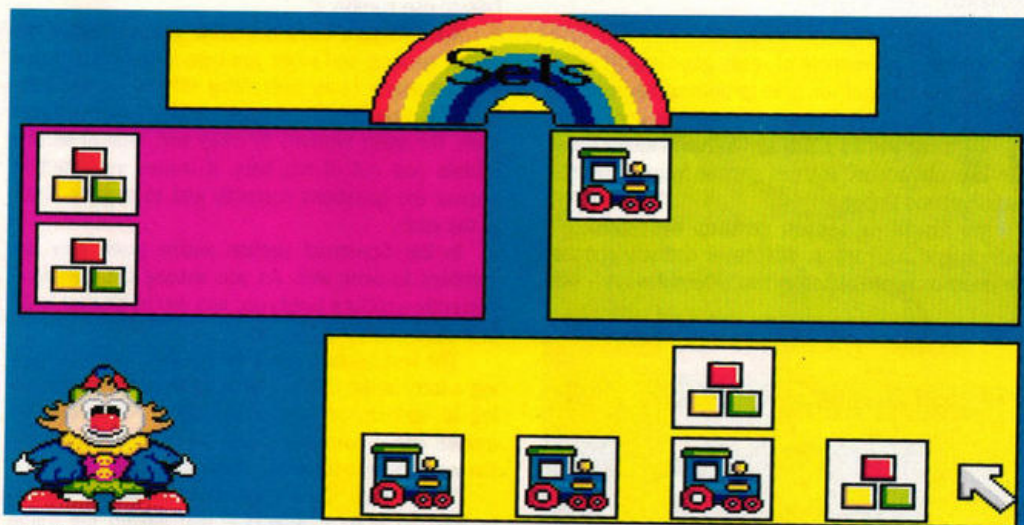
In all, there are six activities, most of which have three levels. They are "Snap," "Sets," which involves grouping objects, "Odd One Out," "Big and Small," which involves choosing the biggest or smallest item out of three, "Painting" and the "Shape Game." This last one is somewhat disappointing because it involves luck and nothing else, but the others are good – and, let's face it, five out of six ain't bad.

The games which involve putting objects into groups all follow the same format – you're shown a number of objects and you use the mouse to select or move them. On Level One all the objects are from the same class, such as a particular shape, but as you go up the levels they're taken from different classes. You can see this quite clearly in the pictures on this page.

Another common feature is that you don't just score points and get the results at the end of the series of games. You see the points being added as you complete each game. This kind of instant feedback is exactly what your ST can do better than teachers, and should appear in edsoft programs more often. Also, the way the points are added is always interesting, with the clown character dropping coins into a piggy bank, pulling a lever or some other fun activity.

In fact, the visual aspects of the program are very impressive. It's the little touches that count, such as being given a thumbs up sign when you've completed a task, or the vibrancy of the colours. It's

**It's the little touches that count, like the instant feedback – exactly what your ST can do better than teachers**



● In *Shapes and Colours*, learning the basic principles of maths isn't just a matter of boring old numbers. Bright colours and interesting objects grab your attention and make it fun to learn how to sort things into sets.



● Picking the smallest object from different types of thing is like the theory of Relativity to the average four year old, but this program in the *Shapes and Colours* package makes it look like fun.

a shame that the sound side of things is relatively boring in comparison.

Where the program is a bit more disappointing is its lack of parental control. Okay, you can change the level of difficulty, but you can't do anything else such as print out the scores. Without a little extra in the way of "grown-up" input, the life of the program is effectively shortened.

Nevertheless, you can't really go wrong for £7.99 – there's loads of variety, the activities are fun and, most important of all, they're educationally sound. Go for it!

Contents: One single-sided disk; 8-pg manual; boxed

PRESENTATION	8
VALUE FOR MONEY	9
LONG TERM INTEREST	5
EASE OF USE	9
EDUCATIONAL VALUE	9
<b>OVERALL</b>	<b>81%</b>

## HOW TO CHOOSE MATHS EDSOFT

What should you look for in maths edsoft? In everyday life you tend not to come across mathematical problems as number crunching exercises – and when you do, you just have to whip out the old pocket calculator. The kind of questions you have to answer are things like "How many yards of carpet do I need for this room?" So the best edsoft in maths should be more than just number exercises. In fact, the National Curriculum includes things like measuring, shape recognition, and collecting data in its list of mathematical skills. So you may not even need maths edsoft as such, if you've got spreadsheets, drawing packages and so on. Look out for software which gets across ideas – but if you must get "question factory" software try and get something which enables you to get print-outs and to change the questions or difficulty levels.

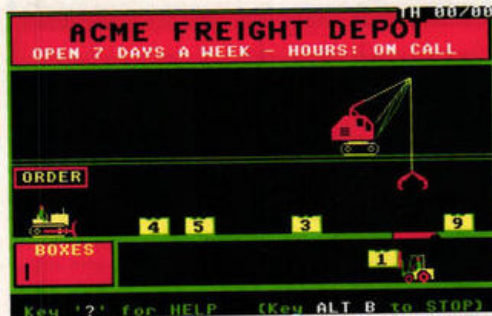


→ **First Maths**

**AGE RANGE:** 4-6  
**MACHINE:** ALL COLOUR STs  
**PRICE:** £2.80  
**FROM:** THE ST CLUB  
**CONTACT:** 0602 410241

Here's an example of really good edsoft which you can get for next to nothing because it's in the Public Domain. *First Maths* consists of three games which aim to teach addition and subtraction. You can choose from *Equations*, *Construct* and *Depot*.

The *Equations* section contains two choices - addition and subtraction. Whichever one you choose, the question is presented in two different ways - with



● Fancy yourself as a crane operator? Work out the next block in the numerical sequence, drop it and the forklift loads it onto the lorry.

**Better Maths**

**AGE RANGE:** 12-16  
**MACHINE:** ALL COLOUR STs  
**PRICE:** £22.95  
**FROM:** SCHOOL SOFTWARE  
**CONTACT:** 0353 6149477

**B**etter Maths differs from the other packages here because it's aimed at the secondary school age range. It consists of three sections: a tutorial, part one - which contains lots of tests on individual topics - and part two, consisting of a few broader-based tests.

The tutorial section consists of mini-tutorials on Algebra, Ratios and Gradients, Quadratic Equations and General Revision. The tutorial is initially impressive. The menu screen is friendly enough, and you can get back to the main menu without having to reset the machine. Also, the "pages" of the tutorial



● An extended tutorial on the meaning of bar charts like this wouldn't go amiss - for the programmers. Wonder what the "average" is an average of...

symbols and with numbers. This is excellent, because it gets across the idea of "bonding" - that is, the fact that adding numbers is combining them to make another number - and the concept of, for example, "three-ness" or "four-ness." That's pretty important, because if you don't understand the idea of "three" or "four" then you can hardly be expected to understand how to use numbers.

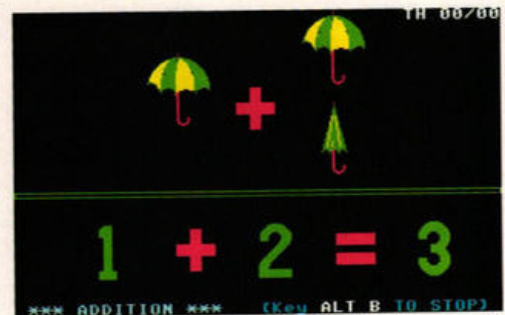
The program does not allow you to type in the wrong answer, and when you type in the correct one you get some really interesting effects on the symbols. For example, the magnet symbols attract paper clips, the wasp symbols fly away and, best of all, the rabbits pop out of top hats. It makes you want to answer the questions correctly just to see the show at the end!

In the *Construct* section you're given only the numbers to work with. As you answer the questions correctly a picture builds up, and you're treated to an animated display at the end.

The last section, the *Depot* game, involves loading a lorry in the correct order of weights, or according to addition or subtraction sums. The animation comes into its own here, with a forklift truck loading the weights onto the lorry, which then speeds away!

What's particularly good about the *Depot* section is that the graphic effects - and indeed the game itself - are actually related to the sums being put; they're not simply added on for the sake of it.

Visually the program is excellent, but the sound, once again, is nothing to write home about. As a parent you can select the kind of sum which is put - within fairly narrow limits - and the highest number



● Get the right answer and entertaining things start to happen - like umbrellas opening, for instance!

used, to a maximum of 99. Although the sessions are timed there is no score record kept.

Also included on the disk is a program called *Flashcard*. This presents multiplication sums, and is incredibly boringly presented. Still, considering no-one has to learn times tables any more, it doesn't matter anyway. Overall, this is definitely the best of the few PD maths disks in its price range. Buy it.

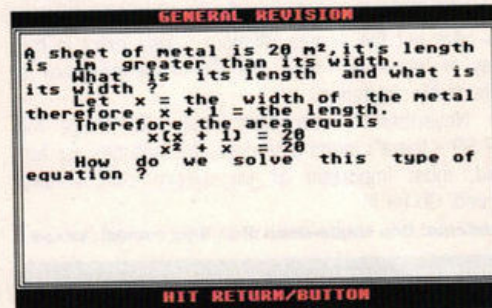
**Contents:** One single-sided disk

PRESENTATION	9
VALUE FOR MONEY	9
LONG TERM INTEREST	6
EASE OF USE	6
EDUCATIONAL VALUE	8
<b>OVERALL</b>	<b>75%</b>

**A maths program with meaningless graphs is like a spelling program with spelling mistakes - unforgivable**

are short and well-explained, and end with problems for you to solve.

This is where the program starts to let itself down. Although it gives you plenty of positive reinforcement, inasmuch as it makes more of a fuss when you get the answer right than when you get it wrong, it doesn't give you much feedback. All it does if you get a question wrong is tell you the correct answer and then pose another one. What's the point? As far as helping you overcome your difficulties is concerned, you'd be much better off buying a decent revision book for about a third of the price. That may



● At first, the tutorial in *Better Maths* is impressive in its layout and short bursts, but after a while the over-emphasis on reading becomes tedious.

not be so different either: the tutorial itself is almost entirely text based. Why would anyone would want a sort of textbook on-screen? Surely the whole point of shoving something onto an ST is if you can do it better like that than in some other way. Surely the machine really comes into its own when demonstrating things graphically. Why couldn't topics like gradients be dealt with in pictures?

There's worse to come. Lots of text and almost no graphics or sound is just about bearable. But a maths program with meaningless graphs is like a spelling program with spelling mistakes - unforgivable. The problem is the bit that gives you your score - it presents it in the form of a bar chart. It looks "academic," but it's almost meaningless - especially when it's based on only one question answered!

There is at least one saving grace though - the problems are often put in a realistic guise, and not merely as loads of figures. However, this program has an old-fashioned feel about it. On the whole it's competent enough at what it does - a bit of teaching and a lot of testing - but it doesn't do it better than the textbook alternatives. Get this only if you or yours are such ST fanatics that you don't look at anything unless it's on the small screen.

**Contents:** One double-sided disk; boxed

PRESENTATION	6
VALUE FOR MONEY	2
LONG TERM INTEREST	4
EASE OF USE	8
EDUCATIONAL VALUE	7
<b>OVERALL</b>	<b>53%</b>

● Next month we look at a sample of edsoft to suit every pocket, and prove beyond reasonable doubt that learning can be fun, inexpensive and effective, all at the same time! If you're stuck for a last-minute Christmas present... get real! ST edsoft is good, but not that good. Get the poor kid a quality ST game instead!



# WE CAN'T THINK OF A HIGHER CALIBRE PRINTER AT SUCH A LOW PRICE, CAN YOU?



Fujitsu's new dot matrix printer — the DL900 — is undeniably low-priced. Less than £300.

The question is, what can you expect for your money?

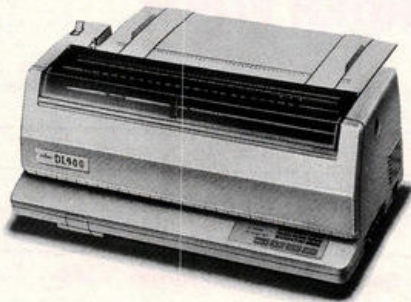
Can you expect really high quality print output, for instance? Well yes you can. The DL900 is a 24-pin printer with a speed of 180cps.

Do you get a variety of printing options? Sure. You can print envelopes, bar-codes and labels with a wide range of resident fonts.

And what about spread sheet capabilities? (Yes again, you can print on A3 portrait or A4 landscape.)

Is it compact though? Indeed it is. Even being a 110 column printer it's smaller than most 80 column models.

Easy to use? Definitely. The free set-up program disc means it's simple to configure the DL900 via your PC.



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Need we say more? We think not.

Please send me further information on Fujitsu's new DL900 printer.

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Title \_\_\_\_\_

Company \_\_\_\_\_

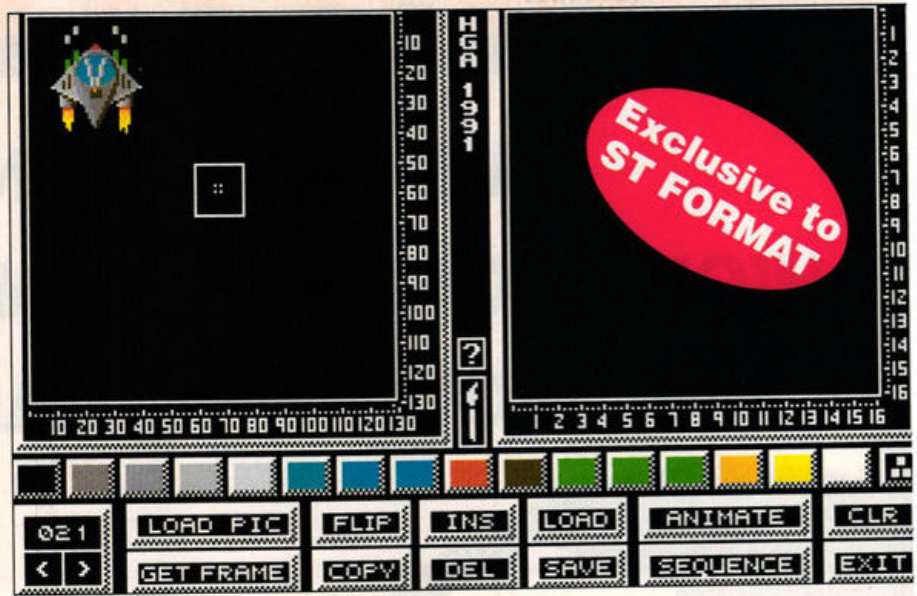
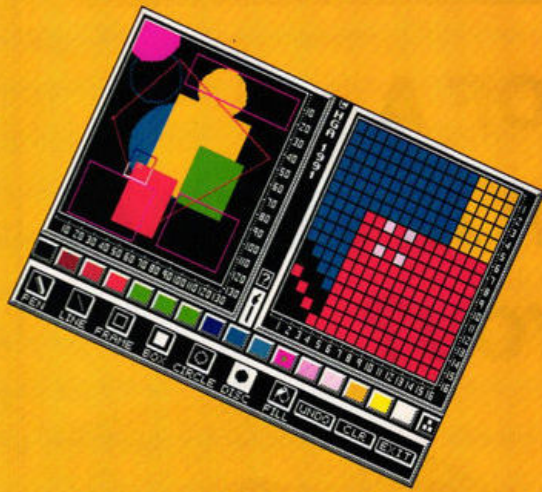
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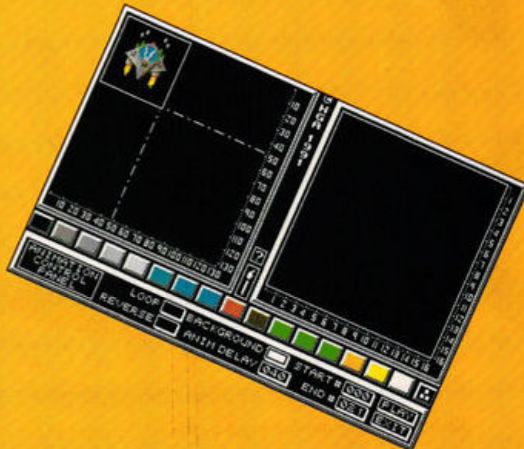
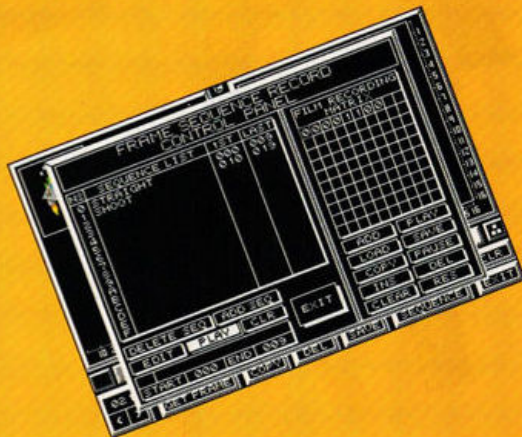
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# Get animating with Animaster!

*“Potentially the best ST animation package”*

– Peter Molyneux, creator of *Populous 2* and *Powermonger*, after using our Cover Disk demo from issue 21



That's what professional game-designer Peter Molyneux said about Animaster. You can't overlook praise like that when it comes from the programmer who created hit games like *Populous* and *Powermonger*.

Animaster is ST FORMAT's exclusive and unique animation package which enables you to design your own animated sequences. You can create your own sprites in Animaster, load in backdrops and then make your characters run, leap or die over the top of them. Save your sequences to disk and then merge them together to build up a short cartoon. Using a GFA Basic program supplied as part of Animaster, you can even incorporate the sprites into your own BASIC programs.

A taster of Animaster appeared on Cover Disk 21. The full version of the program enables

you to create and edit your sprites using a range of drawing tools. You can then test them over the top of a background to see how they look. What's more, Animaster even makes use of the enhanced features of the STE, offering you a choice of 16 colours at a time from a staggering palette of 4,096.

Using Animaster's powerful sequencing features, you can construct a short "film". For example, define a sequence showing a little man running, then another showing him leaping and yet another showing him bending down at touching his toes. Using a special recording matrix, you could then define a "film" which shows the sprite running for a while, stopping to touch his toes, running again and then leaping into the air. Imagine the possibilities for a Superman sprite or a colourful Mickey Mouse!

## ANIMASTER PRIORITY ORDER FORM

Yes, I would like to order .....copies of Animaster at the special price of £14.95 (ref: ST367)

Note: Animaster is only available through ST FORMAT

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## ANIMASTER'S FEATURES

- Runs on any ST or STE, with support for the STE's extra palette of 4,096 colours
- Automatic creation of a special mask to use your sprites in GFA Basic
- Single or multi-frame "grabbing" from pictures created in a paint package
- Eight times magnification for close-up editing of your sprites
- Extensive sprite drawing and editing features
- Comprehensive testing features
- A unique sequencer enables you to define up to 16 animation sequences which can then be animated over a blank screen or any picture of your choice
- A "Film Matrix Recorder" enables you to record, edit and save a sequence file to disk

# Desktop



Take a closer look at pictures, sort out your TOS troubles and still have time to upgrade your system. It's all here, and Neil Jackson is your host



## QUICK DMA SOUND SOLUTION

The STE's most exciting addition, the DMA sound chip, is also the most poorly documented, probably. Thanks to STF reader **Lee Bonha** from **Arborfield**, you can control the chip's abilities from your own programs with these short STOS commands.

The DMA sound chip has four main features: treble, bass and volume controls and a stereo balance control.

To start with, you must set up the microwire mask register (inside the DMA chip) to \$7FF hex. This is done with the STOS command

Doke \$FF8924, \$7FF

Once this has been done, you can control the chip's functions. To set the master volume level, use the following line:

Doke \$FF8922, %10011000000+v

where v is the volume level between 0 and 40. To adjust the bass, use:

Doke \$FF8922, %10001000000+B

where B is the bass level between 0 and 12. To adjust the treble, use:

Doke \$FF8922, %10010000000+T

where T is the treble level between 0 and 12. To control the balance, use:

Doke \$FF8922, %10101000000+L

where L is the level of the left channel, between 0 and 20. For the right channel use:

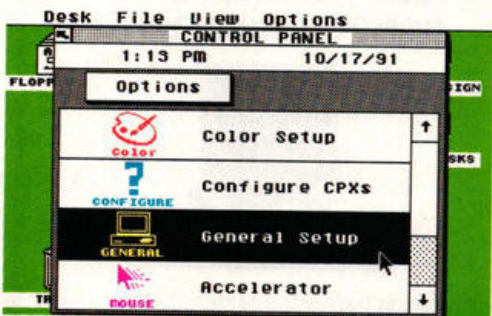
Doke \$FF8922, %10100000000+R

where R is the volume level for the right channel, also between 0 and 20.

## NEW STE TOS?

Many STE owners with inquisitive tendencies have written to *FORMAT*, wondering if they've discovered a new version of TOS – a version 1.98. Has Atari just shipped out oodles of new machines with a different TOS unannounced? Surely they wouldn't do that and risk another year of incompatibility problems?

*FORMAT* is pleased to announce that (thank goodness) there is no new version of STE TOS – the



● The TOS number is stashed away in the ST's ROM in a rarely-used number format. *XCONTROL* is just one utility that can decode it correctly – and avoid confusion. And luckily, it's been on a Cover Disk!

mysterious TOS 1.98 is the standard STE TOS 1.62. The confusion arises because it seems that many TOS-detector programs and Accessories misinterpret the hidden codes in the ROM.

Stashed away in the dark recesses of the ROM chips at address \$FC0002 are two bytes – the TOS version number. But they are not stored like ordinary numbers – they are converted into a little-used number format called Binary Coded Decimal.

In BCD, 1.62 gets stored as the two hexadecimal bytes 01 and 62. If you decode each byte using the normal method to convert them into decimal (that is, multiplying the first four bits by 16 and adding the result to the last four bits) you get 1 and 98. This method worked fine on older versions of TOS, because TOS 1.4 and 1.2 get stored as 01 04 and 01 02 respectively – and both of these decode correctly, whichever system you use, because the most-significant nibbles (the first four bits in each byte) are zero.

To read them correctly, you need to deal with each four-bit nibble as a separate entity. The first nibble is likely to be zero until TOS passes version ten (God forbid!). The second nibble is the data before the decimal point. The third nibble is only non-zero where the data behind the decimal point is more than one digit long (as in the case of TOS 1.62). The fourth is generally non-zero.

If you want to find out the truth about your TOS, Atari's Director of Communications in the US recommends you use *XCONTROL* – Atari's definitive control panel Accessory. *ST FORMAT* featured this program on Cover Disk 26, so you should already own a

## MIG MEMORY MESS UP

Apologies to everyone who owns a 520STFM with TOS 1.4 (the small one with the Rainbow symbol in the top left corner of the Desktop). You've probably discovered that last issue's Cover Disk demo of *MiG 29M SuperFulcrum* crashes when you press the "Fly" icon.

The good news is, there's an easy solution. To fix this you need to carry out the following:

1. Copy the contents of the MIG29M folder to a blank disk.
2. Rename the STE\_MIG folder to AUTO on this new disk.
3. Reset your ST, using the button at the back.
4. Press the FLY icon and play to your heart's content.

Sorry if this means you've missed a month of MiG-flying! Domark's programmers have been exiled to Siberia, and

copy (and if you don't, all you need to do is turn to our Back Issues offer on page 130).

## AMNESIA MANAGEMENT

Thanks are due to **Martin Walsh** from **Frontier Software** for pointing out a slight inaccuracy in last month's Desktop tips. Apparently, our reference to the abilities of the C0100109 MMU (Memory Management Unit) was incorrect. Here's the true picture:

- The C0100109 can address two (and only two) banks of memory – and they must be the same capacity. So with this chip in your ST you can have these setups: 512K (two 0.25MByte banks), 1MByte (two 0.5MByte banks), 2MByte (two 1MByte banks) or 4MByte (two 2MByte banks).

- The C025912 and C101601 MMUs can do all this, plus they can also handle a 2.5MByte setup using two 0.25MByte banks and two 1MByte banks.

Got that? Sorry about the confusion – our own memory management unit was having an off-day!

## THE DIRECT APPROACH

Having trouble with the `DIRS()` command in *GFA Basic 2*? This command should return the current path when you use it in the form `PRINT DIRS(0)`, but occasionally it produces nothing. Why? **Dave Asbury** from **Birmingham** (via the Bath BBS) has the answer.

`PRINT DIRS(0)` prints the current path (along the lines of `"\programm.ing\basic.gfa\"`) but not the contents. If you're at the root directory (that is, `a:\*.*`) the string returned is blank – that's why sometimes it seems not to have worked.

Another reason for the apparent failure of this command lies with the write-enable notch on the disk in the floppy drive. If you're using an older TOS (pre-1.2) you may get a Forced Media Change error if the disk is write-protected (with the notch open). You can tell because the drive doesn't whirr! Write-protection makes old TOS think it has a new disk each time, causing this problem.

Incidentally, if you are actually trying to read the contents, use `DIR "pathname"` where `pathname` is `C:\*.*` or `A:\thisdir\*.*` for example.

we're all wearing hairy shirts in penance. Special thanks are due to **Paul Callis** from **Lancaster** (for noticing that the STE patch would work with TOS 1.4) and **Philip Cornish** from **Birmingham** (for testing it out for us). What would we do without our readers? (Please don't answer that...)



● Whoops! Having trouble getting *FORMAT's* *MiG-29M* demo off the ground? Your troubles are over! Follow this simple guide to get airborne.

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## Don't buy a High Res Monitor

until you've checked out **The Monulator**, an incredible new software utility which turns any TV or monitor into a monochrome monitor capable of displaying every single pixel of the ST's superb High Resolution screen.

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All ST professionals agree that a high resolution monitor is essential for serious use. The Monulator is a direct replacement for the Atari SM124 monitor in a complete, easy-to-use package. No special hardware is required. What's more, The Monulator has features the SM124 can only dream of (for example, a green screen mode!)

Compatible with: Calamus...Cubase... Proflight... Pagestream... Calligrapher...Signum...DynaCADD...Hyperpaint...WERCS...Degas Elite...Steinberg Pro24...DevpacST...QuickST...BeckerCAD...MegaPaint...Notator...Printing Press...Protex...The list goes on...!

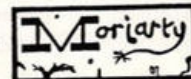
The Monulator is also compatible with the entire Atari ST range, from the 520 STFM to the Mega STE!

**ATTENTION USERS OF P. D. MONO EMULATORS**

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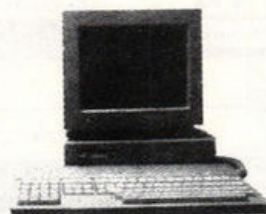
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## TEN TOP DESKTOP TIPS

① Hard drive owners are not necessarily safe from viruses when booting from their hard drives. If you leave a floppy in the internal drive, it still gets checked (and auto-booted) before the hard drive. To be safe, you should make sure that you either (a) don't have a floppy in the drive at all or (b) it's write-protected and virus-free. You can't damage your hard drive, but you could still pass viruses on to other floppies.

② If a program you're running doesn't load properly, have a look to see if there's a file with the same name but ending with the filename extender .RSC. If there is, make sure that the RSC file is in the same folder as the PRG file - the RSC contains data used by GEM for the window menus and needs to be accessed by the PRG.

③ The STE has improved document-reading capabilities over the older machines. When scrolling through pages, use the left mouse button to advance one page and the right to quit back to the Desktop. Thanks to Andrew Marsden from Retford for this one.

④ You can save time when opening folders and starting programs by holding the left mouse button down on the second click and then moving the pointer over the top of the icons you want opened. The double-click command is remembered and opens them automatically, with no further clicking. Thanks to John Bell from Hull.

⑤ Similarly, when closing a window or an alert box, if you hold the button down on the second click, you have

a chance to move the pointer away from the icons if you realise you've hit the wrong one. The currently highlighted icon is selected when you let go.

⑥ If you've got an old Commodore Amiga games machine mouse and you want to cannibalise it, just swap pins 1 and 4 around on the 9-pin plug. All the other pins correspond to the ST's standard mouse.

⑦ If you've just upgraded to Softlogik's excellent PageStream 2 (reviewed in STF last issue - if you missed that, see page 130 for the *FORMAT* back issue service), make sure you remove your old Times and Helvetica fonts from your old fonts disk. These conflict with PageStream 2's new Compugraphic fonts which do the same job (and do it better).

⑧ If you're using XCONTROL on pre-TOS 1.4 machines, you must always use the Shutdown feature before changing resolution or it may cause headaches with the next program to run.

⑨ If you enter an illegal character (like a question-mark) into a folder name, you won't be able to access it properly, because of a quirk of GEM. Do what John Charles of the Bath BBS did - use *ST TOOLS* to change it. *ST TOOLS* was yours on Cover Disk 27, so see the back issues offer on page 130 if you need one.

⑩ If you're handy with *GFA Basic 2*, you could win a hard drive. See the panel right below for details.

## DRIVE YOUR OWN BUS

Here's a short routine by Allan Pratt, Atari's Systems Software Engineer in the US. It's the Atari-approved method for handling bus-errors (caused when you attempt to access non-existent memory addresses) inside your own assembly programs. It must run in Supervisor mode, because it accesses privileged memory (the bus-error vector). The code cleans off the bus error exception from the stack, no matter how much the CPU dumped there. It does this by saving the original Supervisor Stack Pointer (SSP) and restoring it later, rather than adding a constant number of bytes to it. That code in full...

begin:

```
move.l $8,a0
move.l sp,a1
move.l #berr,$8
```

\* Do something that might cause a bus error

```
move.l testaddr,d0
```

\* If you get to the next instruction, you *didn't* get a bus error.

\* Handle that case here (zero a flag), then branch to "berrdone."

```
sf          berrflag
bra         berrdone
```

\* If you get to this label, you *did* get a bus error.

\* Handle that case (set a flag), then fall through to "berrdone."

```
berr: st          berrflag
```

```
berrdone:
```

```
move.l a0,$8
move.l a1,sp
```

And that's all there is to it. Many thanks to Allan!



# WIN A HARD DRIVE FOR NOTHING!

Well, very nearly. You could win yourself a Power 40MByte Slimline hard drive by digging out your copy of *GFA Basic 2* (yours on Cover Disk 22), and bashing out a short program. (If you missed that issue, turn to page 130, order a copy and then read on.)

You've seen the *Autoplay* demo on this month's Cover Disk, and by now you know its limitations. Wouldn't it be nice to have a single program which can load a block of screen-files and display them, without having to worry about RAMdisks and other unnecessary programs?

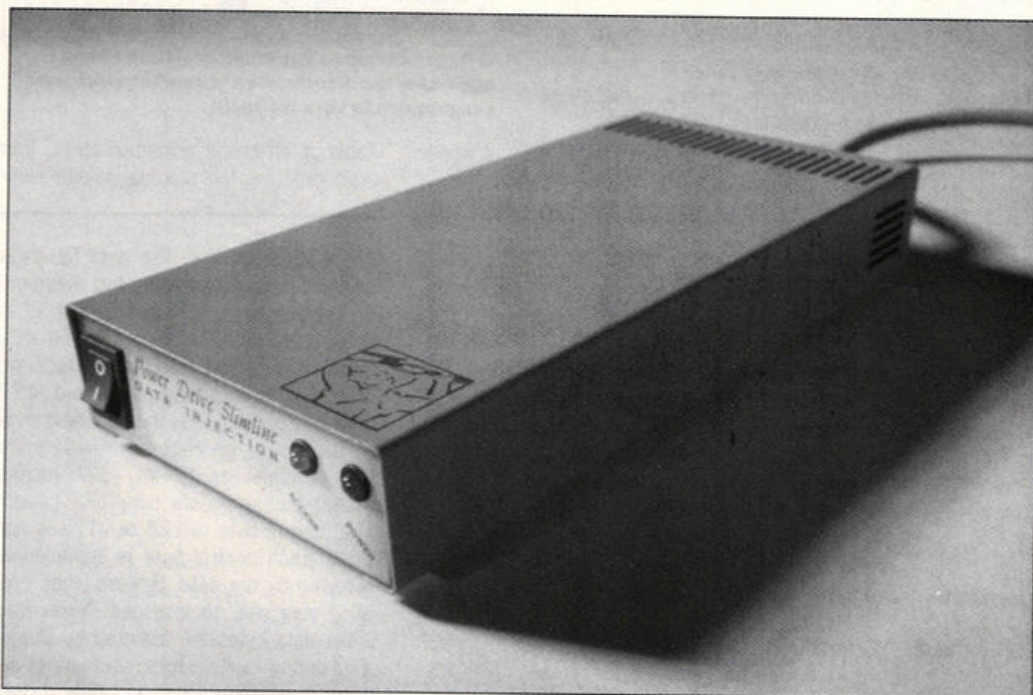
*ST FORMAT* is offering a brand new Power 40MByte Slimline hard drive to the reader who can write such a program with *GFA Basic 2*. The Power 40MByte Slimline is a solid, dependable workhorse - so reliable that it's the one we use ourselves in the *ST FORMAT* office. It can store as much data as about 55 floppies, which means no more rummaging through stacks of disk boxes to find what you're looking for, as well as faster access. In the case of big, multi-disk games like *Wonderland*, installing the game on hard drive puts an end to all that disk swapping and waiting for a new graphics sequence to load. The Power 40MByte Slimline drive is not only small enough to fit on the most cluttered desk, but it also features auto-boot and auto-park on shutdown to protect your valuable data if the unit is moved or knocked. What's more, because it has no noisy cooling fan it is very quiet in operation, and it is even a nice grey colour to match your ST.

The prize will be awarded to the reader whose *GFA Basic 2* program can squish the largest number of *Degas P11* images into a 520ST and then display them one after the other. The only stipulations are that you must not use any other program (like a

RAMdisk), the program must be submitted on a standard ST disk in *GFA's* .BAS format, and the pictures themselves must be full-sized (that is, 320x200 pixel) *Degas P11* images (though you may use any compression method you like once they are in memory).

The winning program will be featured on March's *ST FORMAT* Cover Disk - and the closing date for

submissions is 31 December 1991. As usual the ref's decision is final and no correspondence can be entered into. Make sure the disk you send us is virus-free, and keep a copy - we can't promise to return submissions. Send your *GFA Basic 2* masterpieces to: *GFA animation compo*, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW.



● This Power 40MByte slimline hard drive is virtually identical to the one that *ST FORMAT* Tech Ed Neil Jackson chose to sit on his very own desk - er, except that this one's a bit cleaner and newer and could be yours!

# PROBING INSIDE PICTURES

What's the difference between all the various picture formats? There are many different types, each with different methods of storing pixel data and colour information. To demystify some of these hidden but crucial elements, here's the detailed picture on two of the most popular formats.

## NEOCHROME FORMAT PICTURES

This is a standard format largely because it is so straightforward – just a big block of screen data. The file extension is .NEO. Inside a NEO file, you find the following data stored in this order:

- 1 word Flag (always 0).
- 1 word Resolution (0 = low res, 1 = medium res, 2 = high res).
- 16 words Palette, stored as 16 words. The first word is the data for colour register zero (the background) and the last word is colour register 15. Each word contains the data shown in this table:

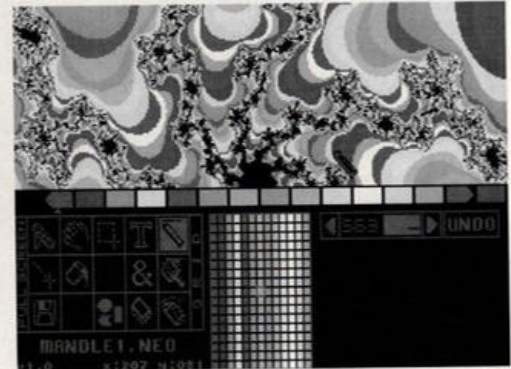
Bit: (MSB)	15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00(LSB)
	0	0	0	0	0	R2	R1	R0	G2	G1	G0	0	0	B2	B1	B0

R2 denotes the most significant bit (MSB) of red intensity while R0 means the least significant bit (LSB) of red intensity. The same pattern is used for green

- 12 bytes intensity (G) and blue intensity (B). Intensity ranges from 0 (no colour present) to 7 (brightest). For example: red = 4, green = 3, blue = 7 would be stored as \$0437 in hexadecimal.
- 12 bytes Filename (usually left blank, as "+++++++", where each + represents a space).
- 1 word Colour animation limits. The high bit (bit 15) of this word is set to 1 if the colour animation data is valid. The low byte contains the colour animation limits (four MSBs are the left/lower limit, four LSBs are the right/upper limit).
- 1 word Colour animation speed and direction. The high bit is set if animation is on. The whole low byte is the number of display-frames or vblanks per step of colour-shifting. If this number is negative, the colours scroll to the left (that is, from palette register 15 to 0). The number of vblanks between cycles is the value of this low byte - 1.
- 1 word Number of colour steps (as defined in previous word) to display picture before going to the next. This is used in slide show programs.

- 1 word Image X offset (This is unused and is always 0).
- 1 word Image Y offset (unused, always 0).
- 1 word Image width (unused, always 320).
- 1 word Image height (unused, always 200).
- 33 words Reserved for future expansion.
- 16000 wds Picture data (that is, the entire screen memory saved as one continuous block).

32128 bytes total

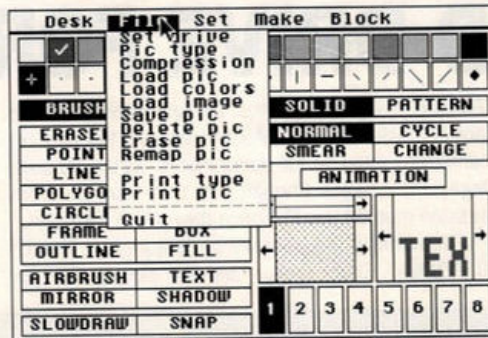


● The Neochrome picture format is the simplest of all the various types – it just saves the entire screen memory as one big block.

## DEGAS ELITE PICTURES

Degas file extensions are .P11 (low resolution), .P12 (medium resolution), and .P13 (high resolution). The Degas Elite format is exactly the same as the old (and now disused) Degas format, except for the last eight words of colour animation data, which only exist on Degas Elite files. Degas Elite files are laid out in the following way:

- 1 word Resolution (0 = low res, 1 = medium res, 2 = high res)
- 16 words Palette information (stored in the same way as for NEO files – see above).
- 16000 wds Picture data (screen memory as one block).



● Degas Elite uses two types of picture format – one rather like Neochrome and another which uses compression to save file-space.

- 4 words Table of left colour animation limits. This table contains the starting palette num-

- bers of four colour animation ranges which can be set up. The first entry in this table and the one below denote the first animation range, the second pair for the next, and so on.
- 4 words Table of right colour animation limits. These are the ending palette numbers of each range.
- 4 words Table of animation channel direction flags. Each word sets the direction of colour rotation for the four possible animation ranges. 0 = left, 1 = off, 2 = right.
- 4 words Table of animation delay-times. Each entry is equal to 128 minus the delay in sixtieths of a second.

32066 bytes total

## DEGAS ELITE COMPRESSED PICTURES

The file extensions are .PC1 (low resolution), .PC2 (medium resolution) and .PC3 (high resolution). These contain the following data:

- 1 word Resolution. This is the same as for Degas Elite files, but highest bit is set to 1 (that is, \$8000 hex = low res, \$8001 = medium res, \$8002 = high res).
- 16 words Palette, in the standard NEO format.
- up to 32000 bytes Control and data bytes. These are arranged using the Packbits compression algorithm. This looks at each line of the picture in turn (starting with the top one) and separates the four bit-planes

into 40-byte groups. The data for each bit-plane is squeezed using this method: A control byte (n) is stored first. If "n" is between 0 and 127, then the next n+1 bytes of data are used "as is", with no repetition. If "n" is between -1 and -127 (that is, 255 and 129) then the next byte of data is to be repeated -n+1 times (for example, an "n" of -127 means repeat the next data byte 128 times). The control byte n=128 or -128 is not used. Each control byte is immediately followed by the data. Beware when creating your own compressed Degas files – the data bytes are buffered by Degas Elite during loading, to a maximum of 40 bytes (one bit-plane of one whole screen line). During repeated data byte sequences, the buffer is filled with the

- repeated bytes. When (and only when) the buffer reaches its 40-byte holding capacity, the data is transferred and the buffer emptied. Don't let the buffer overflow or Degas Elite crashes. When compressing, do each 40-byte, one bit plane, screen line at a time – don't attempt to squeeze more data in by continuing repeated sequences past the end of a screen line.
- 4 words Left colour animation limit table – same as Degas Elite.
- 4 words Right colour animation limit table – same as Degas Elite.
- 4 words Animation direction flags table – same as Degas Elite.
- 4 words Delay-times table – same as Degas Elite

up to 32066 bytes total

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**SDL**

# → GFA Programmer's Surgery

More of your GFA Basic programming queries answered by Barrie Capel



The subject more of you seem to be worrying about than anything else is using a joystick with GFA Basic v2. Is there a routine to do it?

The definitive answer can be found in the book *GFA Basic: Advanced Programming*, by Frank Ostrowski, the author of *GFA Basic*. It is available for £20 (including postage and packing) from GFA Data Media UK (☎ 0734 794941), but unfortunately for us, the listing is copyrighted material and we can't reproduce it here.

In fact, a BASIC listing we have which uses the joystick routine out of the book didn't work on an STE (maybe the programmer's fault, maybe Atari's), so we decided to investigate and try to cure the problem. The listings on this issue's Cover Disk are only the crude, but working, results of these experimentations. Load them up and then read on!

It's worth noting that the book is still of great value for the many other subjects covered – such as optimising your code, page flipping, fonts, GEMDOS, Bios, Xbios, AES and much more, and all GFA Basic 2 users are sure to find it a mine of useful information.

## THE KEYBOARD PROCESSOR

Unlike GFA Basic v3, which has a joystick command, with GFA v2 you have to tap into the operating system directly to read the joystick. This in itself is not difficult – if you know where to look!

On the ST, the joystick information is handled by the keyboard processor, along with keyboard input, the system clock, MIDI and the mouse. All this information is accessed via a vector table.

The Kbdvbase system call `XBIOS(34)` returns the address of the table, which lists the locations of routines, and keyboard processor data.

If you take a `PEEK` into these locations and print them to the screen, you can sometimes reveal some interesting things – though please note that on some machines, addresses other than those stated in the examples may change. Values are in hex, and those in brackets refer to the STE only.

Listing 1 explores for joystick locations, by using `XBIOS(34)` to find the address of the vector table,

then continuously printing to the screen the values stored in the following 110 memory locations. This enables you to mess around with the joystick while pinpointing any memory locations which are affected.

## JOYSTICK DIRECTION

Load up GFA Basic 2 in High or Medium resolution, type in listing 1 and plug in a joystick. (GFA Basic 2 was yours on Cover Disk 19 – if you missed it, turn to page 130 for the *FORMAT* back issue service.) Run the program, and the screen fills with numbers. Move the joystick to the left while looking at the screen and you see a couple of the numbers change. On a Mega ST, the 13th number in the second column changes to 4. Moving up gives a 1, down a 2 and right an 8. Diagonals return 5, 9, 6 and 10, and you get 0 when the stick is in the central position.

At the top of the screen is the address of the first displayed value, so counting along to the altering value results in `&HE4F (&HEAB)` for the joystick direction address.

## JOYSTICK BUTTON

You can see that the value at column 1 line 11 is 248, which corresponds to location `&HE44 (&HEA0)`. Press the joystick button and this value changes to 249, so if you deduct 248 from the value held at this location, the result is 0 when the button is not pressed and 1 when it is.

Pressing the mouse buttons results in values being added to the 248 in the same location. The left button adds 2 (location = 250), and the right button adds 1 (= 249). Pressing both buttons together adds 3 (= 251).

Moving the mouse affects the values in the second and third columns on line 11. The second column value becomes 255 when you move the mouse left and 1 when you move the mouse right. The third column equals 255 when you move up or 1 when you move down. Polling these locations is an alternative method of detecting if the mouse has been moved and in which direction.

## THE KEYS

Press and hold down the "A" key and the very last

value, location `&HE7F (&HEDB)`, changes to represent the key's scan code.

Press `<Alt>`, `<Shift>` or `<Control>` and a value is added to the 16th number in column 5 – location `&HE61 (&HEBD)`. The values 8, 2 and 4 are added for the `<Alt>`, `<Shift>` and `<Control>` keys respectively. Pressing all three results in 14 (8+2+4).

The result of half an hour's playing around is the very compact listing number 2, which simply looks in out two locations and acts on the values returned, controlling a dot drawing on the screen very similar to the old Etch-a-Sketch. Move the dot with the joystick and hold down the button to draw. To clear the screen, just shake the monitor. (Only kidding!)

We have tested the program on a Mega, an STx and a 1MByte ST, but if it doesn't work on your ST you can work out the locations yourself with listing 1. Alternatively, experiment with offsets from the value returned from `XBIOS(34)` instead of constant addresses.

This method of joystick reading works adequately for most purposes, but there's no guarantee that it will work on all versions of TOS – hence the need for different values for STEs. For a comprehensive listing, get hold of the above mentioned book!

## ANIMASTER: SPRITES GOING FAST(ER)

● GFA Programmer's Surgery still gets a fair number of letters about sprites – in particular with regard to using GFA's `PUT` and `GET` over an existing screen. This is not an easy process, because you need a set of sprite masks. This is much easier if you use a program like *Animaster*, available exclusively from *ST FORMAT*, because all the required GFA Basic routines are supplied.

Stocks are limited, but you can still get hold of a copy of *Animaster* for £14.95 by sending your cheque, postal order or credit card details (card number and expiry date) to Trevor Witt, *ST FORMAT* Special Offers, FREEPOST, Somerton, Somerset TA11 7BR. You don't need a stamp, but be sure you write to this address, not the usual editorial address, and quote order number ST367 on your order. If you want to place a credit card order by phone or have any queries, you can ring the Mail Order Hotline on ☎ 0458 74011 during normal business hours.

Well, that's it for this issue, but keep those GFA Basic problems coming to: GFA Programmer's Surgery, *ST FORMAT*, 30 Monmouth Street, Bath Avon BA1 2BW. **stf**

## FORMAT NEEDS YOUR DESKTOP TIPS

In parts of eastern Europe, they exchange presents not on Christmas day but St Nicholas's day, 5 December. We think this is admirably pointless, so if you've got a tip, a short cut, an undocumented feature, a bug, a password – in short, anything at all you've found that helps you get more from your ST – we'd like it as a St Nick's day gift! That way you can share your information with well over 70,000 fellow ST enthusiasts and possibly win up to £50. Or, if you have a technical problem or query, we want to hear about that, too – it could win you £20. This year, let's get in early before all the commercialism spoils the whole thing...



Name \_\_\_\_\_

Address \_\_\_\_\_

Daytime phone \_\_\_\_\_

Brief description of tip \_\_\_\_\_

Please complete this form and send it, along with your tip, to: Desktop, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW.

## GOT A PROBLEM? GOT A MODEM?

If the answer to both these questions is "yes," then you've got a 24-hours-a-day hotline to Desktop. Simply use your modem to dial up the Bath BBS on ☎ 0225 840060. You can log on and leave messages and questions for *ST FORMAT* at any time of the day or night, as well as read many other messages from ST owners and programmers. There is a wide range of utilities and programs stored on the Bath BBS to help and entertain you – you can even get hold of all *ST FORMAT* back-issue Cover Disks. The best questions and tips could win you a prize or be printed here – you may even get a direct reply via electronic mail!



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## MEMORY UPGRADES



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# Feedback

Write to: The Editor, Feedback, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW

## GET 'EM DOWN

■ I would like to pick up the argument started by Simon Clarke (STF 27) regarding the price of ST software. Firstly, I disagree with your analogy between cinema and video – you pay more for the cinema because of the big screen and the atmosphere generated by a large audience.

Secondly, I think that software companies would do everyone a favour by reducing the price of their software. The average ST owner is more willing to part with £10 than £25 and therefore would be more likely to spend more on software. In any given month, I would be much happier spending £50

on five games than £25 on one. Also, spontaneous purchases will become more common. At present, very careful consideration has to be given to the value of a software item, so games without an *ST FORMAT* Gold are likely to be left redundant.

All it would take is a software company to take the bit between the teeth, even over a trial period, and everyone's questions will be answered!

**Paul Starr**  
**S Croydon**

■ I'm a poor student-type and can't afford to spend £25-plus for a new game. Therefore, when I'm looking at

games in shops, I always make for the cheap ones in the small plastic cases because I can afford them. Even if other games have great boxes, it doesn't mean the game is all that hot. Cheap games, as we see now, outsell full priced alternatives. So, why the continued high price?

Also, I may be new to the scene and missed a great debate, but why are DTP, word processor and art packages so damn expensive? Are they ever going to get cheaper?

**EEN Knope**  
**Epping**

**stf:** Games are only released on a bud-

get label once their potential full-price sales have been exhausted, though some games never make it onto a budget label. For example, we're unlikely to see MiG-29 released on budget. Being a flight simulator, it needs a chunky manual and extensive documentation just to explain how to operate the controls. This inevitably pushes up the cost of the whole package, making it an unlikely candidate for a budget label. Other strategy or god-games also need a high level of documentation, again pushing up the production costs.

In many cases, programmers only receive royalties on the full-price sales of their game – another reason why the

## SHORT BUT SWEET (like this heading – er, except for this bit)

If you can fit all you want to say on a postcard, just send it in to the address above

■ Could your boffins tell me if there's a powerful chess prog for my 1040 STFM which runs in high-res mono, please? Ta.

**Tim Jebbett**  
**Birmingham**

**stf:** Colossus Chess X from CDS software does the job. Give them a call on ☎ 0302 321134 or ☎ 0279 635377 for more details. It's one of the best chess programs on the market.

■ I am trying to get hold of a copy of a good paint program for my STE. I'm looking for something which can make use of the extra colours available on the STE and perform some clever 3D operations as well. Can you recommend a package to do the job?

**Peter Mahew**  
**Cheshire**

**stf:** I love the simple ones. Next month, we're putting two disks on the cover and giving away a supplement as well. What's on the second disk? No, it's not a complete game; it's two full packages – a fully-featured graphics package and a comprehensive music package. These are still on sale for over £100 in the shops, but next issue they're both yours for just £1! extra!

Unfortunately, we're contractually bound not to reveal the identity of

these programs, so don't miss next month's sound and vision special issue, due out on Thursday 12 December. It's sure to sell out quickly, so why not ask your newsagent to reserve you a copy? (There's a handy form you can use on page 170.) Alternatively, turn to page 130 and make sure you guarantee yourself a copy not just next month but every month.

■ I thought I'd let you know about the excellent service I received from a small local company which recently installed a memory upgrade to my STFM. I heard about a company in our town which does upgrades and repairs and took it there. All my questions were promptly answered by the obviously knowledgeable staff who helped me to decide exactly which type of memory upgrade I should go for.

It took them just a day to install the upgrade, it was inexpensive and the work is covered by a guarantee. The company is: The Service Department, Main Street, Bingley, West Yorkshire. ☎ 0274 564456

**N Prescott**  
**Bingley**

**stf:** It's always good to hear of reliable and speedy ST dealers.

■ After seeing the Millennium team's "Games for 1,000 years" in STF 27, I

felt I had to write to you. I agreed with their Top Ten, but feel I must disagree with their inclusion of Powermonger in their choice of games that won't last a thousand seconds. I bought Powermonger when it was released. I have completed it a couple of times, but I am still playing it.

**D Nicholas**  
**Castle Bromwich**

**stf:** Many people felt that, although Powermonger had the ingredients of a successful game, the manual was badly written and the game was too difficult to get into. Responding to the criticisms of the manual, publishers Electronic Arts (☎ 0753 549442) released a tips book earlier this year. They also have plans to release more Powermonger data disks towards the end of December.

■ I have an STE and would love to purchase some of the bargain-priced games advertised in your many pages, but how do I know if the software will run on my STE? Most of the games advertised are "old" titles. I wish "STE" bargain titles could be displayed as such, say, marked with an "E."

**D Hardy**  
**Hull**

**stf:** All games software is now STE compatible. STEs have been on sale

for the last two years, so programmers can't afford to ignore the machine. Even games older than two years were re-written at the time of the STE's release to work properly. Only a small handful of games which weren't selling well were never updated, and these were withdrawn from sale. If you're still not convinced that a mail order company is selling STE compatible games, then write to them or give them a call and check it out.

■ Please could you tell me if there is a program, either commercial or PD, that enables you to convert art files from one format to another – from Degas files to MacPaint files.

**Jonathan Wright**  
**Newcastle upon Tyne**

**stf:** The program you need, Jonathan, is called PicSwitch. It's been available in the Public Domain for several years now, but does the job admirably. The trouble with MacPaint files is that they are larger than one ST screen. Using PicSwitch you can move the mouse up and down to look at different parts of your MacPaint picture. If you want to convert it to an ST art file format, you need to save it out as several Degas screens and then link them together in an art package. Check out our comprehensive directory of PD libraries on page 49 for where to go to get it.

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costs are so high.

The problem with "serious" software is the sheer development time involved in creating a good package. To write a DTP package on the scale of Timeworks DTP or PageStream can take several years. The original version of PageStream was so laden with bugs that SoftLogik almost gave up on the follow-up - but they kept at it and came up with a FORMAT Gold winner (PageStream 2, reviewed last issue). This kind of package obviously involves considerable investments of both time and money, so it's hardly surprising that the software publishers are keen to keep the price points high.

In the music industry, record producers repeatedly brought down the price of records, cutting their profit margins dramatically. When CDs were released, they learnt from their mistake and kept the price at an artificially high level. Serious software publishers are obviously keen not to fall into the same trap.

#### THE ST COMES OUT ON TOP AGAIN

I want to upgrade my STFM to a larger, more capable system. At present, I enjoy flight simulation and strategy wargames. However, in the future, I want to be able to use whatever system I have for DTP and word processing, as well as the programs I enjoy at present.

I have been looking at PC systems, but they are a bit expensive. On reading October's issue of good old STF, I realised that Atari has a system in the Mega STE range that may fit my requirements. My only worry is that the Mega STE range, which is within my price bracket, will not live up to my expectations.

**Peter Nolan**  
Birmingham

Well, Peter, looking at the tasks you want your micro for, I'm surprised you even considered anything other than an ST. Flight simulators of truly exceptional quality have been hitting the ST from all angles for the last couple of years. F-19 Stealth Fighter, MiG-29 Fulcrum and F-15 Strike Eagle 2 have all been FORMAT Gold winners. Depending on your wargame tastes, there are more Gold winners to choose from. Dr Turcan wrote a series of classic, startlingly detailed wargame simulations.

For Desktop Publishing, the Apple Macintosh has long been regarded as the ultimate DTP machine, but PageStream 2 (reviewed last month - if you missed it, see page 130) and the forthcoming Calamus SL easily match the best Macintosh packages at a fraction of the cost. If you can't stretch to the expense of the top packages, Timeworks and the very-soon-to-be-released Timeworks DTP 2 make cheaper, but hugely competent, alternatives. In the word processing field, we use STs and

Arnor's Protext 5 to write ST FORMAT. What better recommendation do you need? For serious DTP or WP work, you need a superior keyboard, which the Mega STE delivers. So, save yourself some cash and buy a machine which is really going to do what you want.

#### SIMIAN ISLE SUFFERINGS - BE GONE!

Having had the same problems with Monkey Island as your other readers, I finally found a way round the bug. Without collecting the minuets from the men of low fibre, follow the rest of the game as far as releasing the prisoner. Then, talk to swordmaster and go and visit Stan's boatyard. Now visit Meathook's and, after leaving Meathook's, you should be able to go to the lookout by the pier or dock.

As you go down the stairs to the cliffside, you start to insert various disks. This is where the bug usually appears. If you keep using the Spacebar to pause the game while changing disks, you should be able to get onto the dock to meet Stan and your crew. Failing this, various visits between Stan and swordmaster. Meathook is always last. Otherwise there is another bug coming off Meathook's island.

**Ali Patel**  
Shrewsbury

Thanks for that handy advice, Ali. We first revealed the Monkey Island problem two months ago. It seems the game wouldn't run on some 520STs. US Gold said anyone with problems should return the game - they would replace it and provide a free Lucasfilm game to apologise. After being inundated with returned copies of the game, they now say they can no longer provide a free game, though they will still replace any dodgy copies of Monkey Island - or any of their games - if anyone is encountering problems.

#### FRONTIER TRIES TO SHOCK

I am writing to pass on on my experiences with PC emulators for the ST and three companies I have recently had dealings with.

I attended the recent 16-bit Computer Show fully armed with the emulator review in ST FORMAT 25, with the intention of buying a hardware IBM PC emulator. On the basis of price and performance, I decided to buy the AT Speed C16 from Compo. I made straight for the Compo stand and was soon introduced to Neal O'Nions. He gave me a full demonstration of a standard ST running both DR-DOS and Microsoft Windows in glorious VGA. I was very impressed. Neal did me a very good show-price deal, so I bought the C16.

To give Windows 3 a fighting chance of doing meaningful things, I also bought the new Frontier Tech- ➔

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→ nology upgrade to 4MByte for my existing 2.5MByte Frontier RAM expansion.

I installed both gadgets and hit my first snag. There isn't room in my ST casing for everything! Also, AT Speed didn't work. I phoned Neal at Compo and we spent some time discussing the situation. Neal was very helpful and positive and he made a number of suggestions. He also offered to phone Frontier on my behalf regarding the space shortage.

Neal's suggestions didn't help, and neither did the replacement AT Speed C16 or the substitute PC Speed that he kindly sent me. I then contacted Andrew Bennett at Frontier. His attitude was anything but positive - he said that I was trying to fit too much into my ST.

The only suggestion he made was that I remove the shielding from my power supply to create a bit more space. Andrew assured me that this was perfectly safe. The effect of doing that would be to expose large areas of bare metal that are carrying enough current to give you a nasty electric shock! Thanks, Frontier!

Neal suggested that the fault was with my Atari ST hardware, and he recommended that I take my ST to Nick Hill at HCS. Eventually, Nick resolved the problem with the AT Speed by upgrading my motherboard. Apparently, my 1040 STFM was an exceptionally early version. Nick also managed to make everything fit inside the case by lengthening the Frontier RAM circuit

board earth lead and rerouting the ribbon cables to enable the circuit board to sit somewhere slightly different. With hindsight, perhaps I should have bought my memory upgrade from HCS in the first place.

My ST/PC is now fully functional and I am very impressed and grateful for the high degree of prompt, efficient service and support that I received from both Neal at Compo and Nick at HCS. Perhaps these two gentlemen should consider laying on client care and electrical safety courses for Frontier Technology.

**K A Robertson  
Surrey**

**stf:** We've encountered similar prob-

lems ourselves. When we reviewed Sound Tools on a Mega STE expanded to 4MBytes, there wasn't enough room to accommodate the Sound Tools hardware and the memory case. In that instance, Ladbroke Computing (☎ 0772 203166) came to our rescue and lengthened the lead in the same way. If you have a memory upgrade board installed, it's worth talking to manufacturers before you buy to check that you can return your package if you can't install it properly.

#### RELATIVE RATINGS

■ I am inquiring about your new way of rating games. I thought the old way of rating games was sufficient, with ratings for graphics, sound, intelligence,

## NO ACCOLADE FOR CUSTOMER SERVICE

■ About three months ago, I bought the game *Elvira* and I'm beginning to regret it now, considering how much it cost!

The problem is that it won't work from my hard drive - 40MByte Power Drive 900 series - in spite of the instructions that came with the game. (It didn't help that there are two separate sets of instructions, but I did everything both sets stated, in vain.) In fact, I almost did not buy the game because it contains five disks - imagine the amount of disk swapping! Gawd! But then the chap I bought the game from at the 16-bit Computer Show last July said it could be run from a hard drive, so I bought it.

I wrote off to Accolade asking for help or advice as to what can be done, and their reply was very nice but not at all helpful - all I got was comments like, "You're lucky yours works!"

So, can you please help me out? I really like this game, but the disk swapping is horrendous and spoils the game.

**Richard Rycraft  
Kent**

**stf:** I'm all for games being hard drive in-

stallable, especially the giants like *Elvira*. Written by programming team Horrorsoft and distributed by Accolade, *Elvira* is one of the most daring adventure games we've seen in a long time. Thanks to the copy you sent us of your letter from Accolade, I was able to get to the bottom of this. I contacted Alan Welsman at Accolade to try to sort out your problem. According to him, the game is installable on some hard drives but not others. When I mentioned the letter you received from their customer services department, he denied that there were problems with the STE or STFM versions. I then contacted Mike Woodruff at Horrorsoft to find out what the programmers had to say about it all.

It seems there were originally some problems making the game hard drive installable on an STE, but these were cleared up. Mike was horrified to hear that Accolade are claiming it won't run on STs and was quick to refute their claim. Apparently, you need to make sure you set up an empty folder named Z in the same directory as the game, to prevent it from looking at the floppy drive. Mike says that the game is guaranteed to be hard drive instal-

lable. He suggested that if you have any further problems, you give him a call on ☎ 021 352 0847. He's certainly going to offer you much more help than Accolade, who don't seem to know the meaning of the term customer service.

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With Compliments

Dear Mr. Rycraft, 8-10-91

I'm unable to offer you any solutions to your problem. I'm afraid

There are numerous problems with people unable to run *Elvira* on their ST's. It's not even guaranteed to work on STE or STFM (so you're lucky yours works!). People encounter numerous problems which often appear to be "bugs" or general inconsistencies in the programme. This is a possible explanation why you are unable to play the game from your hard drive.

Sorry I couldn't be of more assistance,  
customer services  
Accolade Europe Ltd.  
Bowling House, Point Pleasant, Wandsworth, London SW18 1PE  
Tel: 081-877 0880 Fax: 081-877 3303

● "I'm afraid I am unable to offer you any solutions to your problem. There are numerous problems with people unable to run *Elvira* on their STs. It's not even guaranteed to work on an STE or STFM (so you're lucky yours works!). People encounter numerous problems which often appear to be 'bugs' or general inconsistencies in the program. This is a possible explanation why you are unable to play the game from your hard drive. Sorry I couldn't be of more assistance. - Customer Services."



● *Elvira* has rather a lot going for her (and we mean that in the nicest possible way)... but you don't suppose she's trying to warn you about anything, do you?

# SEIKOSHA DOT MATRIX PRINTERS

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- **1 YEAR WARRANTY**  
With every Seikosha printer from Silica.

Each print example was produced by the printer it is shown with. Printer speeds are quoted as follows: SD = Superdraft 15cpi, D = Draft 12cpi, NLQ = Near Letter Quality 12cpi, LQ = Letter Quality 12cpi.

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**192 CPS 80 COLUMN**

- Seikosha SP-1900AI - 9 pin - 80 col
- 192cps Draft, 48cps NLQ
- 1K Printer Buffer + 2 Fonts
- Parallel Interface
- Graphics Resolution: 144x72dpi
- Epson and IBM Emulation
- Paper Parking
- FREE Silica Printer Starter Kit

SP-1900AI RRP: £179  
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SAVING: £105

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## 9-PIN PRINTERS



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**240 CPS 80 COLUMN**

- Seikosha SL-92AI - 24 pin - 80 col
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- Parallel Interface
- Graphics Resolution: 360x360dpi
- Epson Emulation
- Optional Font ROM - 7 Fonts
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**324 CPS 80 COLUMN**

- Seikosha SL-210AI - 24 pin - 80 col
- 324cps Draft, 108cps LQ
- 5K Printer Buffer + 9 Fonts
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- Graphics Resolution: 360x360dpi
- Epson and IBM Emulation
- Optional Auto Sheet Feeder
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DOT MATRIX  
PRINTER

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- Graphics Resolution: 360x180dpi
- IBM Emulation
- Built-in 50 Sheet Auto Feeder
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## 24-PIN PRINTERS

## BUSINESS PRINTERS (WIDE-BODY)



**277 CPS 136 COLUMN**

- Seikosha SL-230AI - 24 pin - 136 col
- 277cps Draft, 92cps LQ
- 5K Printer Buffer + 9 Fonts
- Parallel and Serial Interfaces
- Graphics Resolution: 360x360dpi
- Epson and IBM Emulation
- Optional Auto Sheet Feeder
- FREE Silica Printer Starter Kit

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**462 CPS 136 COLUMN**

- Seikosha BP-5500AI - 8 pin - 136 col
- 462cps Draft, 106cps NLQ
- 18K Printer Buffer
- Parallel and Serial Interfaces
- Graphics Resolution: 240x144dpi
- Epson and IBM Emulation
- Optional Auto Sheet Feeder
- FREE Silica Printer Starter Kit

RRP: £1299  
STARTER KIT: £25  
TOTAL RRP: £1324  
SAVING: £325  
SILICA PRICE: **£999**  
+VAT=£1173.83 Ref: PRI 8755



**520 CPS 136 COLUMN**

- Seikosha BP-5780AI - 18 pin - 136 col
- 780cps SD, 520cps Draft, 130cps NLQ
- 20K Printer Buffer + 2 Fonts
- Parallel and Serial Interfaces
- Graphics Resolution: 240x240dpi
- Epson and IBM Emulation
- Handles 1+6 Multipart Forms
- FREE Silica Printer Starter Kit

RRP: £1999  
STARTER KIT: £25  
TOTAL RRP: £1724  
SAVING: £325  
SILICA PRICE: **£1399**  
+VAT=£1643.83 Ref: PRI 8760



**800 CPS 136 COLUMN**

- Seikosha SBP-10AI - 18 pin - 136 col
- 800cps Draft, 200cps NLQ
- 64K Printer Buffer + 2 Fonts
- Parallel and Serial Interfaces
- Graphics Resolution: 240x240dpi
- Epson and IBM Emulation
- Built-in Cut Sheet Feeder
- FREE Silica Printer Starter Kit

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STARTER KIT: £25  
TOTAL RRP: £3024  
SAVING: £525  
SILICA PRICE: **£2499**  
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Before you decide when to buy your new printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or software, or help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest Free literature and begin to experience the "Silica Systems Service".

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To: Silica Systems, Dept STFOR1291-58, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

### PLEASE SEND FREE SEIKOSHA INFORMATION

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Company Name (if applicable): .....

Address: .....

Postcode: .....

Tel (Home): ..... Tel (Work): .....

Which computer(s), if any, do you own? ..... 58C

→ instant appeal and long term interest and then the overall rating. Why have you changed your system of marking? I wonder if other avid readers like myself miss the old system.

**C Dickson**  
Liverpool

**stf:** We updated our games rating system to be able to give you a more informed view of the game under review. When you buy a game, you come up with an opinion based on other games you've seen. If you bought Utopia and recommended the game to a friend, you would talk about how it compares to Sim City and Populous, rather than tell your mate the sound had a score of five and the graphics weighed in at eight. Our new rating system examines and recommends games the same way that you do.

We thought this was more helpful to you and less misleading than the way our old system forced us to give a graphics rating, for instance, to a text-based adventure game – inevitably a low rating, but that criterion was in fact an irrelevant one for that kind of game. With our new system you still get some indication of how a game rates in each relevant department – graphics, sound, gameplay and so on – but now it's by

comparison with other games of the same sort, not in the form of an artificially "objective" score out of ten.

If anyone has other comments regarding our game reviewing system, I'm always keen to listen to them.

#### TRAVELLER CRASHES

■ I am writing to complain about a serious fault which has occurred on MegaTraveller 1. It started when I had just bought a jump-2 drive. I can only use my second drive for loading saved games – otherwise my ST crashes. Also, some of the graphics are starting to mess up. When I created a new character, he had zillions of dollars in his account and I haven't a clue where it came from.

Nearly every game started has ended with my ST crashing. I am also confused about two labels on the box. One says joystick control is supported. Well, that's a lie for a start! It also says the game supports all STs, including 520ST, while the other one says 1MByte required. How can the game testers and programmers miss a fault like this, if it is one?

**Barry Molloy**  
Tameside

**stf:** It seems you may have a dodgy

version of the game. We contacted the distributors, Entertainment International (☎ 0268 541126), and they've confirmed that the game only runs on STs with 1MByte of memory or more. It also runs with the mouse and not the joystick. If you're still having trouble, give Entertainment International a call and return the game.

#### KNOCKING THE HEADS OUT

■ I would like to congratulate you on your informative and clearly written article "Driving Test" (in STF 28), on buying a second floppy disk drive for the ST. I would be grateful if you could clear up a couple of points.

If I regularly use a disk format of more than 80 tracks, which the article effectively encourages by describing drives which will format to 84 tracks, is this likely to make data storage and retrieval unreliable?

If I regularly use a disk format of more than 80 tracks, will this eventually "knock" the drive heads out of alignment on some drives?

**J Learmont**  
London

**stf:** With good quality disks, you're unlikely to encounter any difficulties if you format above 80 tracks. However, you may encounter some problems with lesser quality disks where the tracks close to the hub of the disk are unable to reliably hold data. It's extremely unlikely that you could knock the drive heads out of alignment by formatting over 80 tracks.

#### ATARI ART ABILITIES

■ At present I own an Atari 520 STFM and a Star LC-200 colour printer. I wish to know if there is an art program or package available which includes the following:

1. Good variety of fonts.
2. A "Move" command so lettering can be moved.
3. Compatibility with my printer.
4. Graphs, pie charts, etc (with print out).

I already own Canvas, Neochrome and Degas Elite, but these programs do not meet my requirements.

**Russell Hardy**  
Loughborough

**stf:** I don't see why you need to look anywhere else. Degas Elite comes with most of the features you need. With its support for GDOS fonts, you can use virtually any font you want in Degas Elite and move it around the screen before deciding where to leave it. Degas has also been around for so long that there are now many Public Domain printer drivers available for it. Graphs and pie-charts can be constructed manually in any of the art packages you mention. Turn to page 49 for our com-

prehensive listing of PD libraries – most should be able to help you with both fonts and printer drivers.

#### WHERE'S MY DOG GONE?

Please could you help? I've just bought my son Maddog Williams for his ST. He has only had the game for one week. The game consists of five disks – one "introduction" and four other disks, with two chapters on each. The other day he went to play the game and put the "Introduction" disk in the drive – and it seems that Maddog does not exist any more. There is only the GEM Desktop and the disk doesn't seem to load. When we first played the game, MADDOG.PRG was on the screen. Where do you think it's gone?

**Mrs Jones**  
Hadleigh

**stf:** It would seem that your disks have been erased somehow. Perhaps you formatted them by mistake or damaged the disk in some way. We spoke to the game's distributors, Software Management Group, and explained your problem. Their spokesman Chris Cowen assured us they'd be happy to replace your damaged disks for you. Contact Software Management Group, 150c Main Street, Bingley, West Yorkshire BD16 2HR, ☎ 0274 566155.

#### I WANNA BE A WRITER

Firstly, we hear much about double-sided disk games and 1MByte programs, but why don't software companies produce enthralling action on cartridge? What is this slot really used for anyway?

Secondly, do you agree there's no creativity in software today or any other day? Is it possible for someone like me to invent games of originality and sell the rights to software companies without being a programmer?

Also, I have Sim City but where's Sim Earth? Talking about educational programs, are there any to help me with my "A" levels, since buying new books each year only gives money to the professors who write them – what a conspiracy!

By the way, how do I become a writer for your magazine? I guess you won't tell me because you'll be out of a job and out of pocket! Oh well!

**Ian Robinson**  
Tottenham  
London

**stf:** You can put up to 250K of information on cartridge, leaving all the ST's memory available for workspace. Another advantage is the impact on piracy. If you have a cartridge plugged into your ST, the instant you switch on, the ST drops into the cartridge before loading GEM. This means it would be impossible to use a copying device to

## HANDY HINT NO 1 – BACK UP



Firstly, thank you for putting the latest version of ST Writer Elite (v4.2) on Cover Disk 27. I have been using a previous version which I had found to be the best and easiest WP from the Public Domain until v4.2, but I have a gripe.

A while ago, while saving a huge 80,000 character document to disk, I received a message saying "Disk Full." This was impossible because the only other files on the disk were of less than 60,000 bytes at the very most. At this stage, I should have taken a copy of the current file in memory but, for some reason, I didn't. (I know, I know, always make a backup copy...) Anyhow, upon examining the disk I found that all three files on the disk were now corrupted. The first file (a folder of non-ST Writer files) was inaccessible, the second (an ST Writer field) was apparently of 55,000 bytes in length, yet only a screen-full appeared, followed by blank lines – as if <Return> had been pressed a number of times. The same applied to my current 80,000 byte (unfinished!) document. So what went wrong?

I do not think ST Writer was to blame, although I initially did think so. The disk did not have a virus on it, because I checked that with the Ultimate Virus Killer (from STF Cover Disk

26). Can you please tell me what happened to my disk?

**N Hodgkinson**  
Reading

**stf:** First of all, let me put your mind at rest – there is no problem with your version of ST Writer Elite or with your ST. On very rare occasions when your ST saves to disk, the heads get confused and data is written to the wrong area of the disk. In extreme cases, you can find the entire directory is corrupted, or you may even find that part of your file contains spurious information from another document. It's for this reason that you should always make sure you retain a backup copy of any information you save to floppy.

Back in issue 22 we looked at how to recover information from damaged floppies. (If you missed this issue, see page 130 for details of how to order it.) You may find that your complete file has actually been saved onto disk, but, with a damaged directory, your ST cannot relocate all of it. Using a program like Knife ST from Hisoft (☎ 0525 718181), you can search through the disk for the information and call it back into memory. With 720K of information to search through, it's a very time-consuming operation – it might actually be quicker to start again.



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→ get to the roots of the game. The problem with cartridge games is the sheer expense. All the information needs to be held on ROM chips rather than on disk and the cost of ROMs would push up the price of the games - probably to levels that the average game-player would find unacceptable. The only package I know to have ever been released on cartridge was FaST Basic. Since it was a programming language, all the ST's memory could be freed up to hold your program. There were two versions on sale at the time - the disk based version sold for £40 while the cartridge version retailed at £70 - a fairly hefty difference.

Concerning your other points, Ocean are insisting that Sim Earth should be released just after Christmas. The good news is that programming team Maxis are working on Sim City 2, which should be ready late in 1992.

I'm always keen to hear from anyone who wants to write for ST FORMAT, though remember that writing skills are paramount. You need to send me samples of any previously published work and a sample review (about 500 words) for ST FORMAT. I also need to see details of any features you would like to write for the magazine. We already have a large pool of games reviewers writing for the magazine, so I'm more eager to hear from people with technical or serious knowledge. **stf**

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● *The Secret of Monkey Island* is something of an STF favourite. No other adventure offers as much humour, excitement and puzzlement, combined with excellent graphics. Not to mention the breath mints.



● Many flight sims throw you in at the deep end and expect you to act like Tom Cruise first try. *F-15 Strike Eagle 2* from Microprose doesn't. It's ideal for beginners, but offers a challenge for veterans too.



● *Operation Stealth*, by French wunderkinds Delphine, is a shameless rip-off of James Bond that involves you in international intrigue and secret deals in the search for a Stealth fighter, no less.

# The STF December Quiz

# WIN!

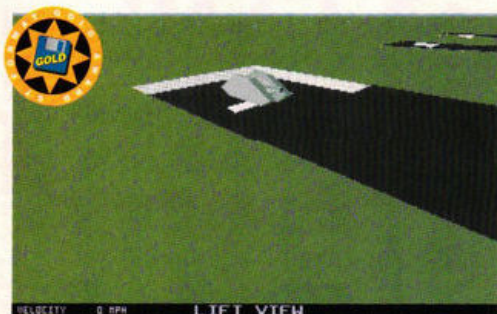
# 50 OF THE BEST ST GAMES

So, here we are again at the bit they're variously calling "the quiz," "the end" and "the quiz at the end." And what can you get for your blood, sweat and tears this month? Why, nothing less than 50 of the stonkingest, wonderfulest and most bottom-pankingly gob-smacking games you've ever seen on the ST. 20 easy-easy-easy questions are all that stand in the way of ten lucky-lucky-lucky winners...

It's all very well us raving on about the best games to go out and buy, but when they cost upwards of £25 a time it's not always possible. If only there was some way of getting all the best games free.

We might just be able to help you there, because this month we're giving away 50 copies of some of

- 1 Which mendacious member of a programming team was less Oriental than he first appeared?
- 2 Small is sometimes beautiful. Choosing the smallest object in a certain program reviewed this issue can reward you with a digital affirmative. Which program?
- 3 You've just bought *Stereo Replay* for your Mega 4 ST. How many seconds of sound can you fit in memory (sampling at 22kHz, 8-bit mono format, naturally)?
- 4 In which game that was reviewed this month would you find music more suited to a game show than to an ST program?
- 5 You might have heard of Apple and Apricot. But which fruity company have just produced the Mark 4 Digitiser?
- 6 *Autoplay*, on the Cover Disk, enables you to produce animations using a script file. Any word processor or text editor can be used for this, but what's (probably) the best - and was also given away on last month's Cover Disk?
- 7 On which date this year did Martin get a joke?
- 8 Stewart Gilray, Richard Fox, Andy Smith and Steve Chalmers work for which company that you were introduced to in this issue?
- 9 The manual of which musical program reckons you can write a song in two minutes flat?
- 10 In a game reviewed this issue there's a real Oriental person who would be very glad to received a certain comestible. Name that comestible.
- 11 How much free space (in kilobytes) is left on this month's Cover Disk?
- 12 When someone wrote complaining that his game didn't work correctly, the spokesman for a particular games company responded to a letter with, "You're lucky yours works." Which games company?



● If you're after a game that combines relentless action, strategic planning and a good deal of solid 3D graphics, look no further than *Armour-Geddon* from Psygnosis.

the best games available on the ST for ten winners. Each winner will receive five games. First up, there's *Armour-Geddon*. This flight sim/tank sim/arcade adventure/shoot-em-up was reviewed in issue 26 and got a slightly-less-than-small 91%. Reviewer Andy Hutchinson said, "If you enjoyed *Carrier Command*, then you'll love this game. There's an ultimate objective to be reached and lashings and lashings of gameplay to make you want to do it. *Armour-geddon* a lot of fun out of this game." Yep, that's what he said. But we didn't hold it against him.

From Microprose, king of the sims, we bring not one but two – yes, two! – of the best sims you can get. In *Railroad Tycoon*, you get the chance to build your own railroad empire. Imagine *Sim City* with little puffs of smoke and you're not far off. When he reviewed it in issue 28, Ed Ricketts said it was "...a hugely enjoyable, complex and fascinating game lurking beneath its accountant's exterior" and boldly dished it out 93%.

*F-15 Strike Eagle 2* is the other Microprose tour de force. A flight sim especially suited to beginners ('cos it's easy), it was reviewed in issue 26. Our man in the cockpit, Ed Ricketts (again), said, "Even if flight sims aren't normally your bag, give it a try. You'll be surprised at just how much fun it is." 90%, no less.

Before *Cruise for a Corpse* (see page 54), there was *Operation Stealth*, another Delphine graphic adventure in the style of James Bond. The review speaks for itself: "*Op Stealth* looks good, sounds good and is seductively exciting," burred Andy Hutchinson, before shamelessly awarding a 93%.

Reckoned by some (the *FORMAT* team, anyway) to be the best graphic adventure of all time, *The*



● *Railroad Tycoon* is Microprose's god-game to end all god-games, and gives you a chance to be at the forefront of the railroad era. Build your track, place stations and keep an eye on the competition.

*Secret of Monkey Island* is funny, frustrating and fantastic, in that order. Mr Hutchinson again: "It's lush and intense and I'm sorry I've finished it." With a rating of 94%, who wouldn't be?

To get these irresistible games into your grasp, all you need to do is answer 20 little questions!

## THE RULES BOX

1. Friday 6 December is the last, the absolutely final, the ultimate, the extreme, the no-more-after-this and the very utmost date we can accept entries here at La Courte de la Beauford. After that we're going to turn them away into the cold harsh winter night, whether or not they're wearing a sensible overcoat

2. Anyone even slightly related to the peeps at Future Publishing, Psygnosis, US Gold or Mirrorsoft mustn't even think about entering this competition. Otherwise they'll have bad dreams for the rest of their life.

3. One entry on a card of the postal type or a pointlessly-wasted sealed envelope is fine, cool and dandy. Sending more than one entry is silly, dangerous and unimaginative (not to mention hopeless, futile and naughty). Anyone found doing this will be reported to the Queen and any such miscreant's entries used to line the bottom of Charly the non-existent hamster's cage.

4. You don't like the prizes? Then don't enter the compo. Hard cash, as sexy as it sounds, is right out of the window, prize-wise. Get our drift?

5. When, at the end of the day, all the cows are counted, the flock is gathered in, the windows are closed, the shutters shuttered, the Open sign changed to Closed, the groceries taken off the shelf at the front of the shop... where was I? Well anyway, at that time, whatever the Judge decides in his infinite wisdom is what goes, and 'cos he can't write he can't enter into any correspondence. So there. (And it's no good sulking.)

13 Which icon in *Robin Hood* enables you to scroll the screen to see more?

14 What does Chuck Rock throw at the bird to wake it up?

15 Which peculiarly-titled company designed and built the K..AT?

16 *Formula One Grand Prix* is the next promising release from Microprose. But how many circuits does it include?

17 An edition of something that was reviewed in this issue could effortlessly cover more ground than the *USS Enterprise*. What is its title?

18 Three names were suggested but rejected for inclusion in a previewed game this issue. What was the second name in the suggested list?

19 Which company is about to publish a tome entitled *Chaos, Fractals and Computers*?

20 What Quality of Life rating do you need to attain to consider each scenario completed in *Utopia*?

Easy, right? Just write your answers on a postcard or sealed down envelope and post it to December Quizmaster, 29 Monmouth Street, Bath, Avon BA1 2DL. All entries must reach us by Friday 6 December.

## NOVEMBER QUIZ ANSWERS

A thousand smackers worth of *PageStream 2* were on offer last month. Winners will be announced next month, answers here and now.

1. Jayne and Richard Dunn have previously written a series of five educational packages – what's the name of the series? **Let's Spell**

2. *PageStream 2* enables you to import graphics in a variety of popular Macintosh art formats, besides the usual ST file types. What do you see when you try to show Mac piccies on an ST screen? **A crossed box**

3. What's the only ST DTP package that enables you to use Compugraphic fonts? **PageStream 2**

4. What new serious software package makes an unlikely double act with a duck? **Home Accounts 2**

5. A Polish man came up with a new theory which he could show graphically. He called it the mu-set. What's it also known as? **The Mandelbrot set**

6. Two war games and a sports sim are coming for the ST – but which software publisher is releasing these new American games? **Electronic Arts**

7. How much free space (in Kilobytes) is left on November's Cover Disk? **2K**

8. Chaos theory is being used to study stock-market trends, weather patterns, nature theories and even human behaviour – but what new dimension is now being explored? **Time**

9. Argonaut reached dizzy new heights when they released a revolutionary ST space game four years ago – but what was it called? **Starglider 2**

10. Not content with releasing the amazing *Llamatron* game as Shareware, Jeff Minter now plans to release what new game? **Revenge of the Mutant Camels**

11. Give the name of a popular PD ST spreadsheet program. **ST Sheet** or **GEMCalc**

12. Which well-known, high-flying Atari coin-op platform game conversion made a brief unlawful appearance in the Public Domain? **Joust**

13. Game publishers Domark are releasing an ST conversion of a violent Atari coin-op that the Marquess of Queensbury wouldn't approve of. What's it called? **Pitfighter**

14. *The Lemmings* data disk has very sadly been postponed – until when? **January** (except it hasn't – see **Previews on page 16**)

15. Which floppy drive under review this month uses a Chinon drive mechanism? **Cumana CSA 354**

16. Which port on the back of your ST plays host to the Atari laser printer? **DMA port**

17. What program on November's Cover Disk enables you to generate your own fractal landscapes using little more than a number? **Mountains**

18. There were inherent design faults in the first ST laptop, but Atari have rectified them in their new portable promised for 1992. What's it called? **ST Book**

19. *Sound Tools* is a top-of-the-range hard drive recording system but you need a mammoth hard drive to be able to use it. What hard drive did our reviewer use to test *Sound Tools*? **The Progate 160DC**

20. Name the pilot of *Thunderbird 4*. **Gordon Tracy**

## OCTOBER QUIZ WINNERS

The prizes in the October issue were three very wonderful Protar 30MByte hard drives. Annd the winners are... **Ian Jubb** of **Dorset**, **Hugh Banton** of **Cheshire** (not the same Hugh Banton ex of Van Der Graaf Generator, surely?), and **Geoff Edwards** of **West Yorkshire**. (Incidentally, for question 17 we accepted either "spreadsheet" or "database.")

# AMAZING PRICES FOR ATARI USERS

GAME	PRICE	GAME	PRICE	GAME	PRICE
3D Construction Kit	26.96	Golden Axe	16.96	Power Up (Comp)	19.95
3D Pool	7.95	Gunboat	20.95	Powermonger	19.95
A.P.B.	6.96	Hard Drivin'	6.96	Predator 2	15.96
Addicted To Fun-Rainbow (Comp)	13.95	Hard Drivin' 2	15.96	Prehistorik	16.96
Advanced Fruit Machine	5.95	Head Over Heels	6.96	Prince Of Persia	15.96
Afrika Korps	19.95	Heroquest	16.96	Pro Tennis Tour 2	16.96
After Burner	6.96	Hitchhikers Guide To The Galaxy	7.95	Profight	29.45
Alien Storm	19.96	Hollywood Collection (Comp)	19.95	Projectyle	8.95
Arkanoid II - Revenge Of Doh	6.96	Hostages	6.96	R-Type II	16.96
Armalyte	16.96	Hudson Hawk	16.96	R.B.I. Baseball 2	19.95
Armour-Geddon	15.96	Hunt For Red October	16.96	Railroad Tycoon (1 Meg)	22.95
Atomino	16.96	Hunter	19.95	Rainbow Collection (Comp)	13.95
Back To The Future III	15.96	IK+	6.96	Rambo III	6.96
Barbarian II	6.96	Indiana Jones & L. Crusade (Act)	13.95	Rick Dangerous II	16.96
Barbarian II (Psygnosis)	16.96	Indianapolis 500	16.96	Robin Hood	16.96
Batman - Caped Crusader	6.96	Insector Hecti	5.95	Robin Smith's Int. Cricket	16.96
Battle Chess	15.96	It Came From The Desert	16.96	Robocop II	15.96
Battle Chess II	16.96	Jimmy White's Whirlwind		Rocket Ranger	7.95
BeastBusters	16.96	Snooker	19.95	Rod-Land	16.96
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Blade Warrior	16.96	Kick Off II	13.95	SWIV	15.96
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Carthage	16.96	Leather Goddess Of Phobos	7.95	Sim Earth	19.95
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Chaos Strikes Back	16.96	Leisure Suit Larry III	25.96	Soccer Manager - Multi Player	16.96
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Flood	8.95	Operation Wolf	6.96	Wings	19.95
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Gauntlet III	16.96	Pegasus	16.96	Xenon II	7.95
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		Power Pack (Comp)	16.96	Zone Warrior	16.96

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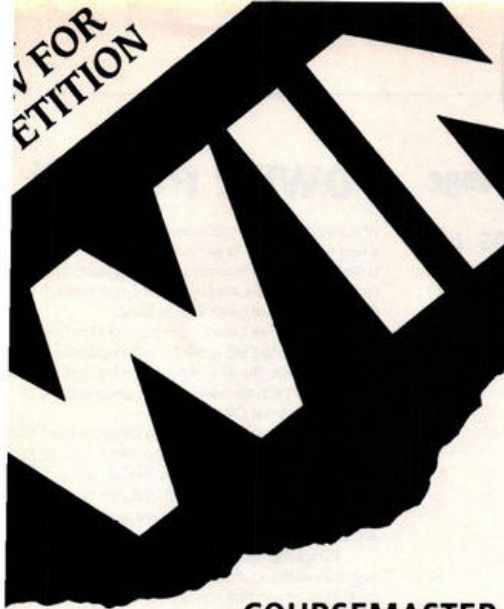
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Okay, it's nearly the end of the year, we're all tired and there are some strange things lurking in the bin marked "Not for publication." While the Editor nips off into his space-time wormhole for the winter, we push the papers through to the...

# Twilight Zone

## THE BULLFROG PRINCE PRINTS



● Hi, my name's Sean and I'm a programmer. No, really. That's just a hobby.

**Living proof** that programmers aren't all spotty teenagers called Darren, Sean Cooper proves that some are called Sean. But he has the last laugh, because it seems those desperate guys and girls who make the BBC's *Clothes Show* have nabbed him to appear on TV.

By day, Sean is the programming brains behind hits like *Flood* and, er, *Flood*, working with the infamous Peter Molyneux-inspired Bullfrog development team in darkest Surrey.

But, by night, he's a transformed figure, apparently gallivanting around catwalks and shaking his tush for the cameras. He's just minced away with an award for finishing in the final eight contestants during the *Clothes Show's*

Model of the Year competition. Serves him right for messing around with those cute characters, really, dunnit?

## TOWER POWER

Who says STs can't handle serious jobs? If you wanna see a Real ST showing up its games-machine rivals, nip down to Alton Towers (that huge money-spinning theme park near Brum) and check this out. Reader Simon Horsley from Cleethorpes did, and here's what he found.

As part of their Laser Ice Spectacular, Alton Towers have a bog-standard 520 running some incredible laser-pattern machines. The ST is at the core of the system, communicating with the lasers via MIDI, under the control of C-Lab's renowned Creator.

But that's not all. The ST is also linked to a massive eight-track tape machine which replays all the vocal tracks and narration for the show. The tape machine also sends an SMPTE timecode and a special "click track" to the ST so that the laser patterns and the live band can keep in sync with each other. And not a Desktop or a joystick in sight.

Rumour has it that the best thing the Amiga games machine ever did was run the Stock Market systems during the Big Bang crash. Now they're using Atari's portable Portfolios, apparently (or is that "appropriately"?).

What's the smartest-looking ST set-up you've ever seen in a professional and public role? Drop us a line and let us know about it. Write to Bigshot STs, ST FORMAT, 30 Monmouth St, Bath, Avon, BA1 2BW.

## HARD DRIVES FROM HELL

In our hard drive roundup back in issue 27, we scrutinised the Third Coast 32MByte hard drive, priced at £299. Since the review we've encountered some anomalies with the drive that caused us to go back to Third Coast to try and sort out what was going on.

It now seems that Third Coast over-emphasised the drive capacity and underestimated its price. While the 32MByte drive certainly costs £299, the drive

which Third Coast sent to us for review was actually a 52MByte Pulsar drive, selling for £399.99. Very nice it was too, but the 32MByte version includes no extra RAM cache and, rather than running at the unbeatable speeds quoted, actually operates at a speed comparable to those noted for the other drives under review.

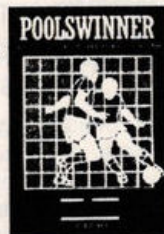
For this reason, we're adjusting the Third Coast 32MByte hard drive's STF rating to a more appropriate 69%.

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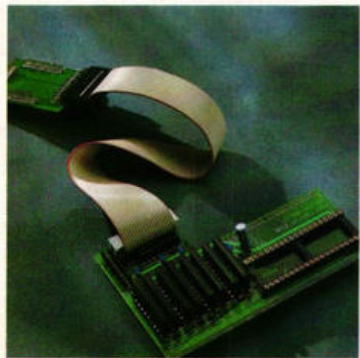
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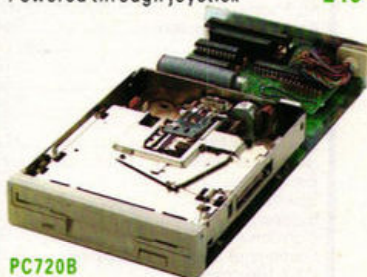
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## THERE'S EVEN MORE NEXT MONTH

You thought this issue was a scorcher? Well, hold on tight for next month's! As part of a sound and vision special, we're giving away two complete packages worth over £100 and a special "Get You Started" supplement. On a second disk to appear on next month's cover, you can expect to find a complete music package and a graphics package, both of which are still on sale at full price. A tutorial supplement then talks you through the exciting range of possibilities for both packages. All of this for only a pound more - isn't that a bargain?

Of course, we've got a spondacious issue to scream about as well. The main feature is all about the ways in which you can use your ST to express yourself. Desktop publishing, graphics, programming and music all enable you to create something exciting, so we're scrutinising these areas and showing you the items you need and the possibilities available. It couldn't be easier to get creative with your ST.

We're also reviewing the biggest and best games due out for Christmas. The Bull-

frogs' much talked about *Populous 2* should be in for review, so you can see how this full-screen god-game lives up to expectations. Then we're getting our teeth into *The Simpsons* to see whether Ocean can turn out a licence with great gameplay for a change. As if that isn't enough, we've given Activision so much grief over their delay in releasing *Deuteros*, the long awaited follow-up to *Millennium 2.2*, that they've finally decided to pull their fingers out and release it next month! So, expect a definitive review next issue.

If you've got an Atari high resolution monitor you already know how good the screen display is, but have you ever tried to run a game? Previously there have been very few commercial games which can run on a high res monitor. However, 1991 has seen more games with mono compatibility released than ever before. Find out what you've been missing next month.

MIDI maestro Dave Clackett reveals how he turns professionally-created music into MIDI sequence files which can be used

with most MIDI instruments. From classical music to pop, Kliri Te Kanawa to Ice T - nothing's sacred to Dave's magic ear.

Believe it or not, we've got a programming genius on the *ST FORMAT* staff. Our new Cover Disk editor, Chris Lloyd, has a fairly dusty skeleton in his closet. After we stapled his hands, feet and hair to a Sainsbury's supermarket trolley and pushed him down a very steep hill, he agreed to spill the beans on a PD demo he wrote in *STOS Basic*. Make the most of his tips and you could be doing the same thing!

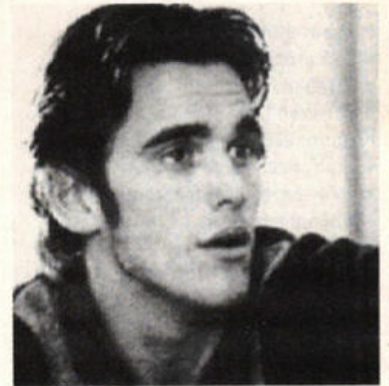
In addition to all these wonderful features, we've also got the usual line-up of riotous regulars. *Armour Geddon*, *Utopia* and *Cybercon 3* are cheated in next month's Gamebusters; we preview the games likely to make it out in 1992; more technical tips are revealed and we start a new section on assembly language tips. It's all there, so make sure you get down to your newsagent on Thursday 12 December for next month's ultra-special issue - or turn to page 130 and guarantee your copy!

## STF STIFLES A TEAR OR TWO

A shadow of gloom has descended on the *ST FORMAT* offices because of the sad news that our long-esteemed and long-serving art editor, Martin Parfitt, is leaving us. Martin, by nature a quiet chap, has decided to retire to the hills of Frome where he can tend his flock of Canadian Wildebeest in peace and tranquility.

It seems that for a long time Martin has found the pressures of experiencing ST computers a large burden, because of their excessive noise and excitement, which upsets the delicate balance of his karma. He has lately been arriving at the office decked out in the headgear below, for what he calls "safety and preservation at work, man. Summa these graphics and FX are too much - I gotta protect my eyes and ears from overload, man."

Martin was last seen heading for the hills, being pursued by a strange man who vaguely resembled the editor of *PC FORMAT*. Future's new mag for PC-contemptible owners. Apparently this weird geezer was muttering something about "PC computers are much less exciting. You'll love 'em!... we need you!" Martin will be sadly missed by all.



● "What are you on?" he used to say...

## THIS IS INTERNATIONAL RESCUE CALLING...

Last month we sent out a cry for help to discover the meaning of a rather strange letter from one of Iceland's many *ST FORMAT* readers. We couldn't understand what he was talking about, but super-smart **Andrew Millar** from **West Lothian** knows the lingo and filled us in on the missing details.

It seems our mystery Icelander is called Addaandi the Great, and he has a dodgy sound ouput from his STE's stereo ports. Addaandi (may we call you "Mr Great?") then goes on to slag

off his local dealer, 'cos he reckons the STE got damaged in transit to Iceland.

Andrew has a return message and wants us to send his name and address to Addaandi, but we can't because Addaandi didn't include his. But yes, Andy, he is genuine! We've got the Strokur stamp to prove it.

So, Addaandi the Great, if you're reading - Góðan daginn, Ég tala íslensku ekki nema dáhlið. Ég skil nyrri tækni orð ekki. Atari ST bók alls enskur og pyzba. Ég viljå aðstoð ef per skrifa.

Við smeygja, Andrew Miller.

Fine. That's that settled then. At least as far as our typesetting technology can manage. Anyone from Easter Island like to chip in? **stf**

## Got trouble finding ST FORMAT?

Still having problems getting hold of *ST FORMAT*? Well, it's like this. Because of our stupendous efficiency, Britain's biggest, best-selling ST magazine has actually been going on sale earlier than the advertised date in some places - which means it's even more likely than before to be whizzed off the shelves before you even get in the newsagent's door.

What can you do? If your newsagent doesn't have a copy on the shelf, interrogate the person standing behind the counter. They might have some more in the back room. If that doesn't work, check one of the bigger newsagents, like John Menzies or WH Smith. If you don't want to subscribe - and see page 130 for some good reasons why you should - fill in the form below and hand it to your newsagent. Every newsagent in the country will be thrilled to reserve you a copy each month - or even deliver it to your door.

Still no luck? Then call the incredibly amenable Annie Gronow in Future's circulation department on 0225 442244 and tell her which of Future's magazines you're after and where you've tried to get hold of it. She can sort out your problems in no time at all!

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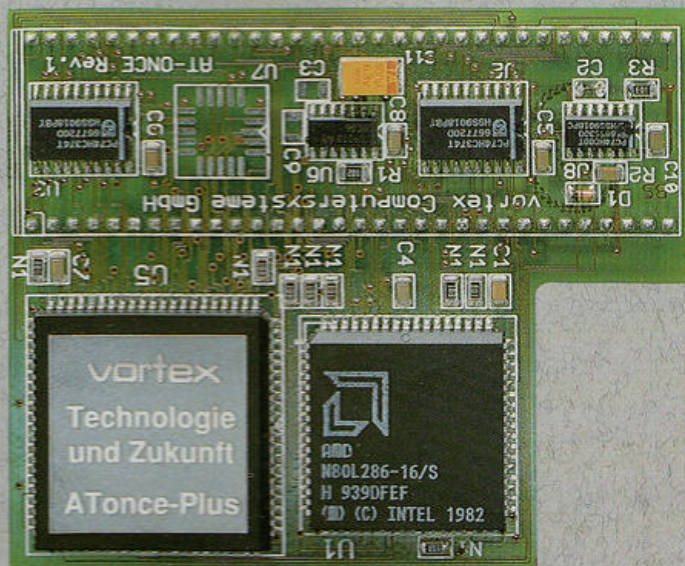
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It is developed and produced in Germany by vortex Computersysteme GmbH.

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- For further information or the update-service, please contact your local Atari dealer or call Compuserve Box # 100015,330

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