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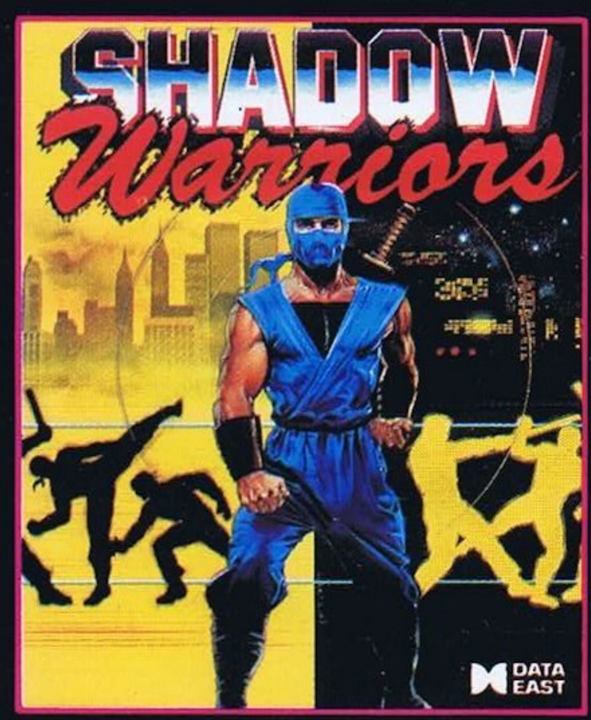

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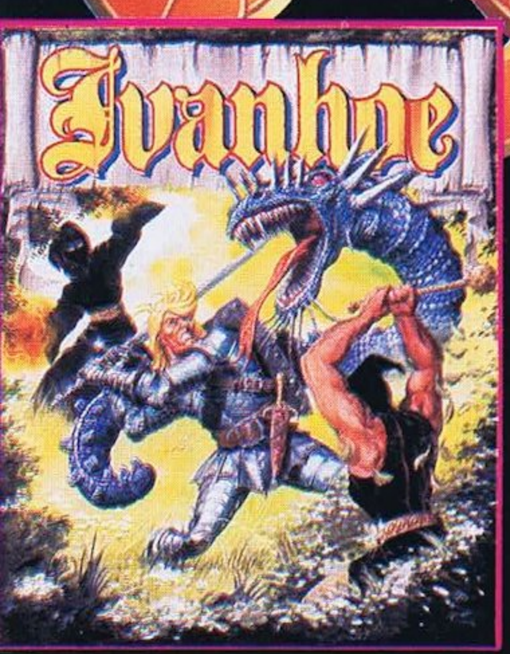

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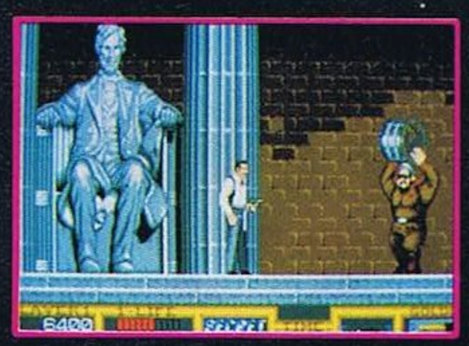

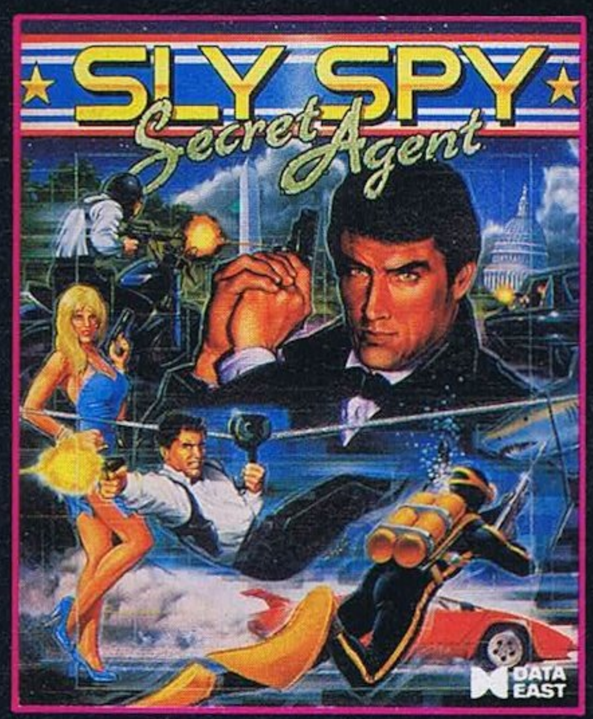

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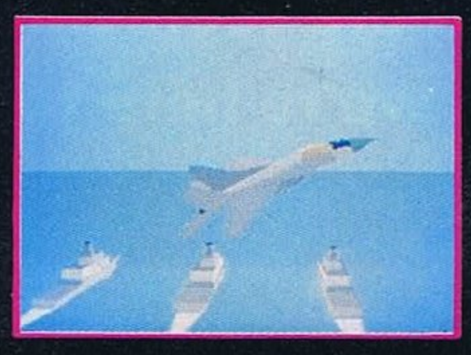

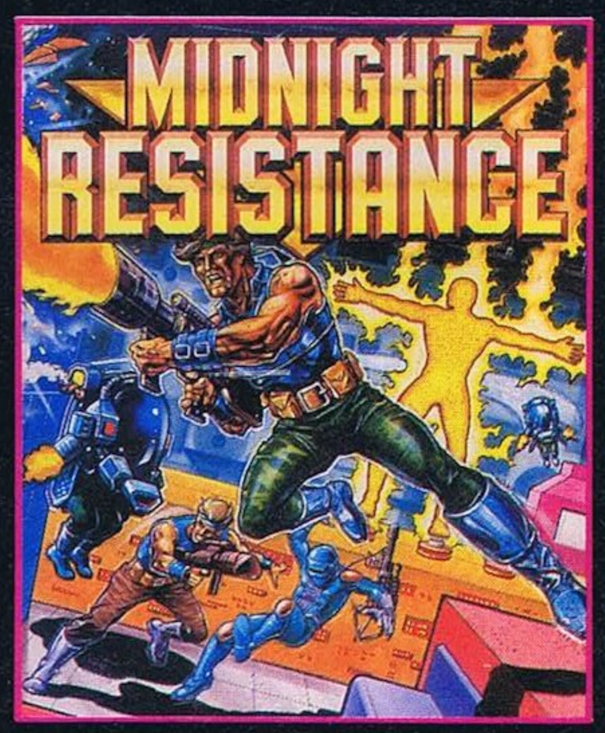

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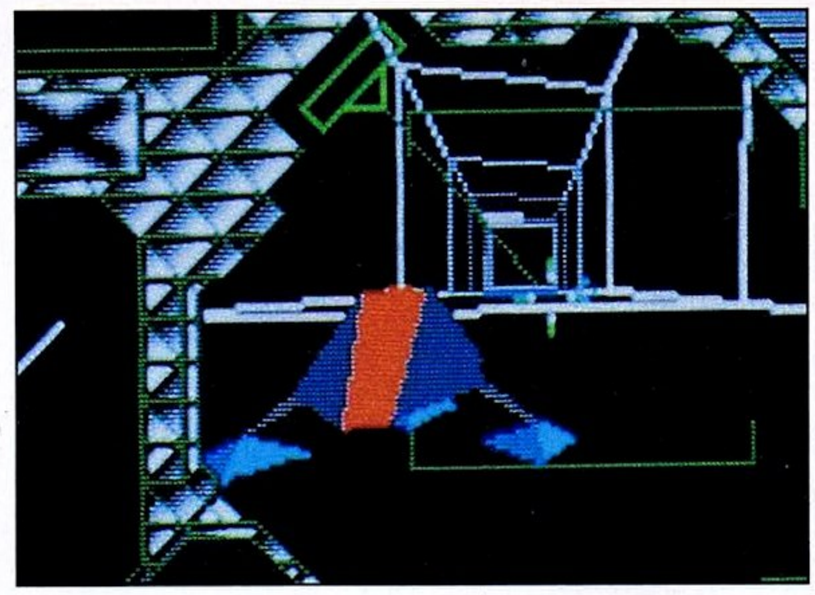

As Magic Fly prepares to take off, discover how it was created ——————18

Sheer bloody frustration!

Even with a machine as clever and powerful as your ST there are bound to be problems sometimes. So whether it's a game you're stuck on *(pages 62-76)* or something more techical *(pages 87-96, 124)*, we're here to help

ST FORMAT

ABC August – December 1989 43,007

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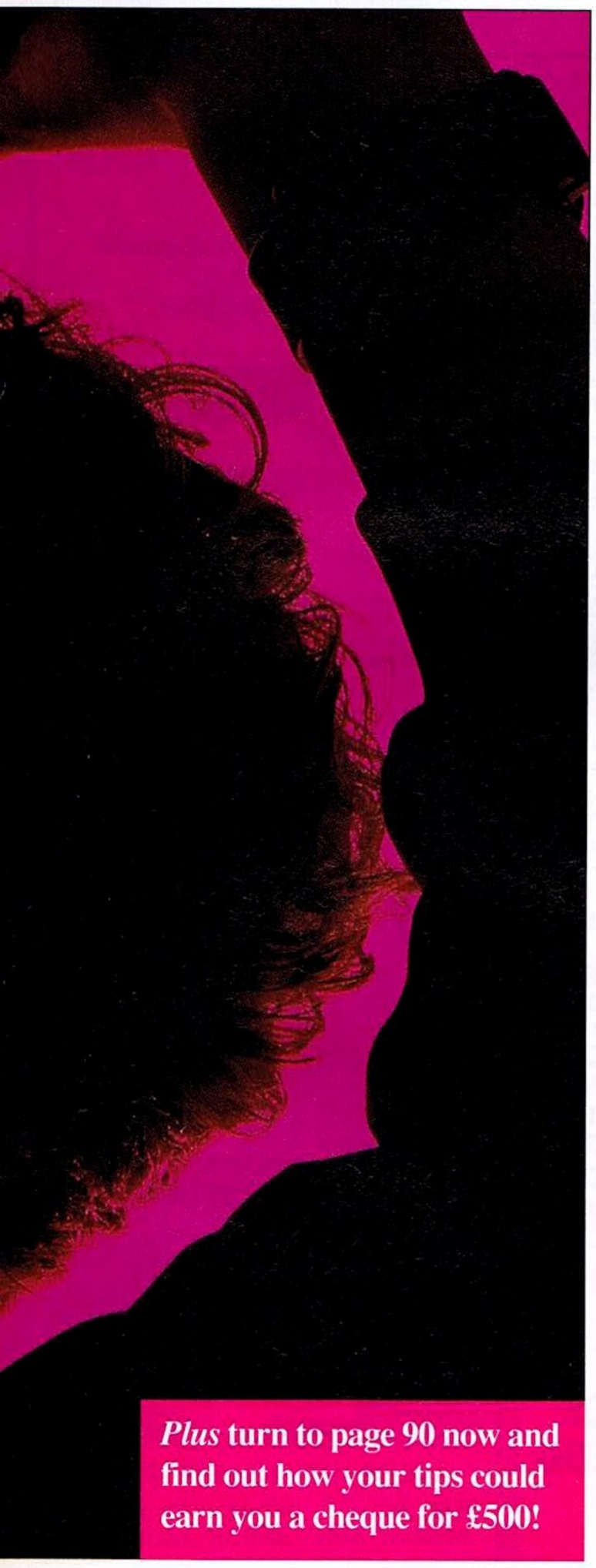

Plus turn to page 90 now and find out how your tips could earn you a cheque for £500!

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IT'S THE WHOLE HEAP OF STUFF THAT MAKES OUR DISK SO BLINKIN' TUFF (SHAKESPEARE)

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While we welcome letters for use in *Desktop* and on our letters pages, we regret we cannot reply to individual enquiries, either by letter or by phone. We're too busy making *ST FORMAT* even scrummier!

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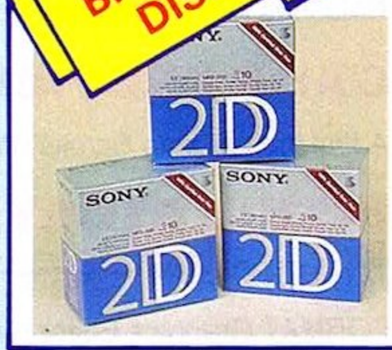

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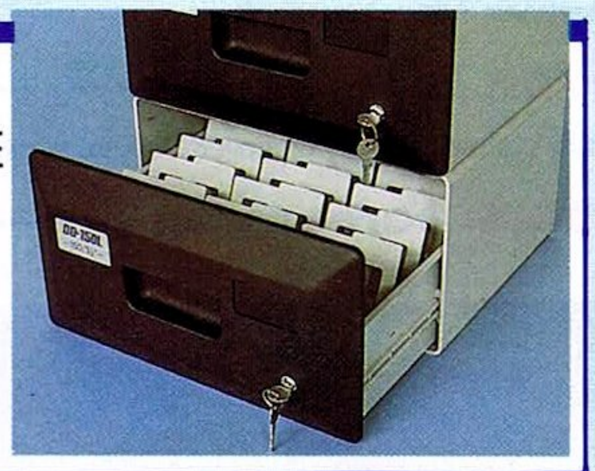

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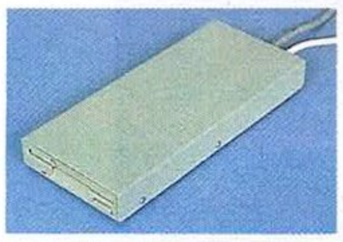

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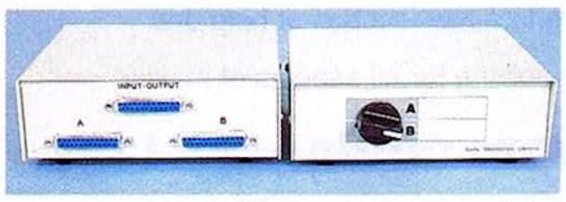

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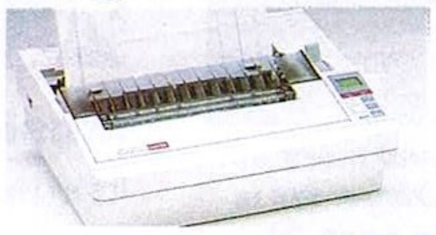

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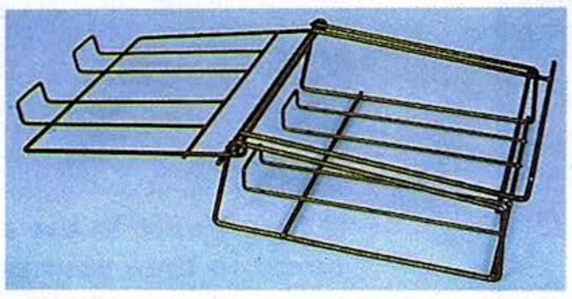

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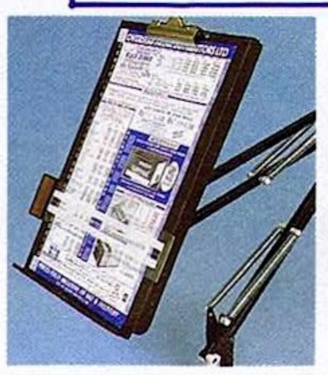

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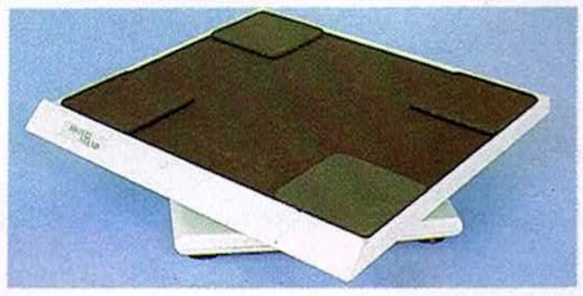

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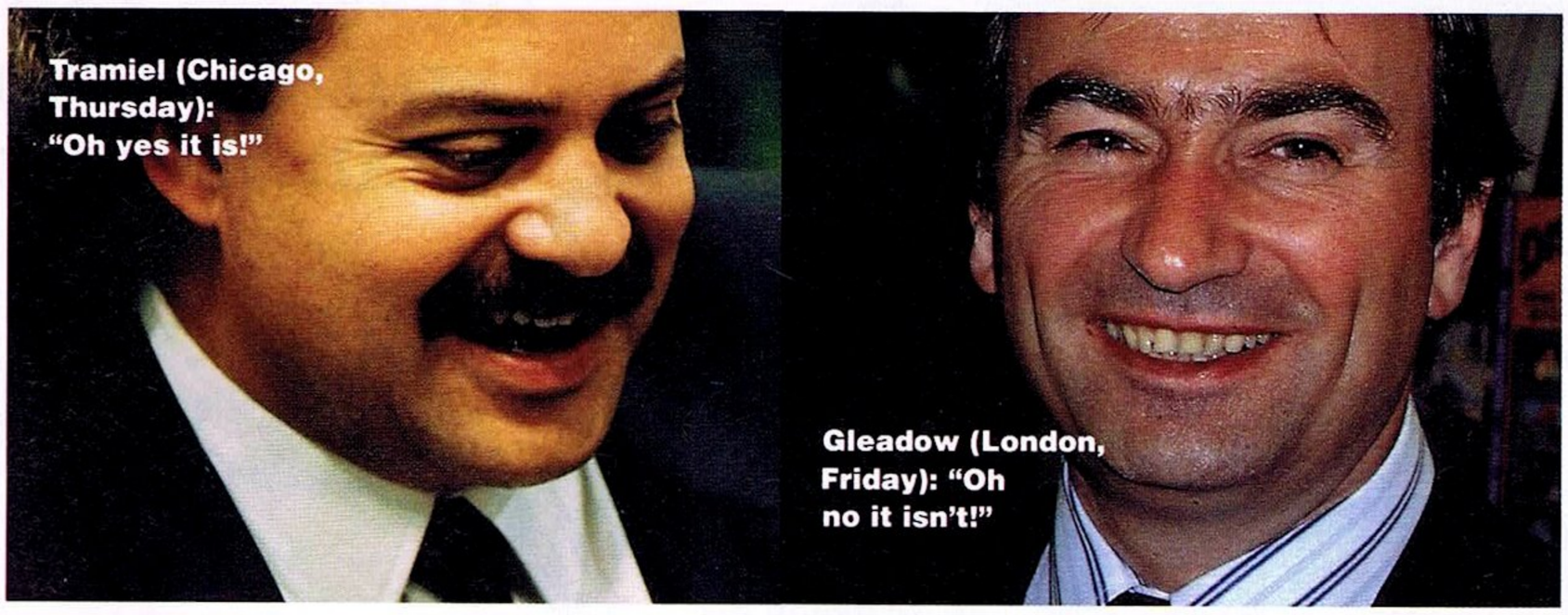

Tramiel (Chicago, Thursday): "Oh yes it is!"

Gleadow (London, Friday): "Oh no it isn't!"

Tramiel tells ST FORMAT: "Yes, we **are** *doing it"*

Atari aims for CD-ST

by Dave Roberts and Steve Carey

While Atari UK Managing Director Bob Gleadow was in London dismissing CD techology as an "immature concept," and stating categorically that there was no prospect of an all-in-one Atari CD-ST, in Chicago the company's president Sam Tramiel was revealing that such a machine is in fact already well on its way to being ready for release.

Speaking at the CES Show – the world's biggest – Tramiel was quite remarkably open about Atari's plans. Asked about an integrated CD and home computer, he said that "we've actually had that idea for the last three or four years." The problem has always been what Tramiel called a "software/hardware chicken-and-egg situation."

Pressed about Atari's plans to bring on the separate CD drive (there are thousands in warehouses waiting for enough software to support a proper release), he said: "We'll probably do both, bring out a low-price CD drive for today's STs and then bring out a CD-within-an-ST as one machine as well. The one machine will be next year, the separate machines might even be next year. We certainly have everything ready and now that the software people are behind CD we can start moving very quickly."

Tramiel estimates that the number of software houses currently working on titles for the CD-ST is about ten, and would be happy to launch with as few as five good titles. Such a machine is likely to prove especially attractive to educational and business users who require vast amounts of memory. CDs with ROM (Read Only Memory: you can't alter what's on them) can hold anything up to 600MBytes of information, compared with just 1,000th of that on a standard floppy disk. And when you tire of using the CD player with your ST, you can use it to play the latest rock music.

Another surprise is Tramiel's intention to bring down the price of the separate CD unit, currently $499 (£399 in this country) to $299, with the British price likely to be under £300. Atari's UK warehouses in Slough are said to contain heaps of the items, with Gleadow joking that the only software currently available for CD on the ST being the Swiss 'phone number and the spare parts list for the Boeing 757. At least, one assumes he was joking.

Perhaps ironically, Gleadow's comments on Atari's plans (or lack of them) for CD technology, which came at the Atari 90s show in London, were linked with a reminder of Tramiel's promise earlier this year that the company was intending to take a more conservative approach to new hardware announcements. Hitherto it has been Atari's habit to go into paroxysms of nods, winks and nudges for months at a time, often over developments which then mysteriously fail to appear.

■ And as we went to press there were unconfirmed rumours that Atari plan to launch a £599 bundle comprising the £399 CD-ROM player with the £299 520STFM. This appears difficult to square with Gleadow's observation at the Atari 90s Show that people make major purchases separately.

Sounds worth a whirl

If last month's *STF* got you keen to get into MIDI music and all that jazz, you may yet have time to make it along to the 1990 British Music Fair at London's Olympia. It's open from the 20th-22nd July and features over 150 exhibitors showing the very latest in musical instruments, MIDI devices and recording equipment. Admission is £5 (adult), £3.50 (under-14s): ☎ 071 730 7852.

Titus gets its hands on Dick

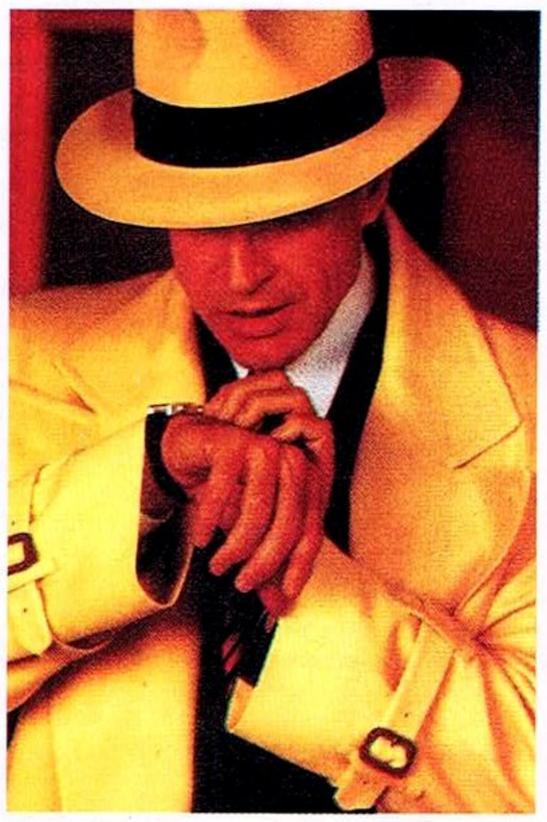
■ French software house Titus have scooped one of 1990's biggest licences, Warren Beatty's *Dick Tracy* movie. The title forms part of a two-year deal signed with Disney that should see Titus releasing 11 education, entertainment and utility titles by Christmas.

■ Expect a game that offers a compendium of common styles, much like Ocean's *Batman* and *Untouchables* conversions of last year. Planned for October release, the game is to include animation taken from the comic strip and digitised two-way wrist radio dialogue.

■ Second best bet of the Titus/Disney bunch is the movie licence *Arachnophobia,* due for cinema release in August and starring Jeff Daniels, Julian Sands and Big Bob, an eight-inch Amazonian Bird-Eater with half inch fangs and no table manners. The ST arcade-style action-style game has you seeking out and destroy Big Bob and his uncouth friends. Great animation and digitised speech are promised.

■ The full list of the Disney software titles signed up by Titus include three games, four utility packages and two education titles. In the utilities section, *Animation Studio,* due for release in November, enables you to create your own Disney-style animations.

■ Titus are best known for *Crazy Cars II* and *Fire and Forget,* and probably best forgotten for *Titan,* a spectacular UK belly-flop. The Disney signing is a major coup, but the cost of the licence means it is one they cannot afford to screw up. ➢

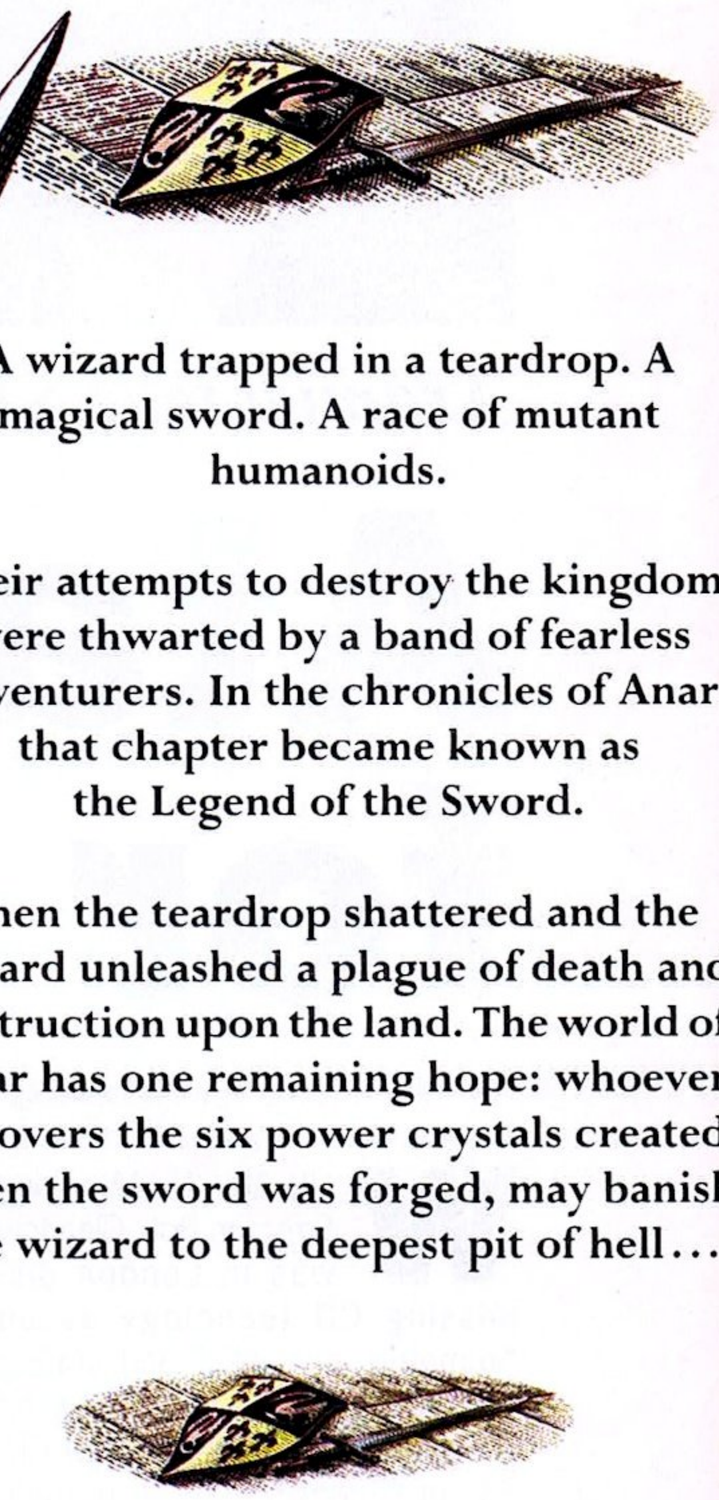

■ You missed the movie, so play the game: Disney's *Dick Tracy* is on his way, courtesy of Titan

£25 FREE SOFTWARE! – Turn to page 111 at once

THE FINAL BATTLE™

the legend of the sword continues

IN THE BEGINNING THERE WAS A SWORD, THEN CAME THE ADVENTURE.



A wizard trapped in a teardrop. A magical sword. A race of mutant humanoids.

Their attempts to destroy the kingdom were thwarted by a band of fearless adventurers. In the chronicles of Anar that chapter became known as the Legend of the Sword.

Then the teardrop shattered and the wizard unleashed a plague of death and destruction upon the land. The world of Anar has one remaining hope: whoever recovers the six power crystals created when the sword was forged, may banish the wizard to the deepest pit of hell...

Final Battle, the sequel to the much-acclaimed Legend of the Sword, features a much larger vocabulary, an expanded inventory and superior graphics. Its highly sophisticated action system allows for weather changes and gives a 3D view of every location – a system at the forefront of contemporary adventuring.

When the teardrop explodes, only the brave can save the land.

PSS

© Mirrorsoft 1990

Screenshots from Amiga version

IRWIN HOUSE, 118 SOUTHWARK STREET, LONDON SE1 0SW. TELEPHONE: 071 928 1454. FAX: 071 583 3494

■ Phwooaarrghhh! If, unlike us, you've got a few grand to spare you could do worse than being the first on your block to shell out on one of Yamaha's Disclavier piano range. You can record and replay your masterpieces on 3.5" floppies, or by using the built-in MIDI connect up with your ST. And it looks pretty swanky too. Only thing is, prices start at £5,399 and don't stop till they hit £12,000. Oh well, we'll just have to make do with secondhand keyboards, won't we Saint? Funny you should mention that, Greavsie: turn to page 109 for the *FORMAT* guide to those very items. Yamaha ☎ 0908 371771.

■ ***ST FORMAT*** **team in mass Yamaha ogle: can we have one to review (and keep)?**

On the right track

With the numbers of MIDI users growing at an ever-accelerating rate, it is surprising there hasn't hitherto been any official UK organisation for them to turn to in the event of difficulties. Step forward the United Kingdom MIDI Association (UKMA), just set up with the approval of the International MIDI Association (IMA).

The man responsible for UKMA's creation is Vic Lennard, who has been running MIDIHelp, an unofficial problem-solving service, for the last year. Lennard has now achieved official recognition from the IMA, and henceforth the UKMA is Britain's official MIDI group.

UKMA acts as a liaison between its members and the American-based IMA and MIDI Manufacturers Association (MMA). This includes helping MIDI users to obtain the complete MIDI or MIDIfile specifications and the setting up of a "problem" database to collate all those annoying MIDIosyncracies.

■ **Vic Lennard heads new UK official MIDI Association**

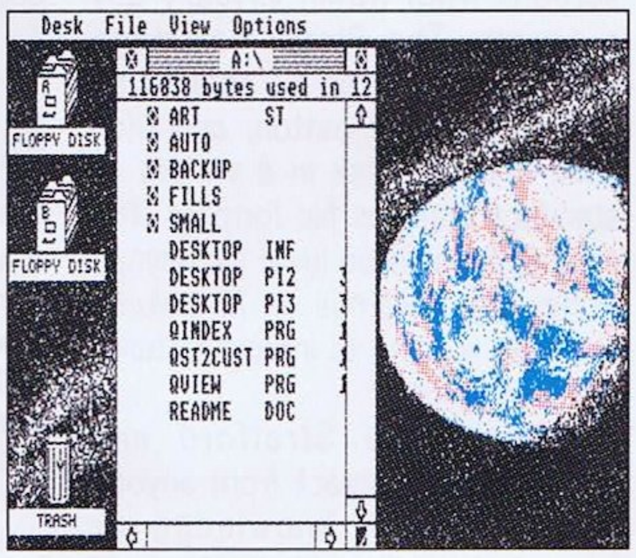
Membership of the new UKMA, which costs £34.50 a year, gets you a monthly newsletter outlining common problems and dealing with individual hints and tips; free membership of the Music Network bulletin board; and discounts on the MIDI specification book and all Hal Leonard MIDI-related publications. UKMA ☎ 081 368 3667.

Meanwhile your MIDI problems are solved in our own music tips section on page 114.

GEM gets quick on the draw

Quick ST II, the GEM accelerator from Branch Always Software, is now available exclusively from Advantage at £19.95. The package is a suite of five programs designed to enhance the range and speed of any GEM-based program, by replacing certain TOS and GEM functions with faster, rewritten ones. *Quick ST II,* which runs on STs, Megas and STEs and supports all versions of TOS from 1.0 to 1.6, works by speeding up all GEM drawing operations like text printing, scrolling, window and dialog boxes and desktop redraws.

Other programs in the *Quick ST II* collection include a Desktop Customizer for installing backgrounds of your own design; a drawing program called Art ST; Quick View, a fast file viewer to replace the standard SHOW/PRINT/CANCEL dialog box; and Quick Index, a benchmarking program used to check the speed of various areas of your ST's operations. ☎ 0242 224340.



■ **Put extra zip (and prettiness) into all your GEM programs with *Quick II***

Harlekin gets colour option

■ The colour version of *Harlekin,* the multi-purpose accessory we told you about last month, is now available at the same price, £49.95, from HiSoft ☎ 0525 718181.

■ Turn to page 126, where you can save a very handy £10 on *Harlekin,* colour or mono!

■ And then turn to page 95 for a *Harlekin* hints and tips feature, where you'll find advice from Andreas Ramos, ST guru, author of *Your Second Manual* and one of the creators of this excellent utility.

■ **That nice Mr Ramos offers advice on the new colour *Harlekin* – see page 95**

Chemistry set for a sequel

After the success of *E-Motion* (see *STF 9),* US Gold plan a follow-up for September. While *E-Motion* was based on chemistry – link molecular structures and all that – *Vaccine* explores the wacky world of viruses.

The game features a 3D rotating environment in which you control the cells in a body. By firing green paint at red balls extra weaponry icons appear for you to collect.

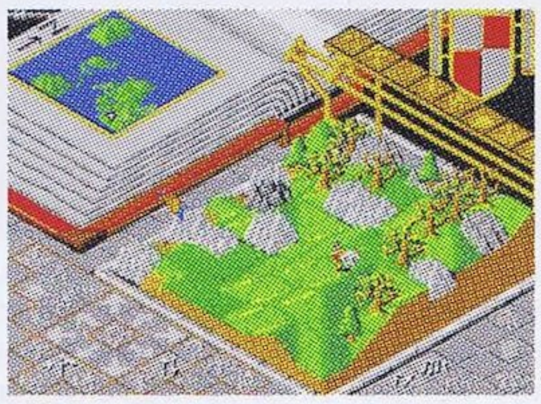
Assembly Line, the team who programmed the original *E-Motion,* are hard at work on the sequel even as you read this. Aren't you, guys?

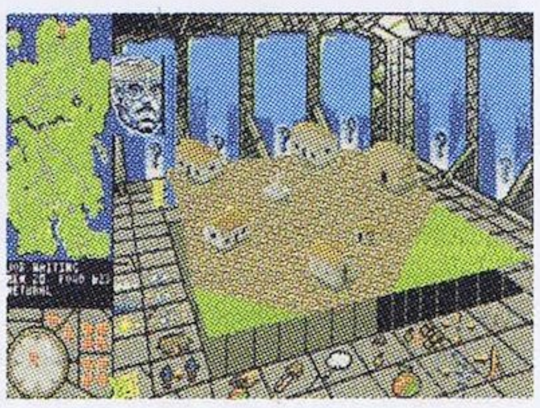
Populous II is coming

Bullfrog Software have revealed they are after all planning a sequel to *Populous,* the biggest game of last year. "We're doing a complete and utter rewrite," Bullfrog boss Peter Molyneux told *FORMAT:* "We're not just doing a *Promised Lands*-type set of extra landscapes. There'll be a whole load of new effects – tidal waves, thunderbolts, plagues and pestilence.

"As well as the good and evil tribes there'll be the 'Good or evil, I don't really care who I worship' tribe, and you'll have to race to win them over. We'll be doing a lot more graphical effects, so it'll look nicer too."

Molyneux also let slip that Bullfrog is beginning work on another, brand new project. He calls it an *"Uhhh!"* game, whatever that means, and describes it as "a cross between *Commando* and *Laser Squad,* but also featuring some of the real-world elements of *Powermonger"* (see page 86).





■ ***Populous*** **(above, left) was the surprise monster smash of 1989 for Bullfrog. Will *Powermonger* (above, right) emulate that success? We preview the ST version exclusively on page 80**

US education specialists Brumleve (☎ 0101 217 337 1937) have increased prices on their repackaged *Kidpublisher Professional* (see the demo on *STF Cover Disk 11)* and *Kidpainter* programs to $35 US dollars each, while a simpler program, *Super Kidgrid* remains at $25 US dollars.

Kidpublisher is available in *ST FORMAT* Special Offers (page 126) for £29.99.

SHORT STORIES

■ *Tunemaker* and *Rhythm Kit* are new educational MIDI programs for composing, replaying and printing music. Each is £19.95, though the price rises in September. Impac also offer C-Lab *Notator* and Steinberg *Pro-24* Resource Kits at £43 each, providing musical examples, exercises, student/teacher information and unpublished tips. Impac ☎ 0723 862617...

■ *ProShare ST*, the stock market program, has been made compatible with the Microtext teletext adaptor, so you can now enter share prices automatically – even to the extent of downloading multiple files from different TV channels. The price remains at £49.95, with a free upgrade for existing users: ☎ 0937 61145...

■ Activision are slaving away at *Deuteros*, a sequel to *Millennium 2.2* due for release next month (September). The team that brought you the original, designer Ian Bird and graphics man Jai Redman, aim to keep much of the atmosphere of the original. And guess what? We're promised *more* animation, *more* galaxies and *more* twisted puzzles. No, *really?*...

■ Ocean have teamed up with adventure programmers Level 9 to produce *Billy the Kid*, a two-player action/strategy game set in the Wild West. The game includes gunfights, bank robberies, a train heist, card sharps and the traditional bar room brawl. It also features an authentic scrolling map of Lincoln County, West of Pecos, and includes digitised sound effects, half an hour of MIDI music plus two-way simultaneous action via linked STs...

■ *Sorcerer's Dungeon* is a new ST programming, roleplaying and comms BBS run by Chris Hopewell. Give it a whirl: ☎ 0636 815094 (9pm-7am V21, V22, V23).

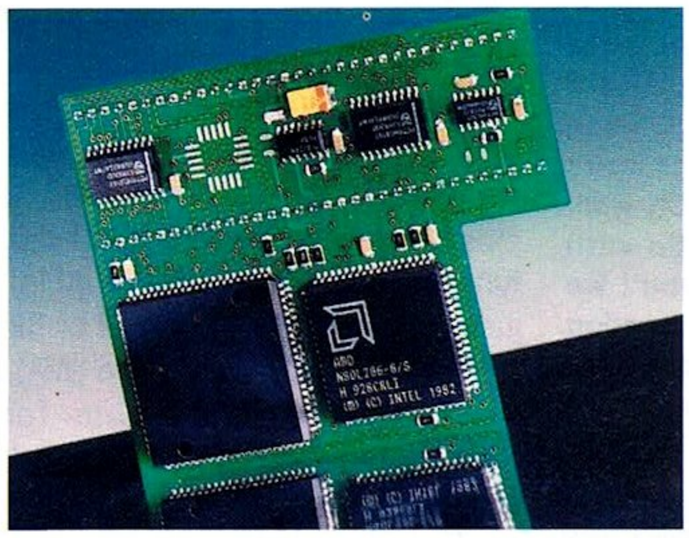
■ MichTron have re-released five education packages at a mere £3.99 each: ☎ 0726 69692...

■ The bad news: Children's Learning Software no longer exists. The good news: their *Let's Spell...* series is now under the Softstuff banner. In addition to the highly successful *Let's Spell at the Shops* and its French language-tutor counterpart, Softstuff have released a companion package – *Let's Spell at Home*. Control is via the mouse and it contains digitised speech. Each *Let's Spell* package costs £19.95 and you can buy direct from Softstuff or from most retail outlets: ☎ 0732 770234...

■ PDQ-games claim to have more games in their catalogue than any other PD library. Competitively priced programs include the Budgie range of PD games and a large selection of educational games. A full catalogue is available for just an SAE from PO Box 38, Eastleigh, Hampshire, SO5 5WR.

Help AT home

Want to turn your ST into an IBM AT-compatible? Many ST users are forced to spend their days working with boring PCs, and while it's impossible to find any way of converting them to run ST software, there's a growing demand for devices that can temporarily convert an ST into a PC so you can take work home with you and do it on the machine you love. The latest is the £199 ATonce system from Vortex. Consisting of an 80286 CPU, Gate-Array and emulation software, the device can convert any Mega, ST or STE into an 8MHz AT-compatible computer with a Norton Factor of 6.5.



■ **So your PC can't do ST work? OK, get your ST to pretend it's a PC instead!**

Fitted in a 1040, the ATonce makes 704K memory available for DOS use. With larger systems, you can use all internal memory in Extended/Expand-ed Mode as a RAM disk.

ATonce administers up to 24 GEMDOS partitions with a maximum of 32MBytes, and DOS can be started from any of these or booted from floppy.

ATonce, from Silica/SDL, costs £199 and comes with user guide and mounting instructions. Silica ☎ 081 309 1111.

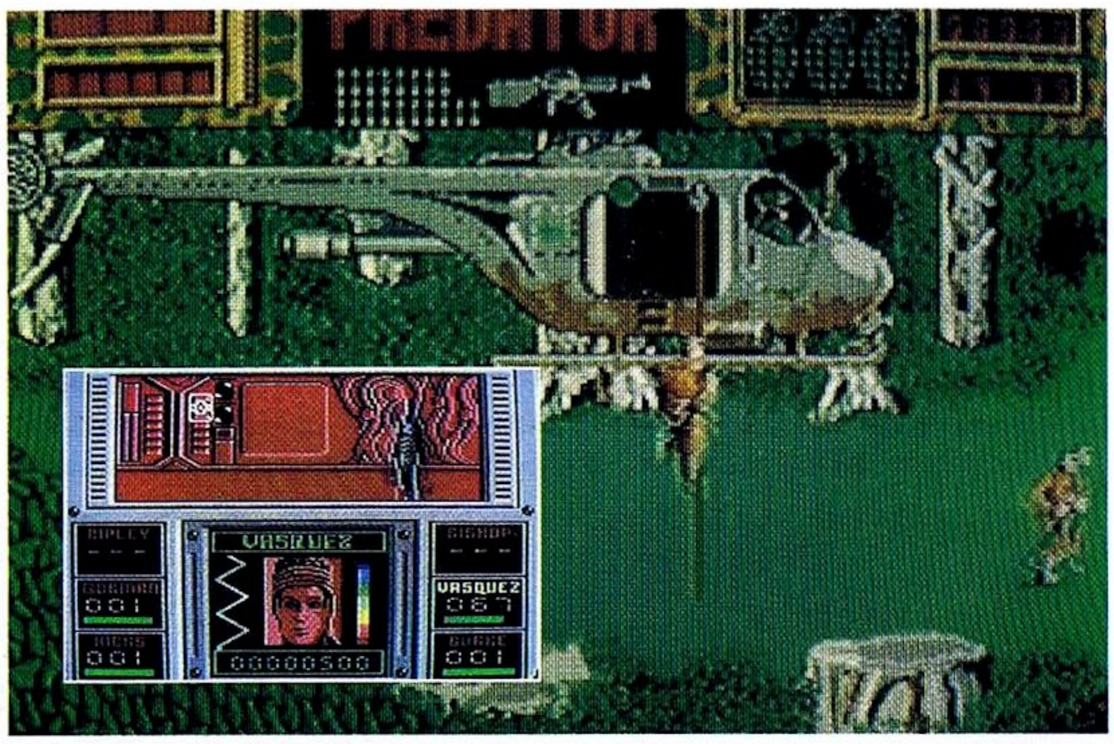
Make an ST grab for it

A cartridge is being developed to offer ST owners the chance to grab screens from within virtually any program. The Picnik cartridge enables you to grab ST screens by hitting the reset button, and then save them to disk in a variety of standard graphics file formats. The cartridge would be ideal for anyone using, say, *Calamus* or *Timeworks DTP* and wanting to import pictures of ST screens.

Developers Stratford and Duplain invite contact from anyone with specialist knowledge or interested in full-scale development of the Picknik ☎ 0634 684770.

A new 400dpi handheld scanner has been launched by PML, together with a completely rewritten version of the Daatascan software. The £200 scanner, also being sold with *Timeworks Desktop Publisher* (normally more than £100 alone) for just £230, is aimed at the professional rather than the home user, who is likely to find the 200dpi offered by the Daatascan Personal scanner (£170) quite sufficient. At the top end of the market, PML intend to announce an A4 device soon, which they hope to price at about £450. "We want to be able to cater for anyone who uses an ST and needs a scanner," said PML boss Ab Pandaal, "from the home user right up to the professional – and everyone in between!" PML ☎ 0234 855666.

Bizarre wars



Activision have secured rights to two of the cinema's nastiest creatures, from the films *Aliens* and *Predator*. The game, with the imaginative title of *Aliens vs Predator*, sets the (literally) stomach-churning nasty that burst from John Hurt's tum against the weirdo that gave Arnie Schwarzenegger so much agg. With Twentieth Century Fox releasing film sequels to both *Predator* and *Aliens* early next year, the game should be big, big, big.

And it had better be, or *Activision will want to know the reason why.*

Look! How to do DTP

■ Network News Services, who created the *Proxima* Desktop Publishing package reviewed at length in this issue (page 102), are working on a series of tutorial videos covering all aspects of home-based professional DTP, printing and publishing.

■ The videos aim to teach newcomers how to get the best from their DTP setup by featuring professional users demonstrating their skills and the ways they go about their business.

■ NNS feel this is the quickest way for new users to learn the problems and solutions that arise in using DTP for a living. No price has yet been set for the videos, but NNS estimate they should sell for around £40. Network News Services ☎ 0375 859103.

So You Wanna Be a Hero...

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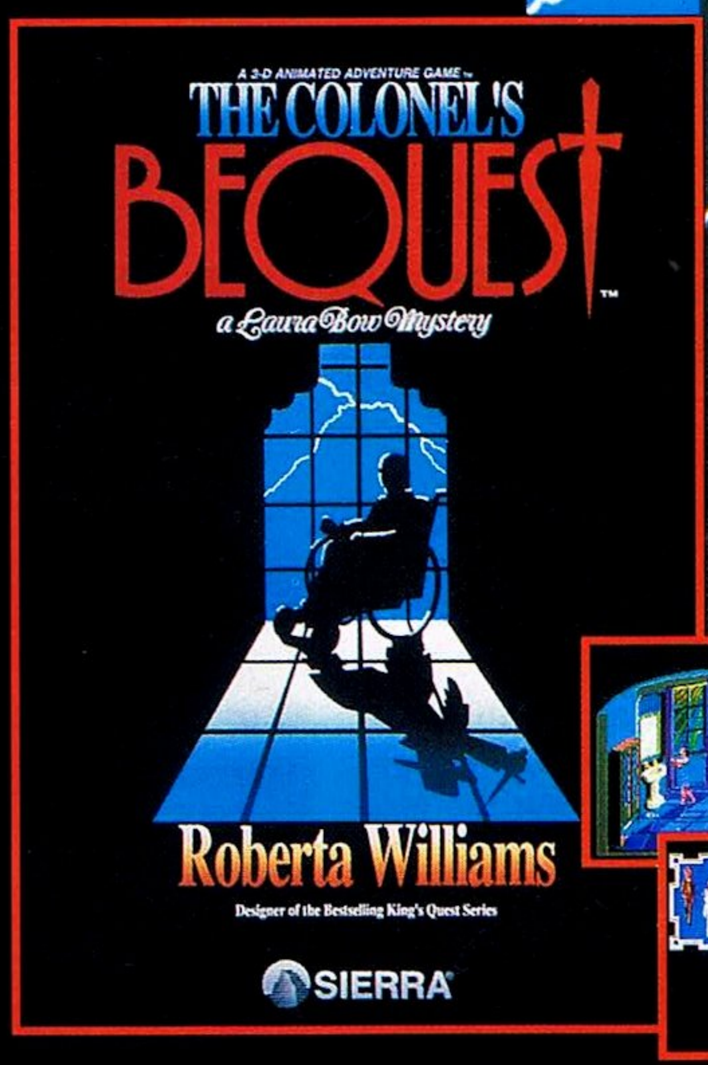

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Sierra Consumer Hotline: (0734) 310003

Don Maple previews the shape of screens to come!

Reporting from the hot bed of activity in Europe –

GEM programs run from AUTO

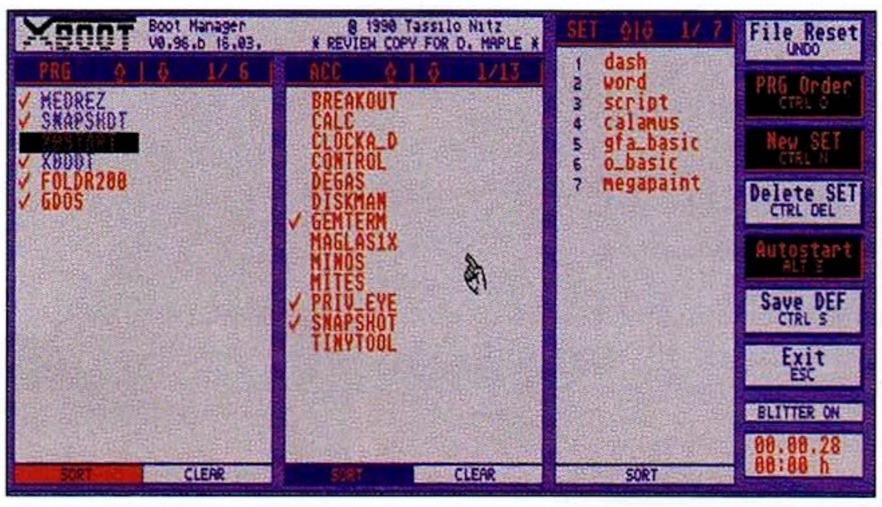
STE owners are smug about their ability to run GEM programs from the AUTO folder. Now, with the help of *Xboot,* STs of any generation can do the same. Actually, your GEM programs can be anywhere and *still* autostart!

Xboot, a GEM program itself, is installed as the first in the AUTO folder. Following a reset it can change the order of, as well as enable/disable, other AUTO programs and accessories. A reset proof time/date and the selection of one of several predefined DESKTOP.INF files are also provided.

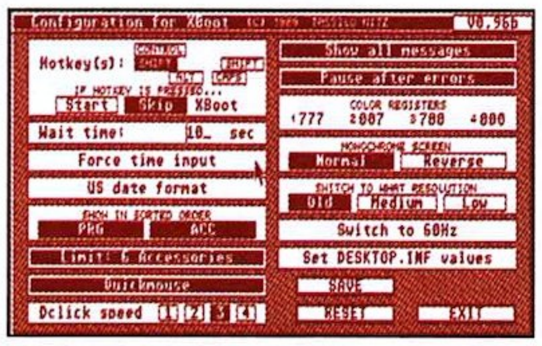
The so-called SET files are central to the working of *Xboot.* Users create as many of these as needed. Each SET is a collection of commands which comprise a mini-language to COPY, KILL, EXEC or perform a number of other functions.

Finally, *Xboot* can be further customised with a supplied configuration program. This, among others, provides hotkeys, quickmouse and a switch to 60Hz.

In Germany *Xboot* costs DM 49 (£19) and TN Software are actively searching for a British distributor: TN Software, Tassilo Nitz, Krablerstr. 24, 4300 Essen 12, F.R. Germany.



■ **Catching up with the STE: using *Xboot* all STs can now run GEM programs from the AUTO folder**



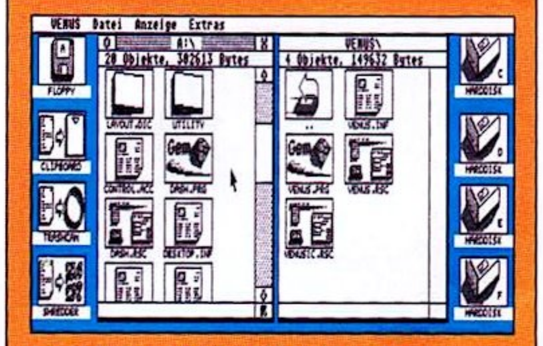
■ ***Xboot* configuration screen: offering hotkeys and quickmouse**

SHAREWARE FROM EUROPE

Gemini is a shareware program offering an alternative to the familiar Desktop. As its name implies it consists of two parts: Mupfel, a full-blown character-based shell, and Venus, a Mac-like graphic user interface. The latter provides for redefinition of icons for each individual file extension and, if GDOS is installed, multiple fonts.

Gemini needs TOS 1.2 or higher, and 1MByte of RAM to realise its full potential. The new version 1.2 in English should be available as you read this.

To test the program send a formatted double-sided disk, a SAE and two international reply coupons to Gereon Steffens/Stefan Eissing, Elsterweg 8, 5000 Kiln 90, F.R. Germany. The authors have spent almost two years working on this program and request regular users to send 50 DM (£20).



■ **A busy Mac-like Desktop at your disposal with *Gemini***

ATARI ABROAD: NEWS IN BRIEF

■ West Berlin based Tommy Software – a frequent visitor on these pages – are determined to penetrate the East German market. In addition to offering a Junior version of their mega-hit *MegaPaint* (see *STF 8)* for only DM 99 (£35), they are also legalising all pirate copies of any Tommy software in East Germany. This "amnesty" coincides with the monetary union of the two Germanies and will last throughout the months of July, August and September. Tommy Software ☎ 01049 30621 4063.

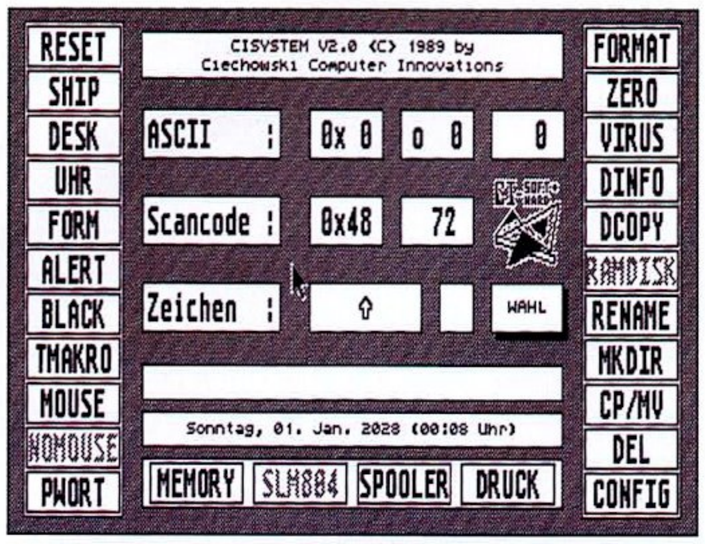
■ The fast and furious *Tempus* editor from CCD now runs on large screen monitors. Even though these megapixel displays are not common in the UK, they're a standard item in any professional German ST set-up. The black and white monitors handle displays of up to 1,600x1,200 pixels, making editing much easier with large amounts of visible text. CCD ☎ 01049 6123 1638.

Cisystem does it all

Cisystem, a multi-function accessory, is the latest in a long line of ST programs by Ciechowski Computer Innovations. In addition to common features such as clock, mouse accelerator and screen blanking, *Cisystem* contains a few unusual features such as keyboard macros and reset resistant RAM disk. But the real power comes with functions like DESK, which changes your Desktop by installing a new DESKTOP.INF file without rebooting – you can even have several with different names!

FORM and ALERT activate rewritten dialog and alert boxes. FORMAT starts with the last track and can be interrupted with Esc if you change your mind – preserving the vital track 0! Finally, paranoids can password protect their computers from intruders.

Cisystem costs DM 120 (£45) and CCI are looking for a British distributor: CCI, Ober-Saulheimer Str. 18, 6501 Wirrstadt, F.R. Germany ☎ 01049-6732-7354.



■ **Boasting a truckload of accessories, *Cisystem* even enables you to alter your Desktop – without rebooting!**

HARLEKIN

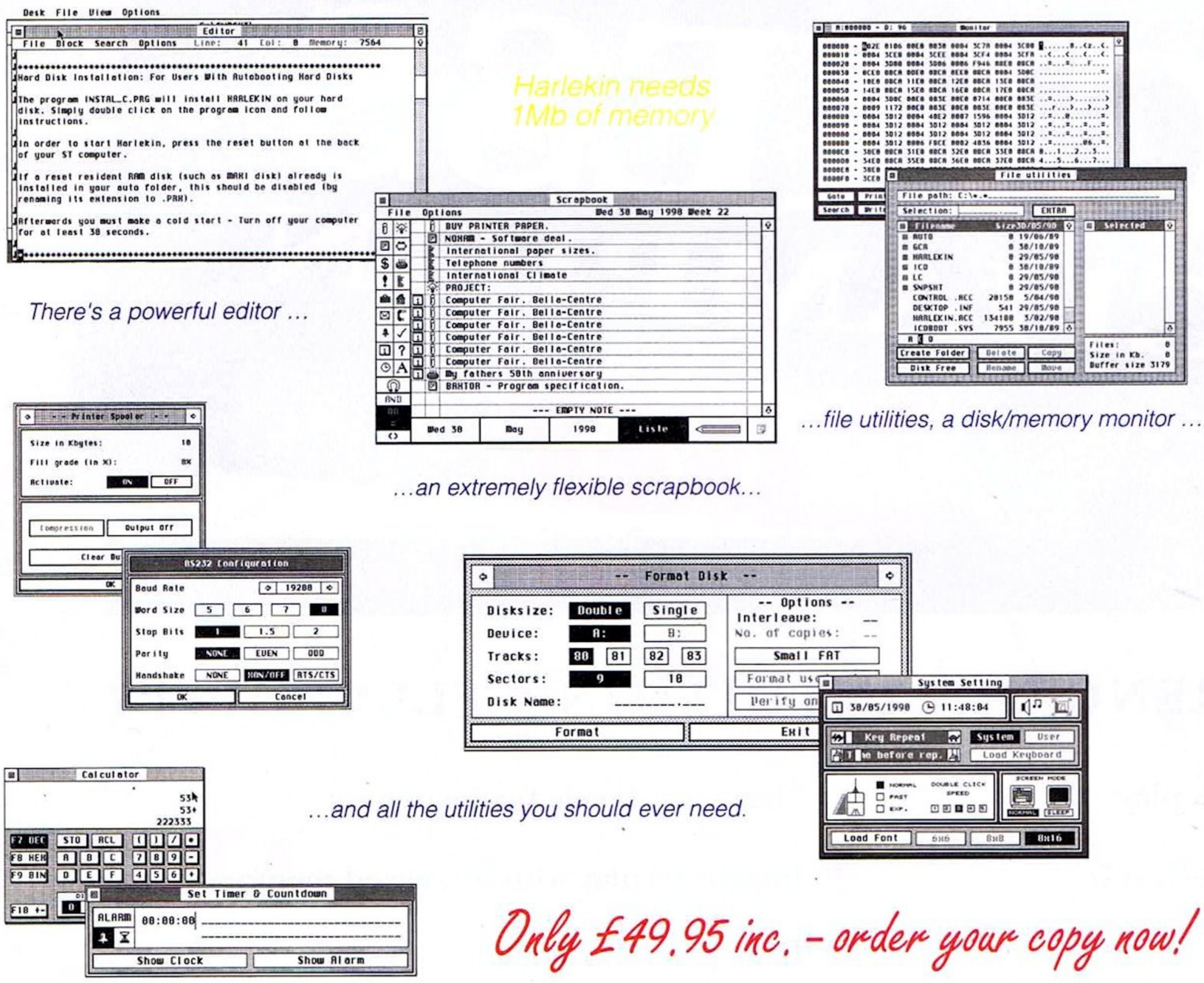
- the program of possibilities

Harlekin is a new concept in desk accessories for the Atari ST - all the desk accessories you're ever likely to need, in one program

Harlekin is actually 18 different programs in one and, since it is RAM-resident, it is always there when you need it

Harlekin comprises a Wordprocessor, a Scrapbook, a Disk editor, a Terminal program, a Calendar, ASCII table, RAMdisk, Printer Spooler and much, much more

and now it works in COLOUR too!



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Harlekin is just one product from our growing software range for the Atari ST. Other titles include: Lattice C 5 (£149), KnifeST (£29.95), Spectre GCR (£379), DevpacST (£59.95), HiSoft BASIC (£79.95), Power BASIC (£49.95), HiSoft C (£49.95), FTL Modula-2 (£99.95), CRAFT (£49.95), HiSoft FORTH (£39.95), TurboST 1.8 (£34.95), Tempus 2 (£39.95), WERCS (£29.95), ProFlight (£39.95) & more.

All software should be available from your local dealer. In case of difficulty, you can order directly from HiSoft by phone, using your Access or Visa card or by mail, using Access, Visa, a cheque or postal orders. Our prices include VAT and shipping within the UK.

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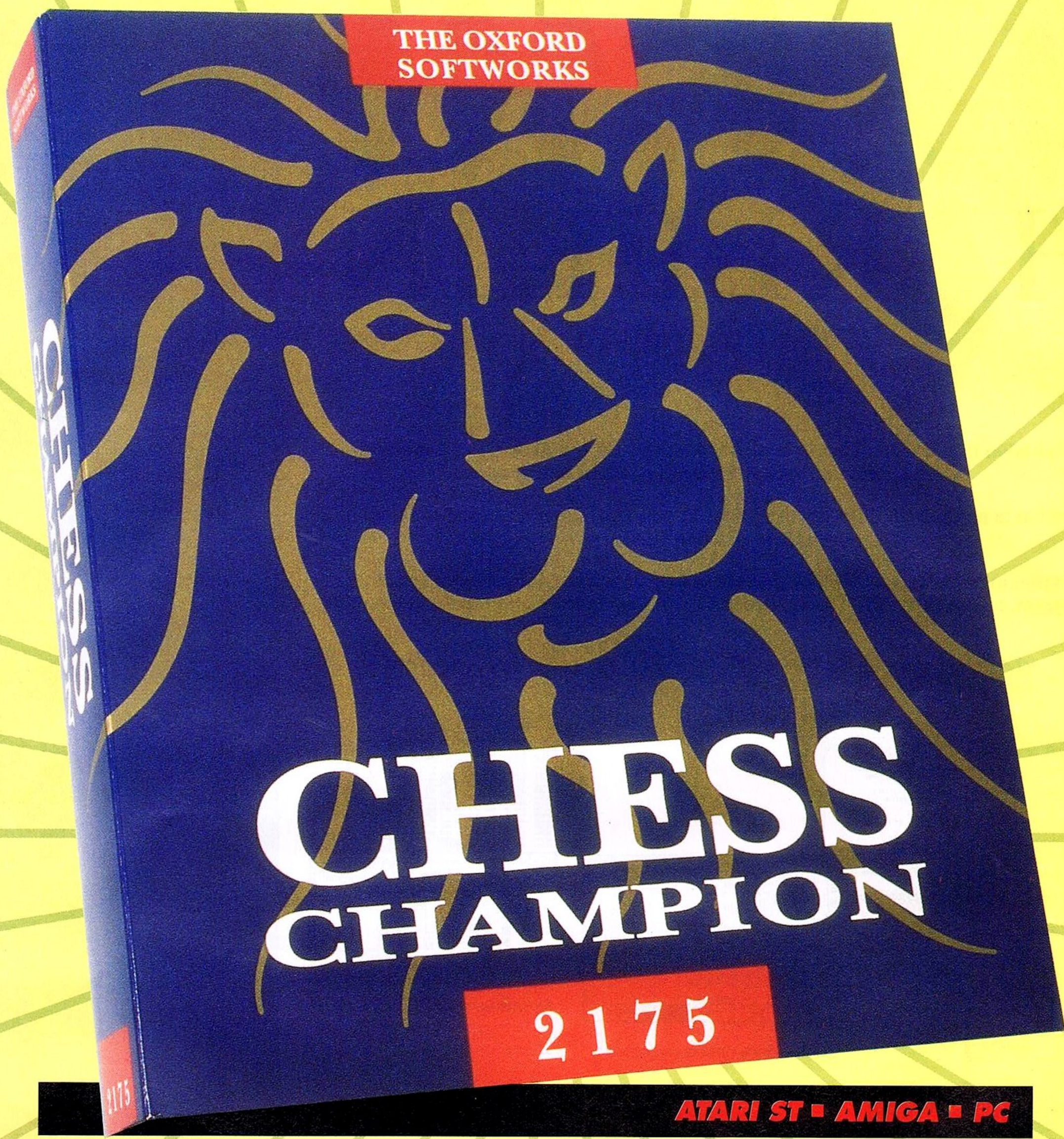

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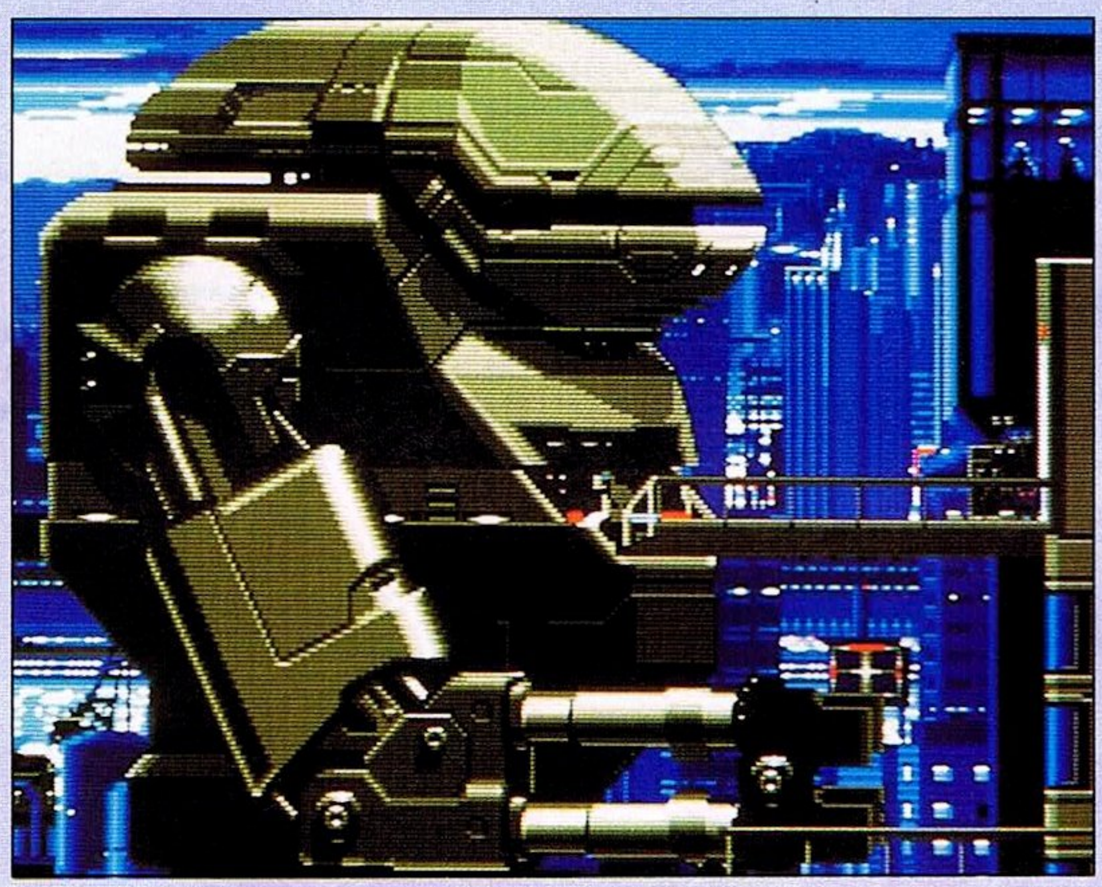
previews

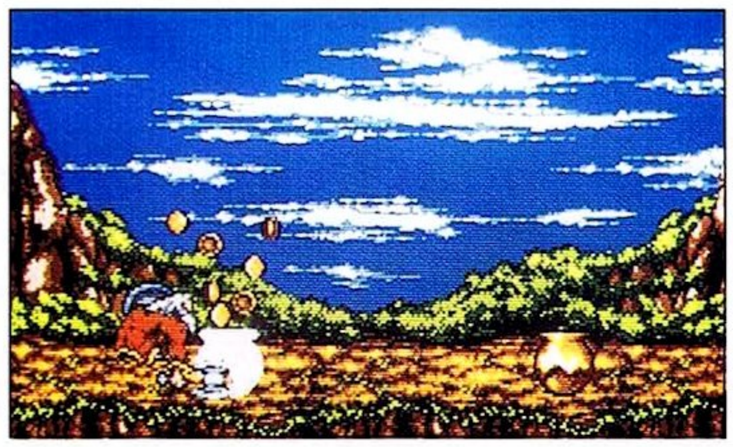
The run up to the autumn '90 season sees the strongest ever line-up of ST games, with hundreds of titles vying for your attention. Mark Higham picks a few potential winners

■ MURDER! (US Gold)
Suddenly Agatha Christie-style murder games are where it's at: CRL have just released *Herewith the Clues*, and now US Gold are about to join in. Get those grey cells working and solve 3.5 million murders (*how* many? That's not murder, that's genocide!) by sifting through interviews, evidence and red herrings.

METAL MASTERS
Infogrames



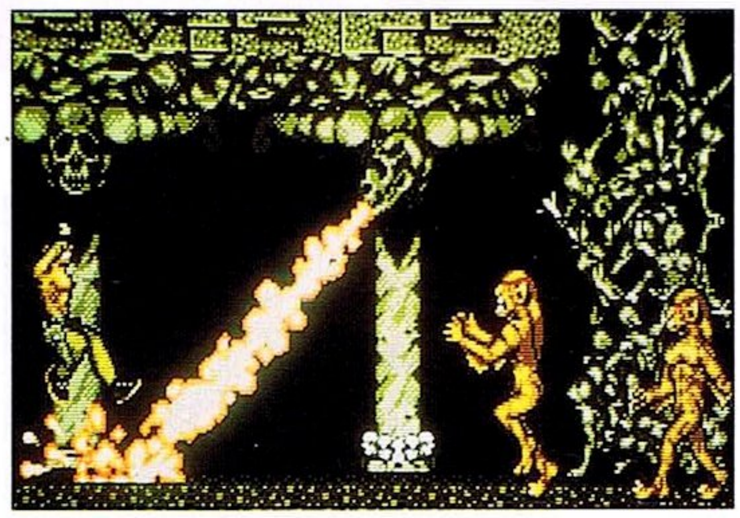
Aciiiid! If we've read the scenario right, this one has you controlling a robot in some kind of Automaton Olympics, with events including Destroy the Concrete Wall, Make the Pendulum Swing As Fast As You Can and, eventually, Fight the Supreme Robot. Sounds well weird – full report when we've finished Making the Pendulum Swing As Fast As We Can.

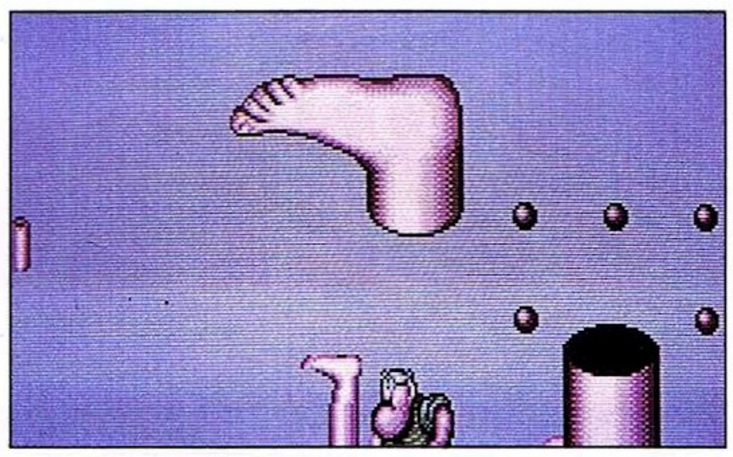


■ SATAN (Dinamic)
This month sees the release of the so-so AMC (reviewed on page 43), Dinamic's new shoot-'em-up, and before the ink is even dry they're bringing out a follow-up called *Satan*, featuring four directional scrolling and massive enemies. Dinamic have some quite astonishingly indifferent releases to their name. Question is, can they turn it all around with this one?

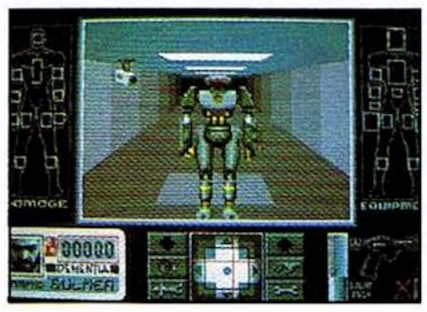
■ LIFE AND DEATH (Mindscape)
(Above) Bloody hell! Welcome to the first snuff ST game, as you play an NHS surgeon in this op simulator. Very reassuring: "Did you know this is my first operation?" We've already seen very promising demos, but find out how realistic it is next month. Oh dear, I do feel all funny. Pass the sick bag, Alice.

GOLD OF THE AZTECS (US Gold/SSI)
(Below) This is a surprise: what was the last game from SSI *(Star Command, Red Lightning, Demon's Winter)* that had you working your way through horizontally-scrolling levels battling against monsters? Could surprise everyone.





■ MONTY PYTHON (Virgin Mastertronic)
As the 20th anniversary looms, and the BBC plan to screen *The Complete Works of Brian* for the 92nd time, Virgin are clambering aboard the bandwagon in plenty of time for Christmas, when anything but anything with a name your granny would recognise shifts by the skipfull. Direct Gumby through a host of surreal levels, in a bid to collect 16 cans of Spam. We've seen demos, and the graphics have captured the atmosphere of the BBC series, but do look out for those smartarses repeating dialogue from the series for hours at a time. ➢

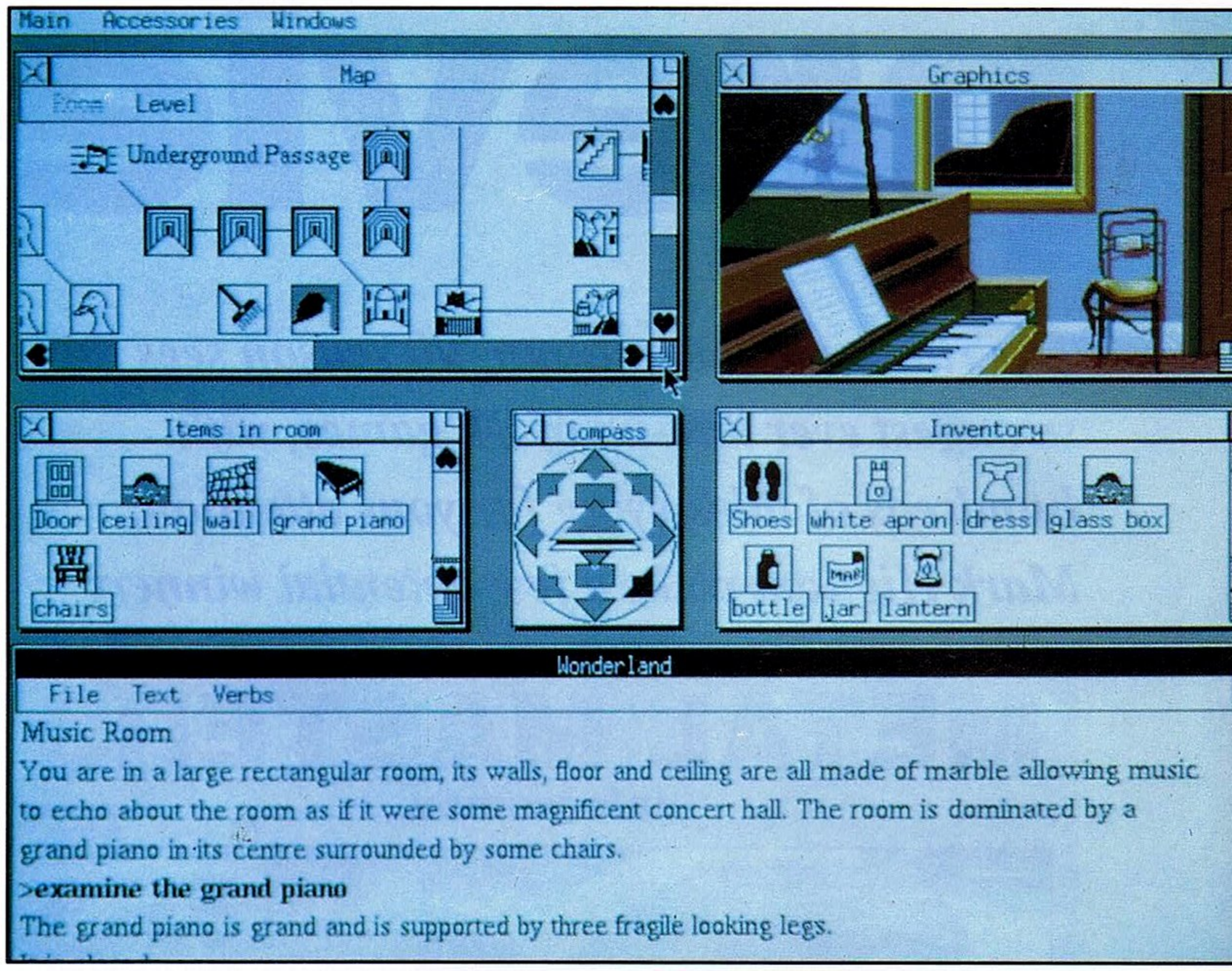


■ CORPORATION (Core)
With *Rick Dangerous, Action Fighter* and *Dynamite Dux* already on their collective CV, Core are striking out on their own. *Corporation* is a futuristic 3D challenge in which you explore a maze of corridors in search of, er, items (unspecified). It looks a good deal like the rather splendid *Resolution 101* – hardly surprising, perhaps, because the graphics are by Kevin Bulmer, who worked on the Millennium corker.

No doubt you remember why you went off text-based adventures: behold, a series of boring, yawn-inducing, often semi-literate descriptive sentences and the occasional cursor. Left to your own devices you were expected to outwit a witless inscrutable parser and come up with a recognisable command – something like "Go North," or "Pick Up Item." Gradually, inevitably, the ST's graphical ability forced change, and more and more pictures were introduced to liven up the action. Eventually the arcade adventure evolved, with games such as Grandslam's *Terramex* and more recently Empire's *Time* or Lucasfilm's *The Last Crusade*.

Now Magnetic Scrolls have taken the adventure format into a new era, and with the new style comes a new name, Magnetic Windows. This offers a clue in itself, for *Wonderland* makes use of a set of windows offering access to key functions. One window presents text in the usual fashion, while another displays a graphic for every location. Other, smaller windows display a compass for passing directional commands, or inform you of the items in a room, or tell you what you're holding.

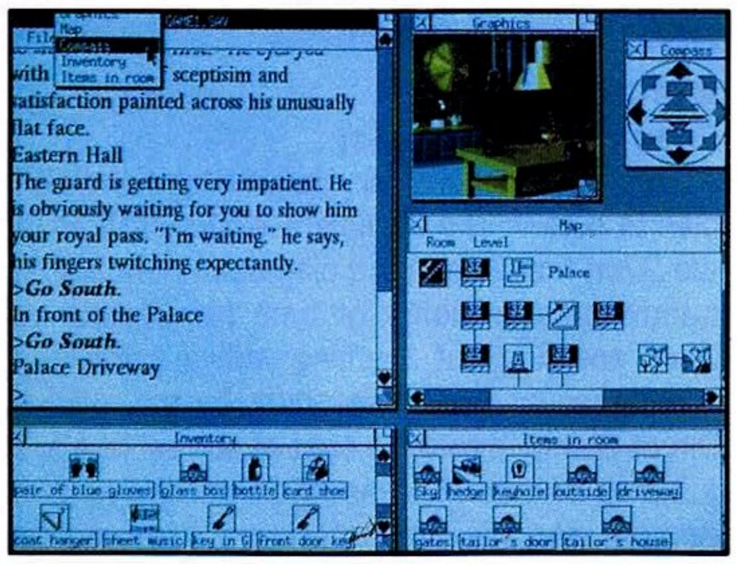
But there's more to this than simply repackaging old ideas, for *Wonderland* goes much further than that. In the usual adventure format a good deal of the struggle is in working out ➢



■ (above) Virgin have four new titles lined up. If *Wonderland* is a hit they've hinted that *Through the Looking Glass* could be next for the windows treatment

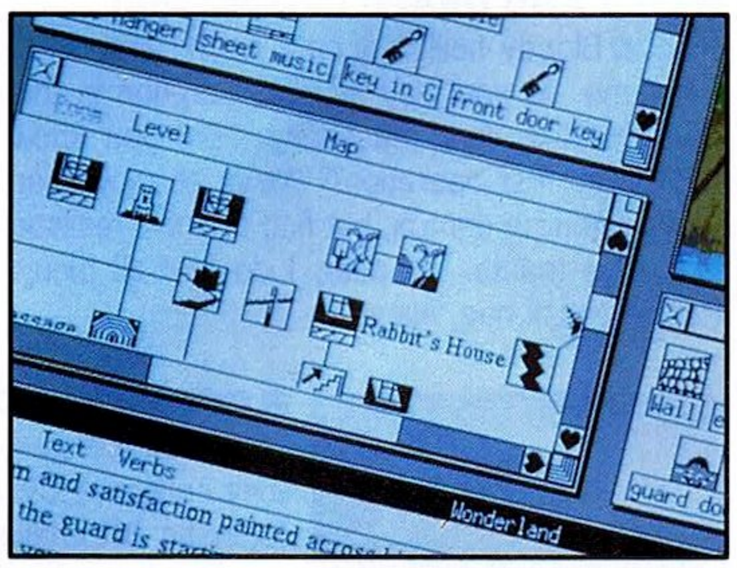
The bog standard boring text adventure is dealt yet another body blow – and about time too – with the imminent arrival of Magnetic Scrolls' biggest project. Mark Higham reports

a mouse in windowland



■ *Wonderland* windows system: ones for text, graphics, inventory, and even a compass to indicate your direction *(apologies for showing a PC screen)*

■ Around 15 pieces of animation liven up *Wonderland's* 110 pictures. With another ten pieces of sampled music, there's certainly lots going on!



■ The map shows how locations are linked and enables you to go to any location you've visited without the hassle of playing through them all again

which items are important to each scene. Some can be be picked up and others cannot. When game designer Nick Bishop came up with the original idea three years ago, he had a single objective in mind: "What we tried to do," he recalls, "was build a text and graphics adventure game, but remove all the barriers there used to be. Knowing what you've got to do but not being able to find the right word or verb was incredibly frustrating." Tell us about it.

In *Wonderland* that problem has been eradicated. If you come across a pair of shoes, for instance, you have three options. In a typical Infocom-style adventure, to drop the shoes you'd type "Drop shoes." You can do that in Wonderland, of course, but there are other, more interesting and more intuitive ways of performing the same operation. You could go to the verb menu and select the appropriate action (examine, open, close, get, drop, wear, remove, drink and eat), or click on the shoes in the graphic window where a small menu gives the same option.

These same principles have been applied to movement. A window displays a compass, with available directions highlighted. Alternatively there's a map which presents all the locations you've visited as squares, linked together to indicate your route. By clicking on one of these, you can either look at the location for clues or go straight there.

■ The Magnetic Windows system isn't designed exclusively for adventures. Other game styles are also in the pipeline

In Magnetic Scrolls' *The Jinxter* you could proceed all the way to the end of the game without picking up a vital item, only to find you needed to retrace your steps to pick it up. That problem has been eradicated, so you can only advance a few stages without holding essential items. For example, in the first few scenes you need to pick a pear to start you off. When you see a rabbit you must follow it down the hole, but without the pear you hit your head on a stone jutting out of the hole. With such brutal lessons as these, you soon learn the way the game works.

Puzzles can often be solved in many ways. At one point there's a loose brick which needs teasing out of a wall to find something behind it. You can use a knife to ease the brick out, but you also need it to cut some chunks off of a mushroom. Tease the brick out of the wall and you blunt the knife and can't then cut the mushroom. The answer is to cut the mushroom first, *then* use the blunt knife to prise out the brick.

Should these puzzles prove too taxing, a drop-down help menu provides a step-by-step guide to solving puzzles. The help messages begin obscurely, but if you continue to request more information, vital clues solve it for you.

The help system has been designed to make sure players can eventually complete the adventure. "Lucasfilm in the States did some research into people's favourite games," explains David Bishop. "The correlation between people's best game and the games they were able to finish was 85%. People don't want a massive game on five disks if they can't get past the first one!"

Virgin estimate it should take about four hours to complete *Wonderland* – and that's assuming you know exactly what to do. Newcomers are likely to spend between 80 and 100 hours working through the range of puzzles.

"The final puzzle is very unique and special," claims Bishop. "Your solution will be very different from everybody else's, and is determined by how you play the game."

As befits such a classic adventure – it's a mystery why it hasn't been seriously attempted before – *Wonderland* isn't big: it's *huge*. Magnetic Scrolls guess it's likely to span five disks, and not surprisingly recommend you run it on a hard drive, though the game has been configured to minimise disk swapping for those of us unfortunate enough to lack such ST luxuries.

All the signs are that Magnetic Scrolls have taken the beloved but somewhat threadbare adventure genre into the '90s. But that in itself is not enough, for what game players everywhere want to know is, *how does it play?*

For the time being you'll just have to contain your curiosity until next month's definitive review. Until then, you could always try hunting out that battered old copy of the book and do some revision... ***stf***

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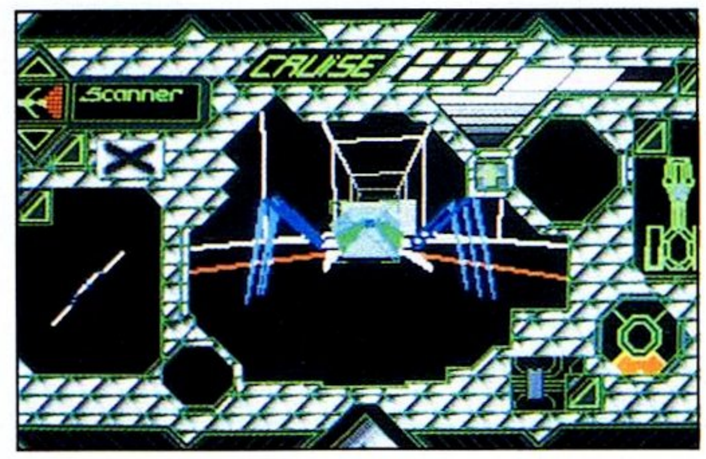
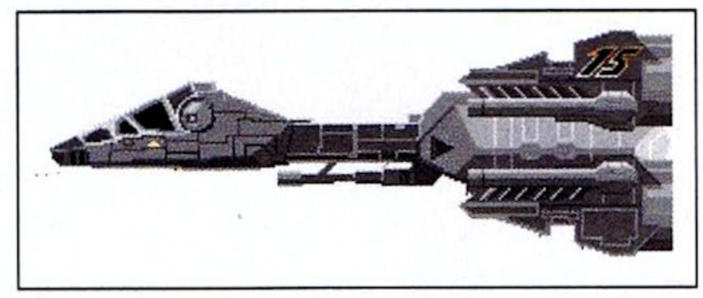


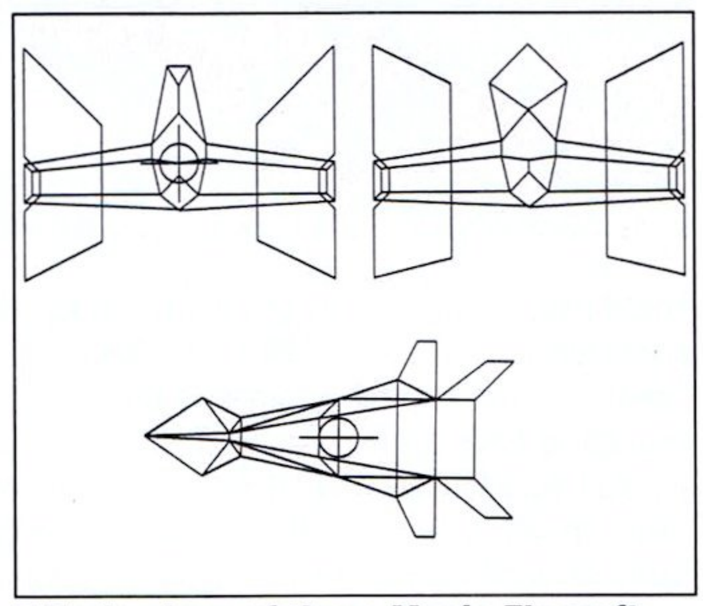
■ **Below and above: shots from the finished game, which was *supposed* to be released last Christmas – good job we didn't know then how long it was going to take!**



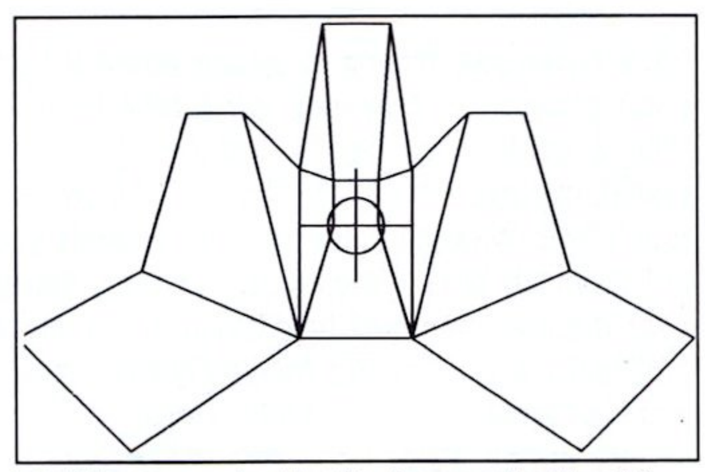
■ **The "Magic Fly" itself, the cute T2**

birth of a genus

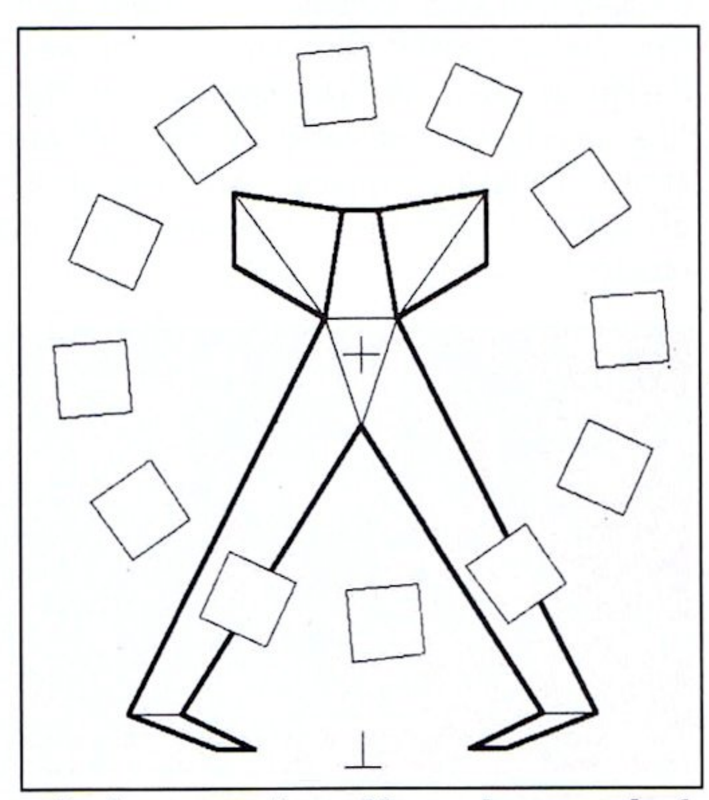
FORMAT Graphics Editor Mark Pickavance reveals the two years of agony and ecstacy behind Magic Fly, a game due to be unveiled next month by Electronic Arts



■ **Early plans of three *Magic Fly* craft...**



■ **This one a butterfly (ground attack)...**



■ **And a queen bee. Ah, such memories!**

The *Magic Fly* project began life as a 3D graphics demo which I produced in spring 1988 while programming relational databases. At the time I was heavily into the *Cyber Series* and creating *Cyber* animations with *CAD 2.0*. One was a demo entitled *Voyager*, a hectic 3D roller-coaster ride from the viewpoint of a camera shooting down a series of connected tunnels.

I sent a copy to friend and colleague Jeff Lawson. We'd just completed *Flair Paint* together, and since Jeff had written a number of flight simulators I was eager to get some reaction to my work. He thought it had potential and convinced me to turn it into a game concept.

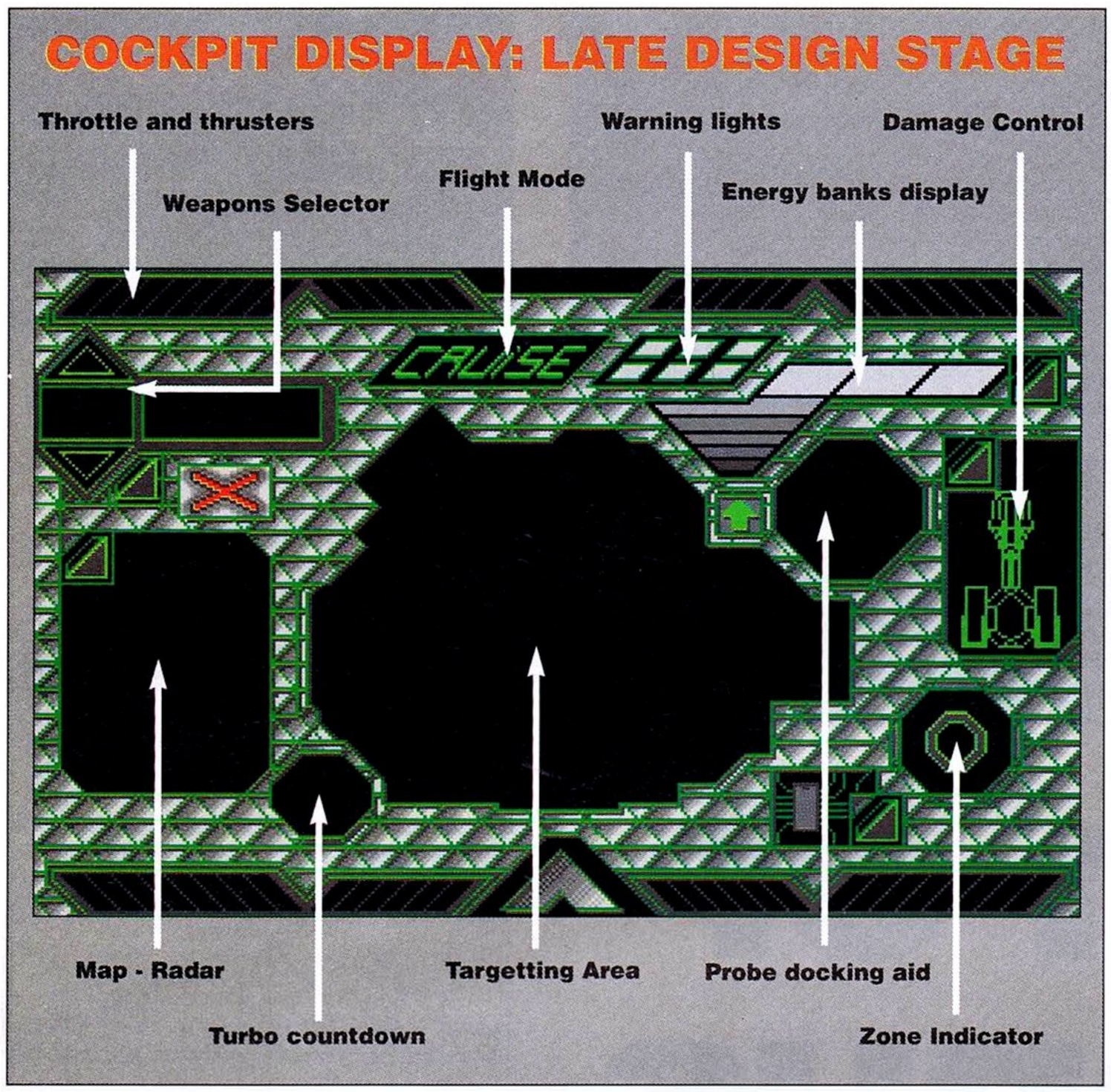
The most popular 3D game at the time was *Starglider 2*, and we were determined to surpass it in all respects: not only speed and complexity, but control and gameplay. Jeff agreed to work on tunnel code while I started devising a software specification and generating some graphics. *Voyager's* working title soon became *Magic Fly* – just as well, because Ocean later released a game called *Voyager!*

"By autumn '89 I was going crazy. My source files took up 1.5 MBytes – and Jeff's were larger! How were we going to fit all this on a 520ST?"

But why insects? The idea came in fact from a selection of Roger Dean's '70s graphics of various creatures transformed into spacecraft, one of which, a fly, had remained fixed in my mind. It fitted well with the tunnel graphics: after all, if you're going to fight in a tunnel you need manoeuvrability – just like an insect! So the controls would need to be sensitive and easy-to-use, something we identified as a shortcoming in other attempts at a similar theme.

One other thing: we wanted to avoid the usual pitfall of creating a wholly serious game and give it something of a bizarre feel.

Within six weeks, armed with a game ➢



specification and some functional code, we approached software publishers. We'd both been involved in the games industry long enough to have a good-sized list of companies we had no intention of working with again. We came up with a shortlist of candidates and eventually decided on Electronic Arts, who seemed the most interested in our project and the least likely to interfere in the creative process.

The hardest thing to gauge about a computer program is how long it will take to write. With a contract signed in October 1988, we confidently expected to finish *Magic Fly* by summer 1989. Wrong! In fact we were a whole year out. Looking back it's easy to see why, though if we'd known then just how much blood, sweat and tears would go into *Magic Fly* I'm not sure just how enthusiastic we'd have been.

By spring 1989 I had two utility programs for creating the data: an Object tester, which displayed objects created as 68000 source files, and a tunnel definer. My first task was to design all the craft. The specification stated "the tunnels are populated by 35 craft which involve complex animation and sophisticated 3D shapes." This turned out easier to write than program.

The first task in the complex procedure of producing flying and walking craft was to produce a schematic, or plan view, created on MAC Draft, under Mac emulation. At the time I didn't have any comparable drawing software for the ST, so I made do with what I had at hand. Then I transferred printouts to a lightbox on top of a large area of graph paper. Using grids projected through the paper I was able to work out coordinates which could then be encoded as data for the game. At one time I considered writing a data converter for CAD models, but the method of arranging the information was so different that it proved impractical.

You may wonder why we didn't make our own 3D object drawing package. In fact I worked on one – until it was gently pointed out to me that we were supposed to be producing a game, not a CAD package! So I returned to keying in millions of numbers. It was a painstaking process, but it produced exact models with few data errors. By the middle of the year, however, I'd finished no more than half the craft required, and Jeff was urgently requiring tunnel data so he could start work on the code. I stopped making craft and started making tunnels.

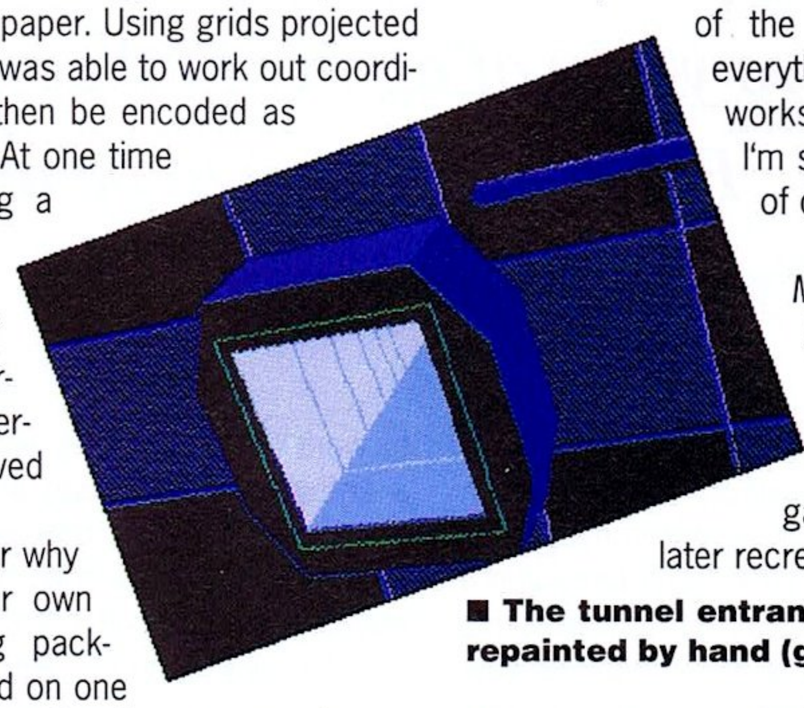
The entire tunnel complex is in 3D, with the result that it was virtually impossible to make accurate drawings of the whole structure. I resorted to creating the whole tunnel layout in the tunnel definer – intending to leave the problem of mapping the tunnels to some hardened gamester. Wrong again. Much later in the project EA requested a map to enable their game testers to get around quickly. Guess who got the job of drawing it?

The *Magic Fly* complex is vast, containing almost a thousand tunnel sections linked by junctions and "kinks." Testing the game, I discovered that parts of the tunnels are so remote that they can take 30 minutes or more of solid flying to reach! As a way around this awkward problem I asked Jeff to supply cheats to avoid long reconnaissance missions.

The tunnel definer was later enhanced so it could insert craft and "furniture" objects into specific tunnels. These were created by a modification to the "object" viewer, since furniture and craft had different data structures. The game needed 70 furniture items which appear at various points in the tunnels. The first furniture job was to create the docking bays that enable you to re-arm and refuel.

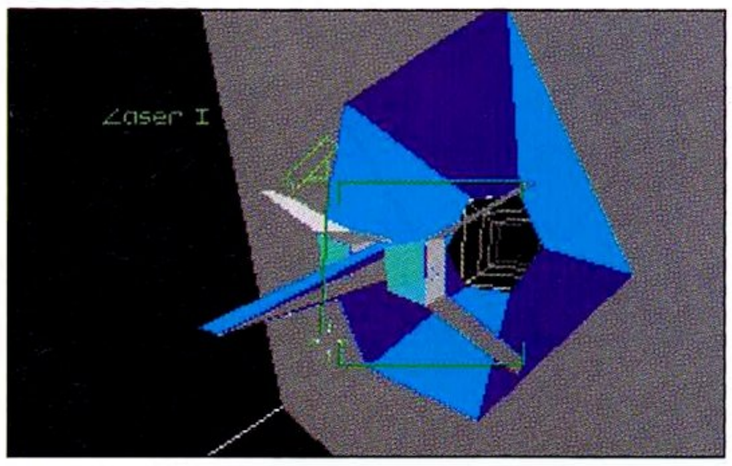
I very much wanted the auto-docking sequence to use a graphic technique I'd never seen before on a home computer. It works like this: when you approach a docking bay it appears as a simple door in the floor of the tunnel, and only when the doors open do you see a highly detailed end to the bay, which then scrolls up the screen as you descend. The end of the bay is a bitmap, but everything around it is vector. It works very well, I think, and I'm surprised nobody thought of doing it before.

All the graphics in *Magic Fly* were created in *Degas Elite, Flair Paint* and *Cyberpaint,* though I also used *CAD 2.0* to design an opening game sequence which Jeff later recreated in code.

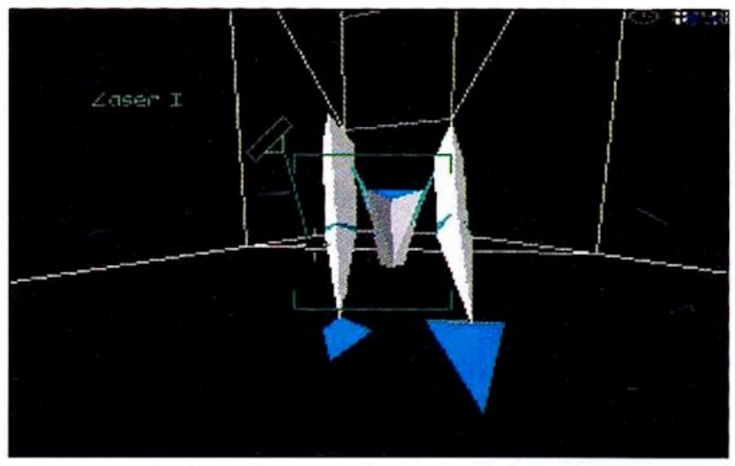


■ **The tunnel entrance, from a CAD model repainted by hand (guess who's!)**

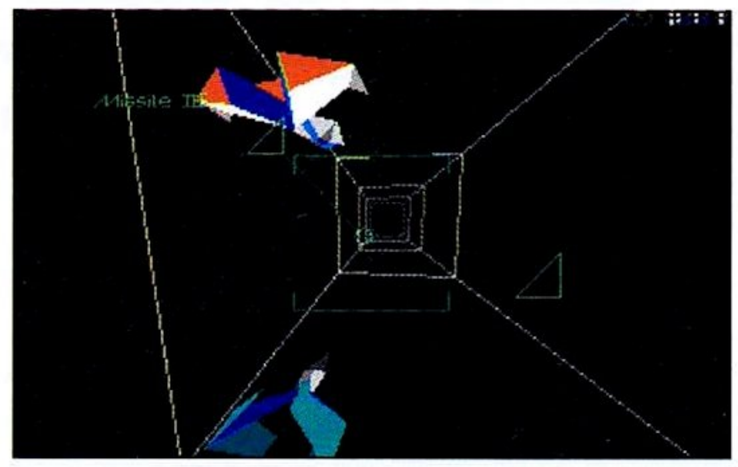
It was always the intention that the craft in *Magic Fly* should react intelligently. The ideal – independent intelligence for all craft – proved impossible, but Jeff came up with a clever compromise. Flying craft had full capability, but



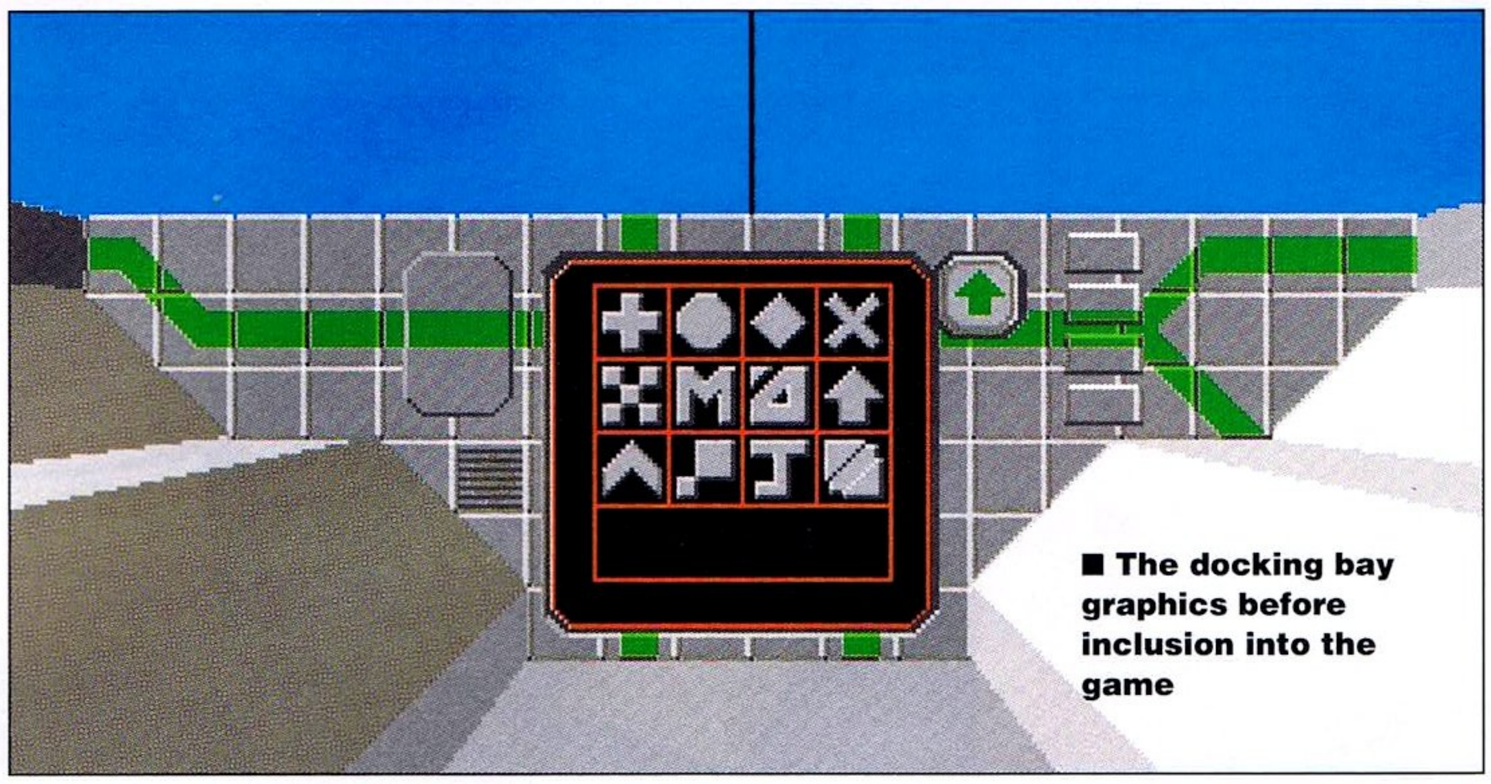
■ **The dragon, screaming down the tunnel**



■ **This one's the mantis...**



■ **and last but not least the horsefly**



■ The docking bay graphics before inclusion into the game

ground-based vehicles, which would simply spend too much time working out how to get around objects on the tunnel floor, were given a sub-intelligence. They could navigate themselves around any object (furniture or craft), as well as reacting to thefly by entering offensive or defensive postures.

This all became very complicated, though, when Jeff introduced weapons. With laser bolts, missiles and other exotic items such as webs flying around, things got pretty hectic. One change that had to be made related to weapon arming: when a vehicle launches a weapon there has to be a delay before the weapon is armed. Otherwise craft blow up – taking you with them!

In addition to all the enemy logic, an entire tunnel logic was created in the form of a planetoid commander, who deploys his forces to stop your progress through the tunnel complex.

"Bugs were inevitable – such as the one that made craft fly through the tunnel wall, or the one that made ground vehicles take off and fly (my fault, I'm afraid)"

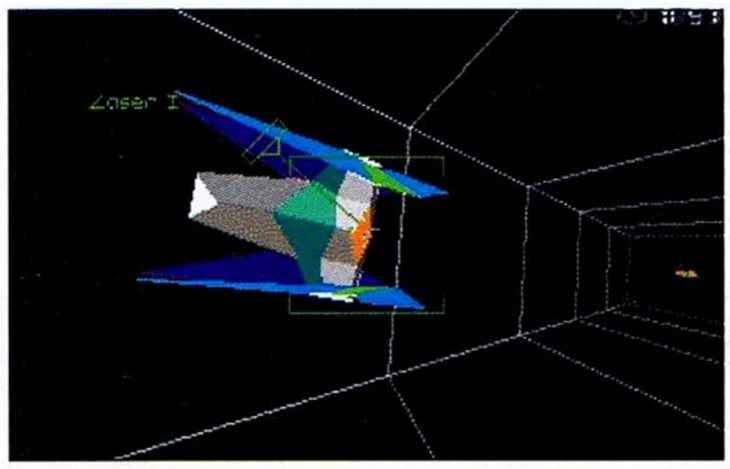
Most vehicles animate in some way or another, ranging in complexity from simple wing configuration changes to "walking," with each model designed to move in a specific way. To manage the more difficult actions, I made multiple drawings – as many as 36, in some cases – showing each phase of the action.

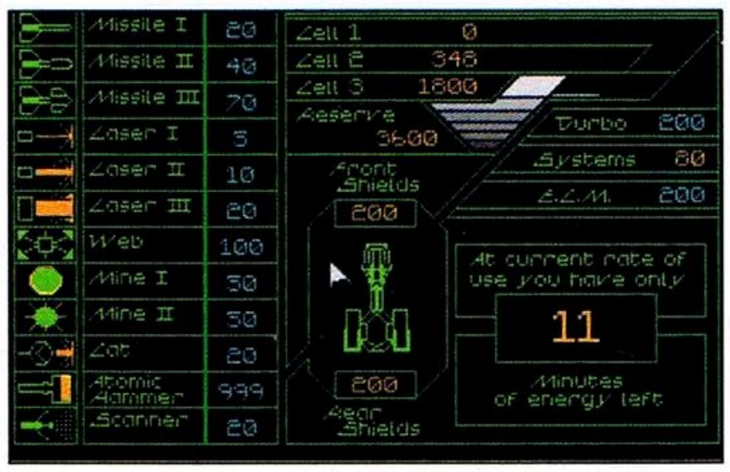
The worst was the beetle, a "super walker," with most of the vertexes being in the legs. The source data just for this one craft alone was over 100K: the sheer number of vertexes and facets make it the most complex object I've ever seen in any 3D game. It took over three weeks to key in all the data and iron out any problems. This in itself would not have been such a burden – had it not been for the stag beetle and scorpion, which were very nearly as detailed as the beetle!

By autumn '89 I was going vertex crazy. By now source files for craft, weapons and furniture took up over 1.5 MBytes of my hard drive – and the code on Jeff's was even larger! It didn't take a pair of geniuses to realise that memory conservation methods would be essential if all this was going to fit on a 520ST. So I started optimising the object data, while Jeff set about becoming an expert in compression techniques. To optimise space further I redesigned some of the craft and evolved others into more pleasing shapes.

As Christmas 1989 loomed we were of the firm opinion that *Magic Fly* simply had to be completed soon. Wrong once more. As always the last 5% requires the greatest effort, and in fact we only finally finished in mid-June! Much of the work in these last few months has been directed towards additional elements specified by EA and in polishing up and tweaking the final game. This included eliminating the inevitable bugs – such as the one that made craft fly through the tunnel wall, and another that made ground vehicles take off and fly away (my fault, I'm afraid). At the same time as removing what are politely referred to as "undocumented features," Jeff also took the opportunity to incorporate the STE's extended colour palette.

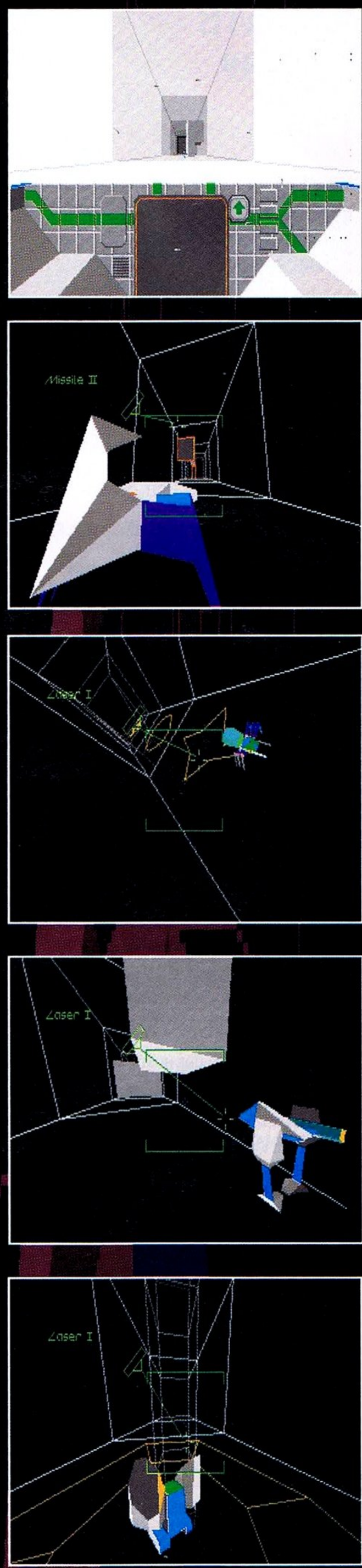
So, after very nearly four man-years of work, *Magic Fly* is complete. As a designer I am proud of the game – not least because it is so very like my original concept. And considering the process of game creating outlined in these pages, this I think you'll agree is quite some achievement. A large part of the credit for this, of course, goes to Jeff, who knows more about the 68000 than is healthy. His capability in transforming idea into code is what games programming is really all about. ***stf***





■ The information screen. If your energy (bottom right) runs out it's curtain, pal!

DAY IN THE LIFE OF A MAGIC FLY



■ A range of shots from various angles in the tunnels (taken from the object editor rather than from the finished game)

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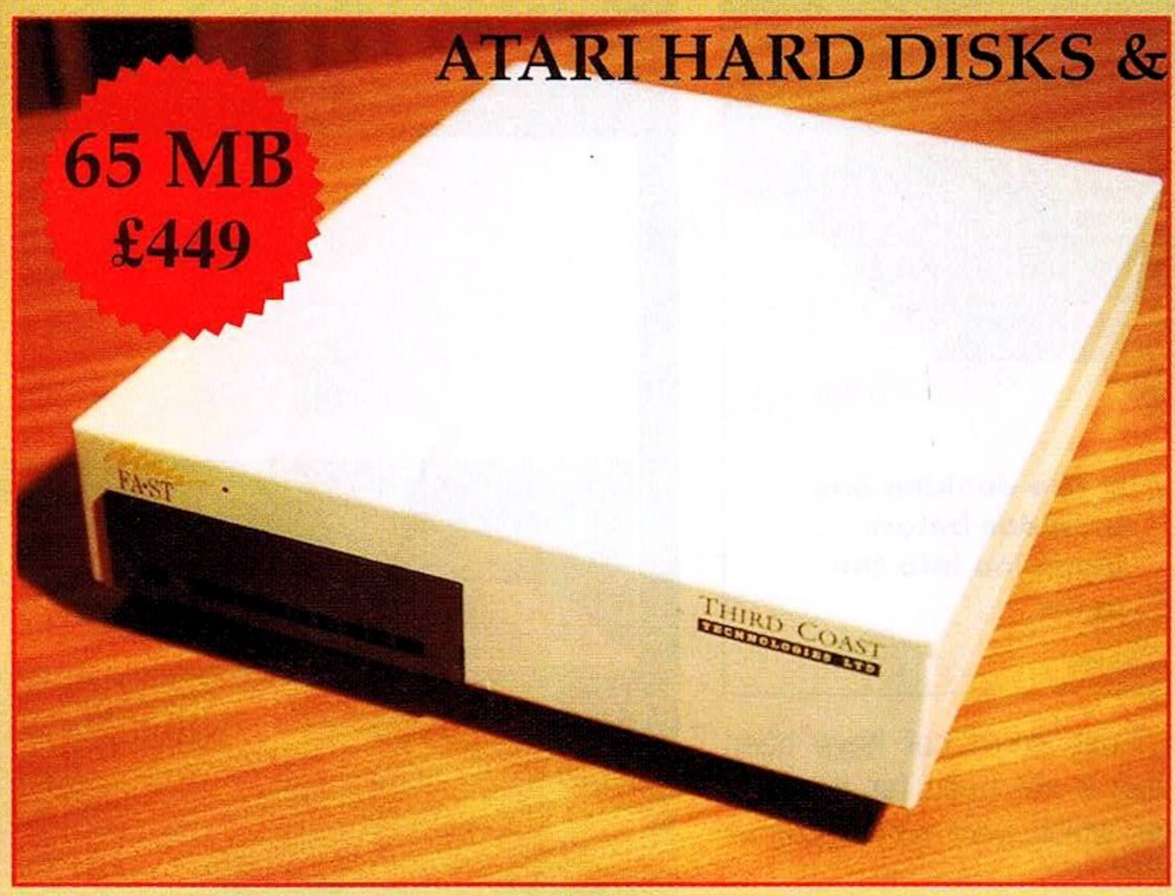

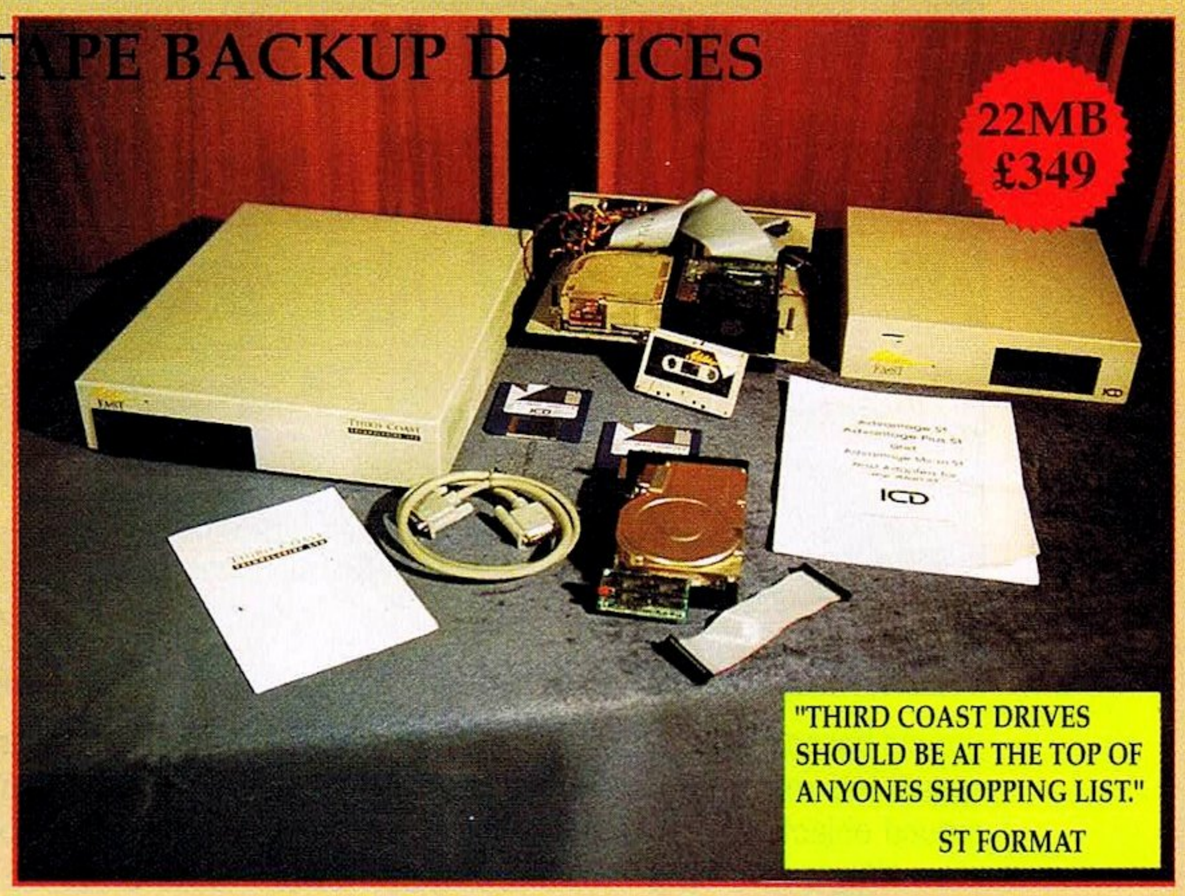

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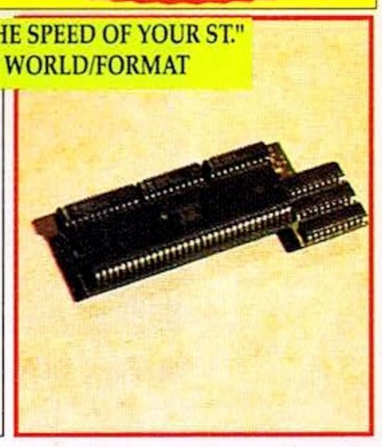

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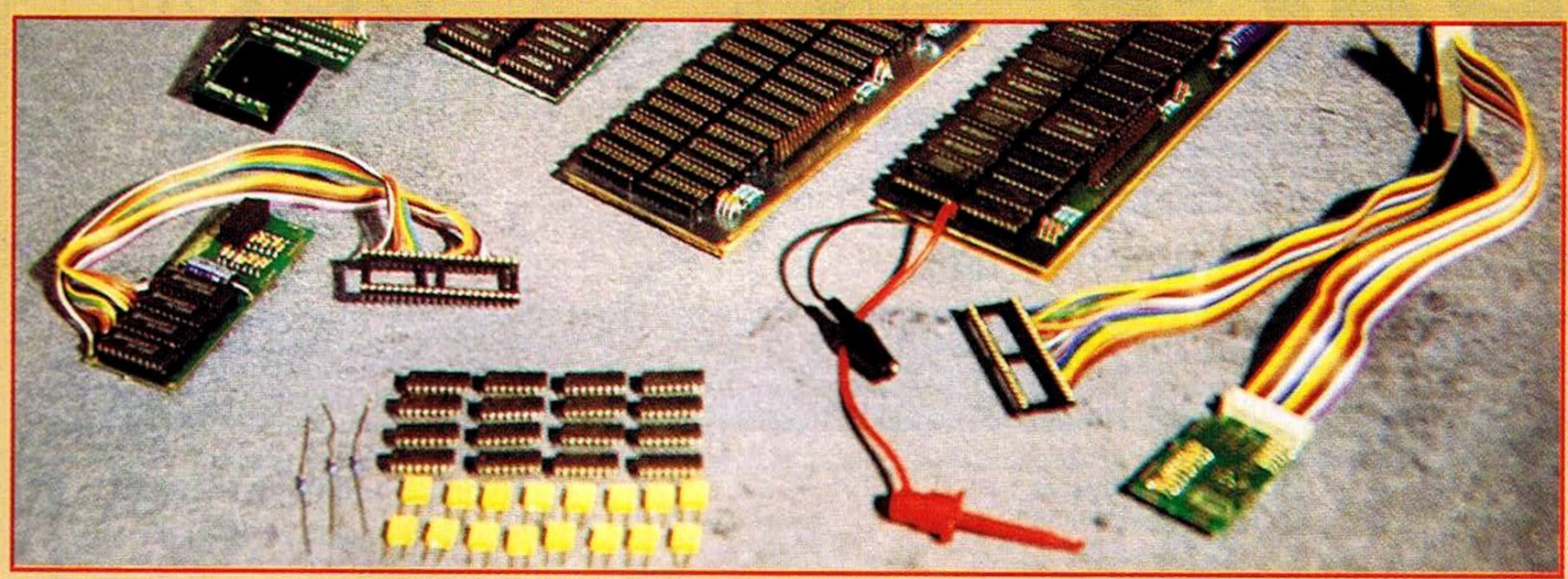

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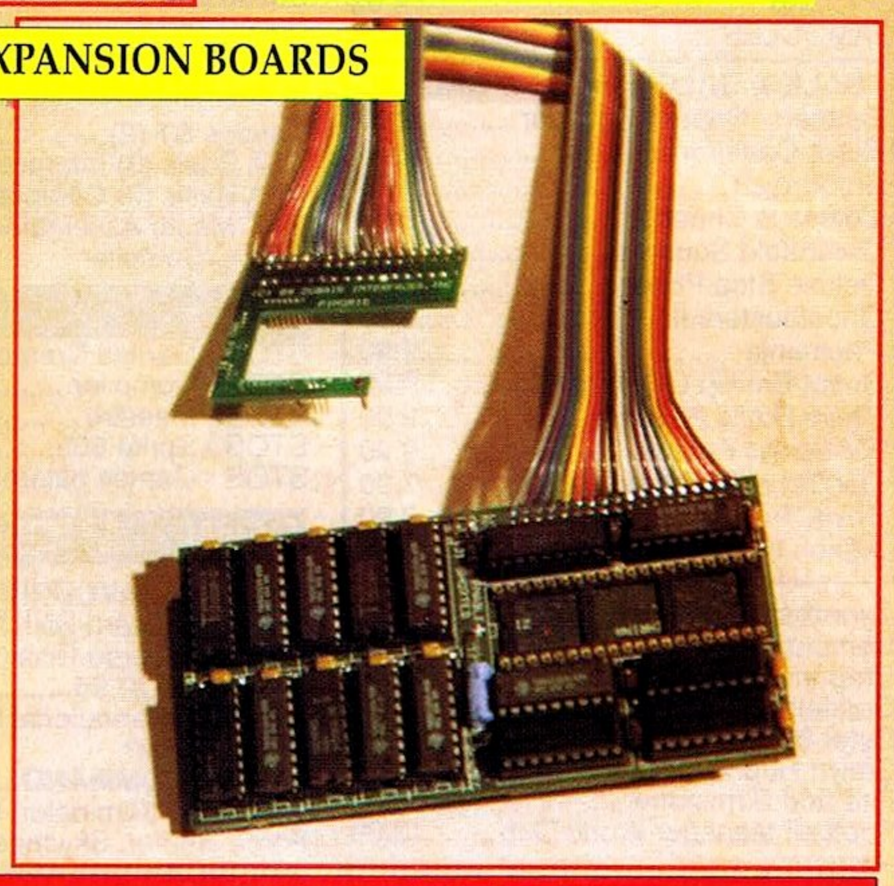

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■ Immerse yourself in the toothsome delights of this month's *ST FORMAT* Cover Disk, crammed to bursting point with over 800K of demos, games and utilities.

■ But... not all STs have double-sided disk drives as standard. So we've devised a special format which both single and double-sided drives can read. Of course, single-sided drive owners can still only access the top side of the disk.

■ Rob Northen is the man responsible for the disk format which enables everyone to access *Battlemaster, FreeRAM* and all the other scrummy programs on side A of the disk. And those with a double-sided drive can get at *GFA Draft, GemPlus* and all the other goodies on side B.

■ You can get to side B of the disk (but only if you've got a double-sided drive!) by double-clicking on the folder SIDE_B.

■ If you have a single-sided drive and try clicking on the SIDE_B folder, a warning message appears telling you that there is data damaged on the disk. But of course the disk ain't damaged; it's just a nasty practical joke... er, I mean, your ST's way of saying it only has a single-sided drive. Click on the CANCEL button in the box and stop worrying.

■ Please please please back up your Cover Disk: don't put the original into your ST. That was a Public Information announcement. Over and out.

BATTLEMASTER

Battlemaster

BY: PSS
SIDE: A
MACHINE: ALL COLOUR STs
FILES: ALL FILES IN THE BATTLE FOLDER

In the days of old, when knights were bold and all that, men hated orcs, who didn't get on with elves, who weren't keen at all on dwarves.

Battlemaster is a difficult game to classify; set in a medieval fantasy world populated by orcs, elves, dwarves and men, it combines the arcade action of *Gauntlet* and the puzzles and traps of *Dungeon Master*. There really is nothing else quite like it!

The plot revolves around a centuries-long conflict between the four races which the player is aiming to end. Torn by war and decay, the world is doomed unless the player suceeds in conquering it to re-unite it.

A map of the world provides the framework for this classic fantasy, and an adventure occurs at each place on the map.

The arcade element is similar to *Gauntlet*, with the player controlling a 24x24 pixel leader moving around a multi-directional scrolling play area.

■ **Come on you dwarves, elves, orcs and humans! It's all in aid of a desperate bid to re-unite the warring planet. Fusing roleplaying and arcade action, *Battlemaster* is a gamester's dream**

The roleplaying element is supplied in four ways. First there are magic items that can enhance your leader's and unit's abilities. Second there is the accumulation of experience: the more your troops perform a particular action the better they get at it. Thirdly there is the world the player explores, a collection of about 60 scenarios linked by a network of roads. Each scenario might be a village, a castle, a mine, or a place in the wilderness. And finally there's the game system. All combat, magic items and monsters are treated in a way similar to most paper RPG systems, and this wealth of detail is available in the manual to those who are interested.

GETTING STARTED

Double-click on the BATTLE.PRG in the BATTLE folder. Follow the onscreen prompts and get ready for some serious action!

HRAMdisk

BY: JOHN EIDSVOOG
SIDE: A
MACHINE: ALL STs
FILES: HRAMDSK2.TXT, HRAMDSK.PRG

This useful utility acts as an extra disk drive: instead of using a tangible medium such as a hard or disk drive, it uses the ST's memory to store information. This is much faster and makes boring jobs like copying files to disk a hell of a lot faster. And with HRAMDISK, pressing the reset button doesn't destroy its contents.

GETTING STARTED

Copy the file HRAMDSK2.PRG into your AUTO folder (make a folder on your boot disk and name it AUTO). Whenever the ST boots up it runs all programs with the extension .PRG in the AUTO folder. (If you're booting from hard disk your AUTO folder needs to be in your boot partition.)

You can also run HRAMDSK2.PRG directly from the Desktop. See the file HRAMDSK2 .TXT on the Cover Disk for extra information on this program. ➢

OI, YOU. YES, *YOU!* BACK UP YOUR DISK NOW! (See page 30)

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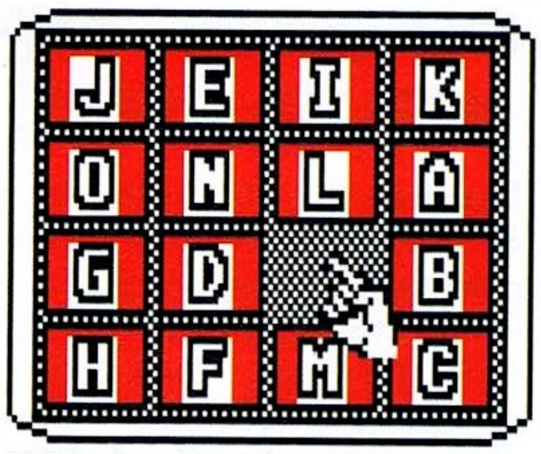
Access VISA



■ **Playing *Puzzle* can seriously interfere with your work!**

Puzzle

BY: PUBLIC DOMAIN
SIDE: A
MACHINE: ALL STs
FILES: PUZZLE.DOC, PUZZLE.ACC

Bored with processing words? Try playing with 'em instead! This neat little accessory allows you to play a tricky Word Square game from the Desktop.

The aim is to arrange the letters in alphabetical order as fast as possible. Although there is no timer it does become easier after a few hours of trying!

GETTING STARTED

Simply copy the file PUZZLE.ACC to the root directory of a disk. (The root directory is the directory displayed when your ST boots up: the name PUZZLE.ACC should be displayed when your ST has finished booting up.)

FreeRAM

BY: HYBRID ARTS
SIDE: A
MACHINE: ALL STs
FILES: FREERAM.DOC, FREERAM.ACC.

If you have a RAM expansion fitted to your ST, or you were forward thinking enough to have bought an ST with 1MByte or more in the first place, then *FreeRAM* is for you. That's not to say that 512K ST owners won't also benefit – but for expanded memory users, *FreeRAM* is particulary useful.

Simply click on the FREERAM option to display how much free memory the system has. (If this is not up to the required level then it's just possible that the upgrade has been installed incorrectly.) Click on the OK option to return to the safety of the Desktop.

GETTING STARTED

Copy the file FREERAM.ACC to the root directory of a disk (ie not inside any folders). Choose the DESK option and the FREERAM option displays the amount of free RAM you have available.

GFA DRAFT PLUS

BY: GFA DATA MEDIA
SIDE: A
MACHINE: ALL STs
FILES: ALL FILES IN GFADRAFT FOLDER

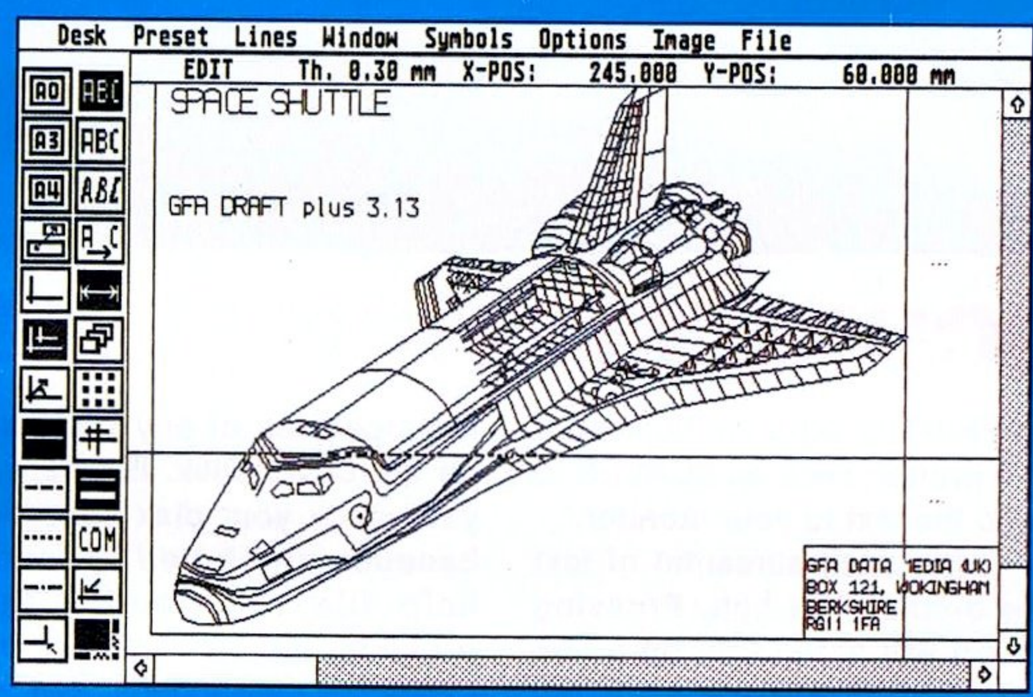
With the arrival of the ST, applications previously restricted to multi-million dollar mainframes have become accessible to the average computer user. One such application is Computer Aided Design (CAD). With its high resolution screen mode and a fast and powerful processor, your ST has everything it needs to run CAD applications. Everything, that is, except for one thing: software. Enter *GFA Draft Plus.*

GFA Draft Plus is a powerful CAD package brought to you by the same people that revolutionised the ST programming scene with the excellent *GFA BASIC.* As well as our exclusive demo, GFA have kindly provided us with an extensive text file that helps you get the very most from this demo.

Also provided is a demo image, SPACE.000, a structured drawing of a NASA Spaceshuttle. Read the help file and then experiment to your heart's content.

GETTING STARTED

Start *GFA DRAFT* plus by double-clicking on GFADRAFT.PRG, which brings up a file selector box. Either enter a new name for your own drawing or select SPACE.000 to load the demo file.



■ **Give your ST a visual treat by loading up *GFA Draft***

Mouse Ka Mania

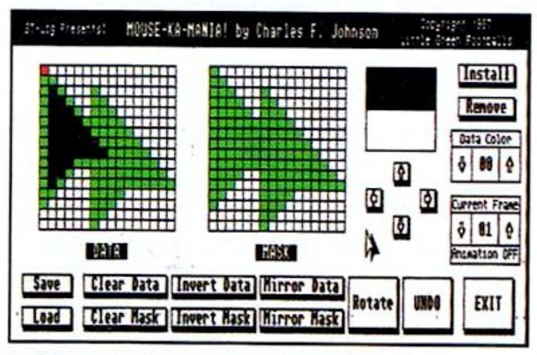
BY: CHARLES F JOHNSON
SIDE: B
MACHINE: ALL STs
FILES: ALL FILES IN MOUSE FOLDER

Ever fancied giving your mouse pointer a facelift? With this editor you can transform your pointer, and even add animation! Choosing the *Mouse Ka Mania* option on the DESK menu enables you to enter the editing screen. Two large grids are displayed: one contains a blown-up picture of the pointer, and the other the mask. Using save and load options you can load your own creations, or use the some of the others already on the disk.

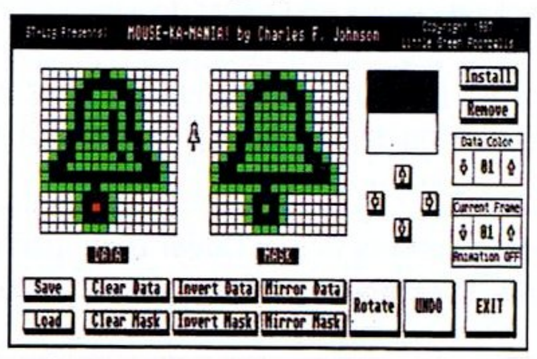
Autobooting with any of the new mouse shapes is simple: just ensure that the MOUSE.ACC and the relevant data files are in the root directory of the disk. When you switch on you'll find that the old pointer has been replaced with a newer, trendier pointer.

GETTING STARTED

Copy the file MOUSE28.ACC to the root directory of a disk. (The root directory is the directory displayed when your ST boots up: the file MOUSE28.ACC should be displayed when your ST has finished booting up.)



■ **Transform dull pointers...**



... into upbeat new icons

Gemplus

BY: DAVE LINCOLN
SIDE: B
MACHINE: ALL STs
FILES: INSTRUCT.DOC, ICONS.PI2, ICONEDIT.PRG

Anyone who's used the ST GEM Desktop knows that, though it has its drawbacks, it's a very good way to communicate with the ST's operating system. There are several other different types of Desktop though, from the oldest on that rich man's toy the Mac, up to the latest on Steve Job's much heralded NeXT machine. These two desktop programs both have one major advantage over the ST Desktop, namely the ability for the user to change and add icons.

The ST Desktop has pre-set icons for the disk drives and also three different icons for the files, these being the folder icon, the executeable program (.PRG,.TOS etc) icon and finally one icon for all the other files. This makes it very difficult to distinguish between files when you have a window with several files all with the same icon.

GemPlus enables the user both to change the disk drive icons and design icons to attach them to folders and files on a disk. The package includes three programs: one is *GemPlus* itself, and the other two are for designing the disk and file icons respectively.

GETTING STARTED

The GEMPLUS.PRG file needs to be placed in an AUTO folder so that it can auto-boot from the disk. If you have any disk icons stored in a DISK.DEF file, this file should also be placed in the AUTO folder, where *GemPlus* automatically loads them. Once booted, *GemPlus* works in the background. When any disk is inserted and catalogued, *GemPlus* looks on the root directory of that disk for a file called ICON.DEF. If such a file is found, then it's loaded and the icons in that file used instead of the normal GEM Desktop icons.

C series files

BY: WARWICK GRIGG
SIDE: A
MACHINE: ALL STs
FILES: ALL FILES IN C_SERIES FOLDER

Look in the C_Series folder and you'll find all the files to accompany Warwick Grigg's C article (see page 121). There's also a compiled version so you can use it with any C package.

GETTING STARTED

In order to compile the code, first copy the files into the WORK folder on your Sobozon C compiler disk. Just double-click on the desired PRG or TTP file to test any of this month's demos.

CLI

BY: PD

SIDE: B

MACHINE: ALL STs

FILES: CLI.DOC, CLI.ACC

One of the few things your ST lacks is a Command Line Interface (CLI). Though it may not being as user-friendly and pretty as GEM it's much more powerful and well worth getting to know. Typing HELP displays all the commands available – most of which are self explanatory (try and guess what FORMAT and COPY do, for instance!).

GETTING STARTED

Simply copy the file CLI.ACC to the Root Directory of a disk. (The Root Directory is the directory displayed when your ST boots up: CLI.ACC should be displayed when your ST has finished booting up.) ***stf***

COVER DISK HOTLINE 0225 765086 WEEKDAYS (2PM TO 6PM)

Flipping-well foxed by files? Dashed-well dumbfounded by disks? Perplexed by Cover Disk programs? If you have a problem with the disk – and you're sure there is no corrupted data – phone 0225 765086 between 2pm and 6pm on weekdays with your query. You'll be through to Trickie Dickie Monteiro, our Disk Editor with the interesting tan.

Before you call have ready the info Dickie needs to help you: the model of your machine; the version of GEM/TOS you're using; and anything you've got attached to (or plugged inside) the computer. Have the disk handy and your ST up and running, and a pen and paper handy to take any notes.

DOUBLES ALL ROUND!

You single-sided drive owners don't have to miss out: get hold of the B-side by sending your name and address with a cheque or postal order for £1.75 to:

August B-Side Disk,
***ST FORMAT*, Beauford Court,**
30 Monmouth St,
Bath, Avon BA1 2AP

OI! BACK UP YOUR DISK!

Because the oh-so-delicious *ST FORMAT* Cover Disk is non-standard and squeezes in a whacking great 400K plus of data per side, 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 knacker your Cover Disk.

1. **Format a couple of blank disks – single-sided if you've got a single-sided drive, double-sided if you have a double-sided drive.**
2. **Write-protect the Cover Disk and insert it into drive A (if you have two drives, you lucky devil, insert the Cover Disk into drive B). Double-click on the drive B icon. If you're still saving up to buy a second drive, a message appears requesting you to put disk B in drive A. Simply click on OK.**
3. **Insert a freshly formatted disk into drive A. Double-click on the drive A icon.**
4. **Pick up a folder at a time from the Cover Disk window and plonk it into the drive A window.**
5. **If you have one drive then you'll be 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 last folder – and subsequent folders – onto the second freshly formatted disk.**
7. **Double-sided owners, double-click on SIDE_2 once you've finished copying all the folders from side A of the Cover Disk. Job done!**

READING DOCUMENTATION FILES

In virtually every folder on the Cover Disk you'll find a file with the extension .DOC. This is a help file and contains instructions on using the program. Ensure you read all help files before running any program.

To read a help file (or .DOC file) simply double-click on the file. Click on CANCEL if you don't wish to read the file; click on PRINT to send the document to a printer; click on SCREEN to send the text to your monitor.

After each screenful of text the display will halt. Pressing return will scroll you up a line while pressing space will scroll up a complete page of text. Pressing Q or Control C will return you to the Desktop.

Future Publishing CANNOT be held responsible for improper use of any programs on the Cover Disk. Basically, if you wreck your disk collection because you failed to read a help file, it's tough. Your problem, etc etc. Be sensible, follow the instructions, and you won't have any trouble.

Next month: how to access the B-side of the Cover Disk using a major domestic appliance!

THE DISK NEEDS YOU!

We need *your* software – games, utilities, demos, anything good, original and preferably short. If you've written anything worthy of the *ST FORMAT* Cover Disk (and remember, it's the ones we reject that makes ours the best), send it with this form and full documentation to: Richard Monteiro, *ST FORMAT* Cover Disk Editor, 71 Barn Glebe, Trowbridge, Wiltshire, BA14 7JZ. Allow four weeks for a reply.

Name _____

Address _____

_____ **Daytime 'phone** _____

Program title _____

Size of files in K _____

What's so brilliant about it _____

_____

_____

Don't forget to: ■ Enclose an SAE ■ Include on-disk and paper documentation ■ Write your name and address on the disk ■ Use a virus-free disk ■ Remember that *gnu* has a silent *g*, as does *gbanana*

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

Signed _____

Note: we pay out *up to* £800 for contributions to our Cover Disk. But to earn that kind of dosh, of course, you'd have to write something pretty spectacular, original and complex.

FAULTY DISK?

In any disk duplication run as massive as *ST FORMAT*, it's possible that a minuscule proportion of the disks might be faulty. If you're unlucky, sorry. You're guaranteed a working replacement if you a) say "blinking flip," and b) send your corrupted disk to:

ST FORMAT
August disk returns,
Discopy Labs, Unit A,
West March, London Road
Daventry, Northants NN11 4SA

DON'T SEND IT ELSEWHERE, OR YOU WON'T SEE IT AGAIN! *stf*

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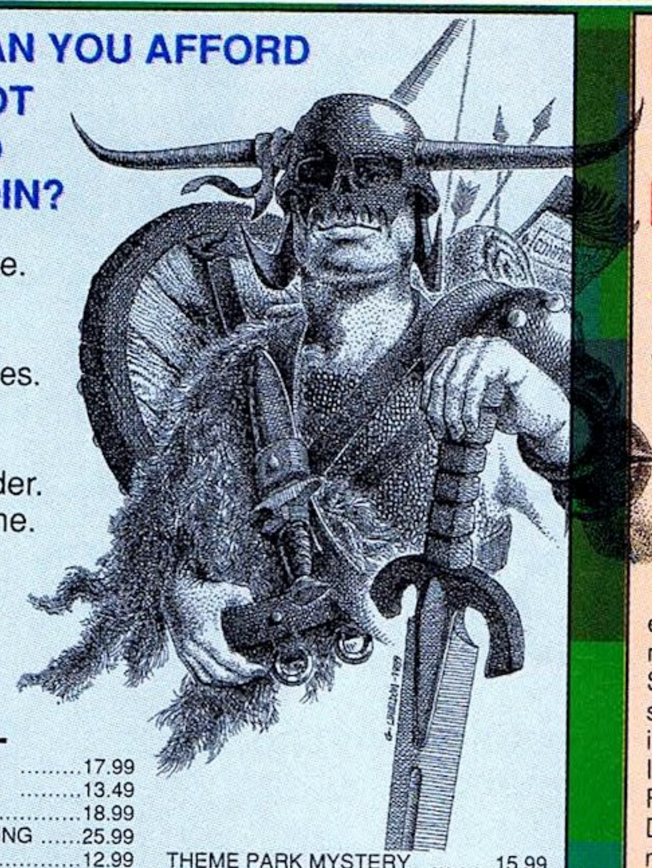

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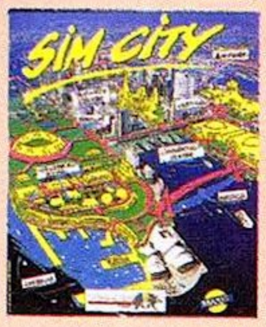

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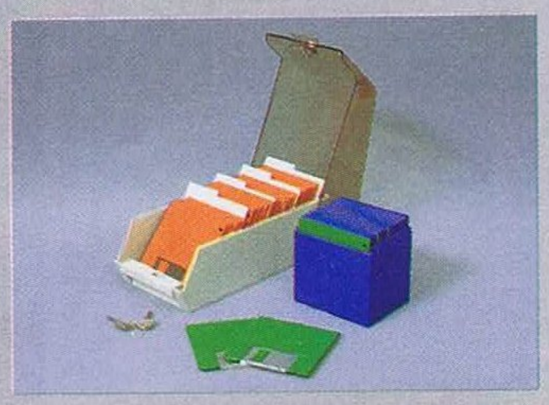

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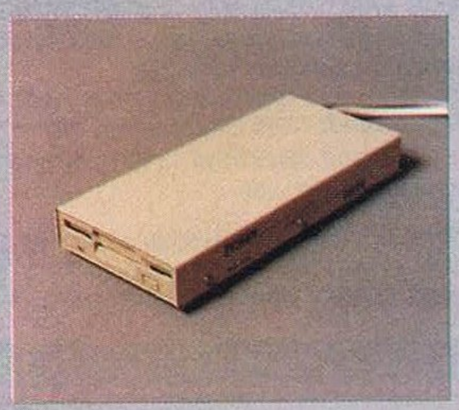

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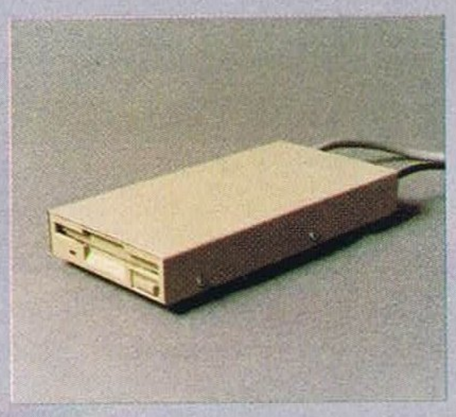

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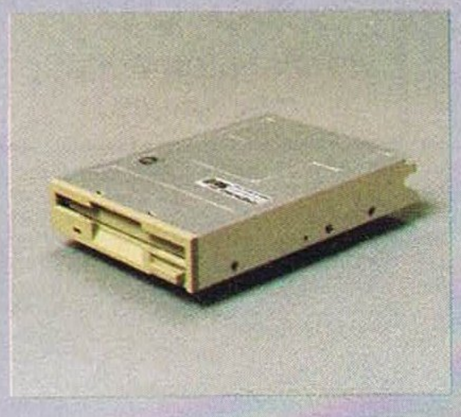

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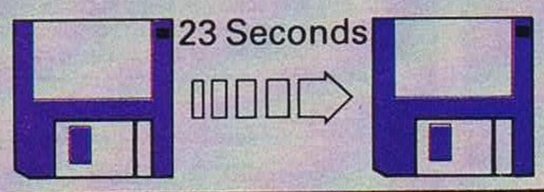

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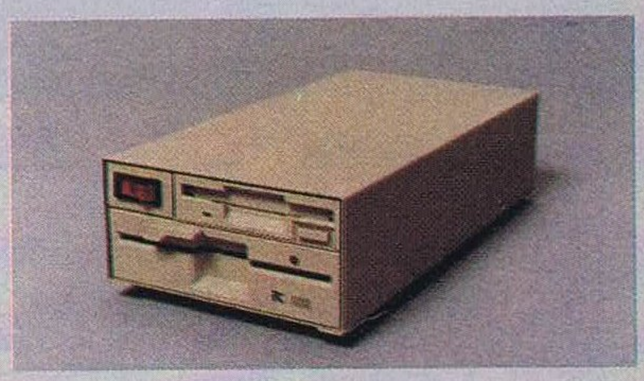

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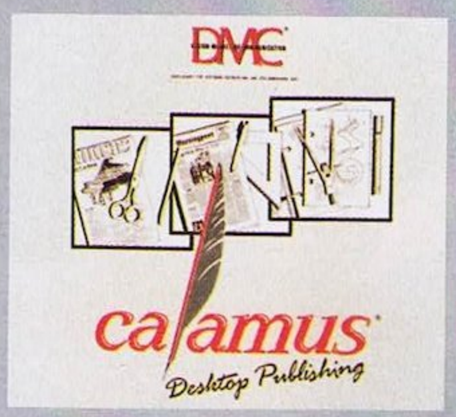

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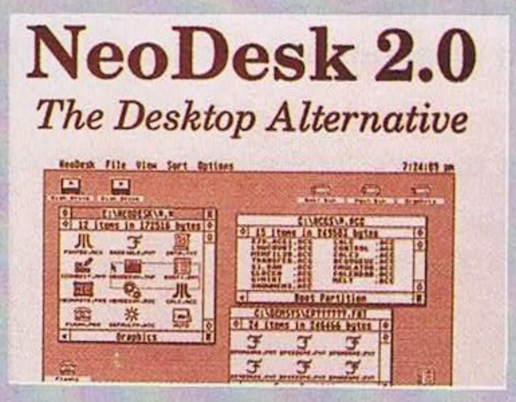

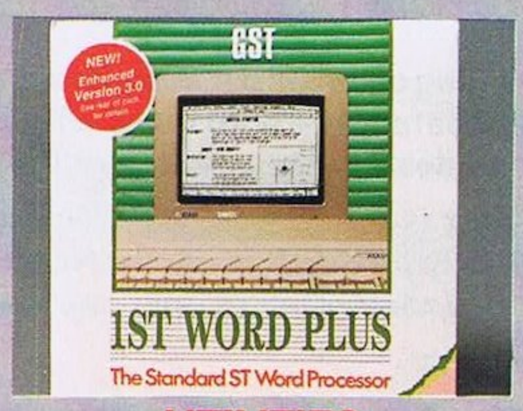

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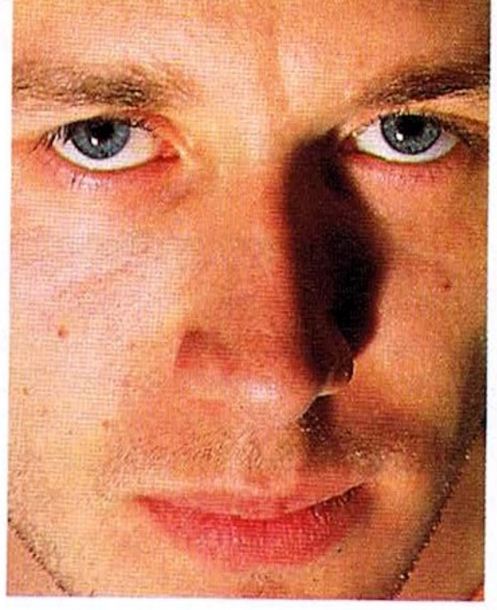
ST FORMAT

Thank you for choosing to join with us at this time. Welcome aboard what we modestly like to think is the best guide anywhere to what's "going down," if you will, on the ST, entertainment-wise. May we introduce our captain for this flight of *Screenplay,* Mark Higham? (That's him *(right)* – sorry if he gave you a bit of a funny turn). Take it away Mark, then bring it back and review it until it can't take no more. Here we go two three four...



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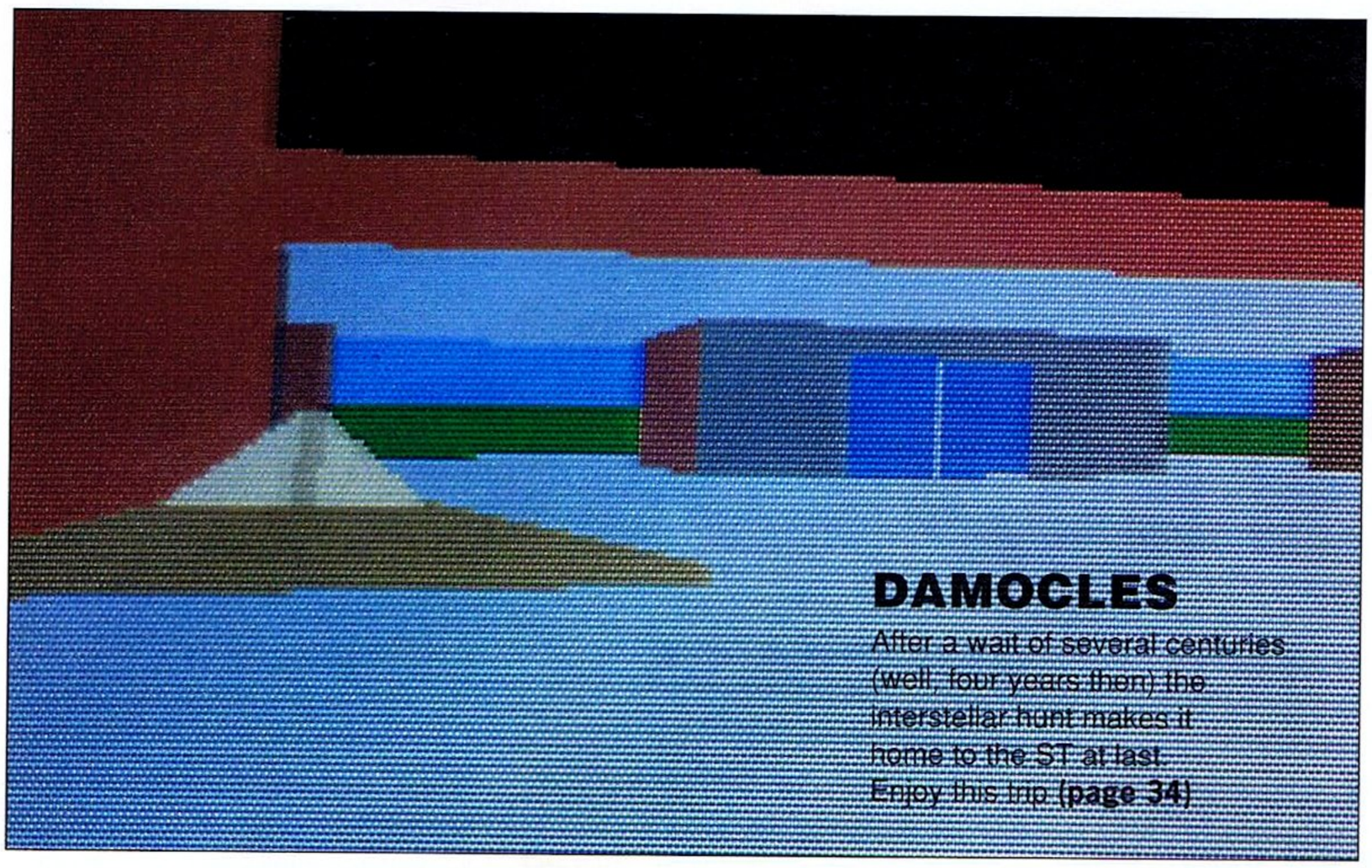


DAMOCLES

After a wait of several centuries (well, four years then) the interstellar hunt makes it home to the ST at last. Enjoy this trip **(page 34)**

AMC

We are talking horizontally scrolling shoot-'em-ups, back with a Dinamic bang **(page 43)...**

MIDNIGHT RESISTANCE

... and suddenly two trad shoot-'em-ups come along together. This one offers zilch in the originality department, but then that doesn't mean it's not a stonker. *Or does it?* **(page 46)**

PROPHECY

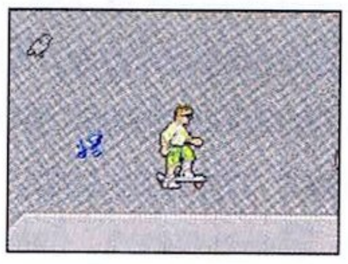
The programmers claim it has an even bigger landscape than *Rainbow Islands.* But then they would, wouldn't they? **(page 60)**

WIPE OUT

Skateboarding like you ain't never seen it before. *STF's* Cover Disk demo of two months ago: have we scored it about right? **(page 39)**

SKIDZ

A load of old rubbish? Gremlin's Refuse Collector Operative Simulator **(page 59)**



KHALAAN

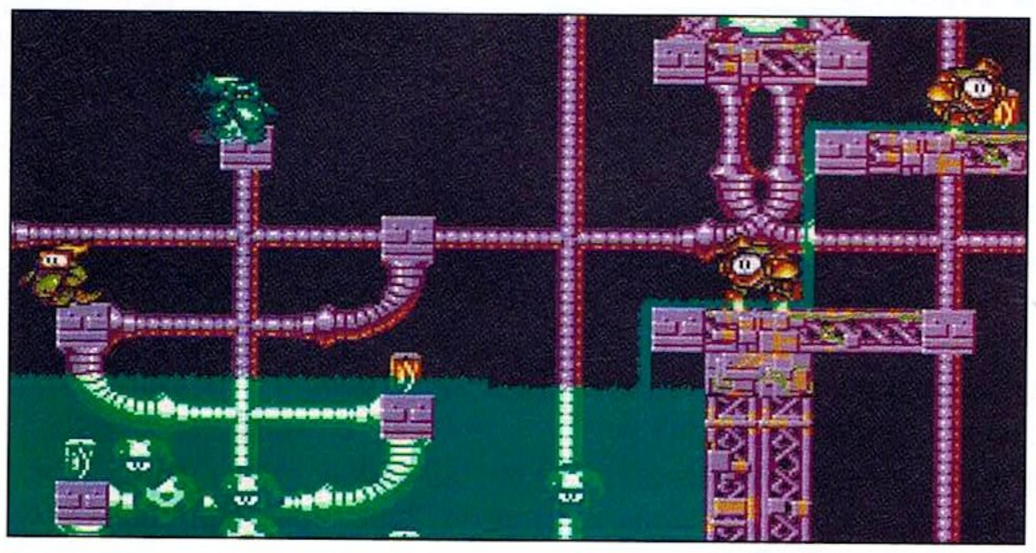
Take on kalifs and alien intruders in this bizarre strategy game from Rainbow Arts **(page 49)**

TREASURE TRAP

Look at the tentacles on that! A wild and wacky platform game **(page 52)**

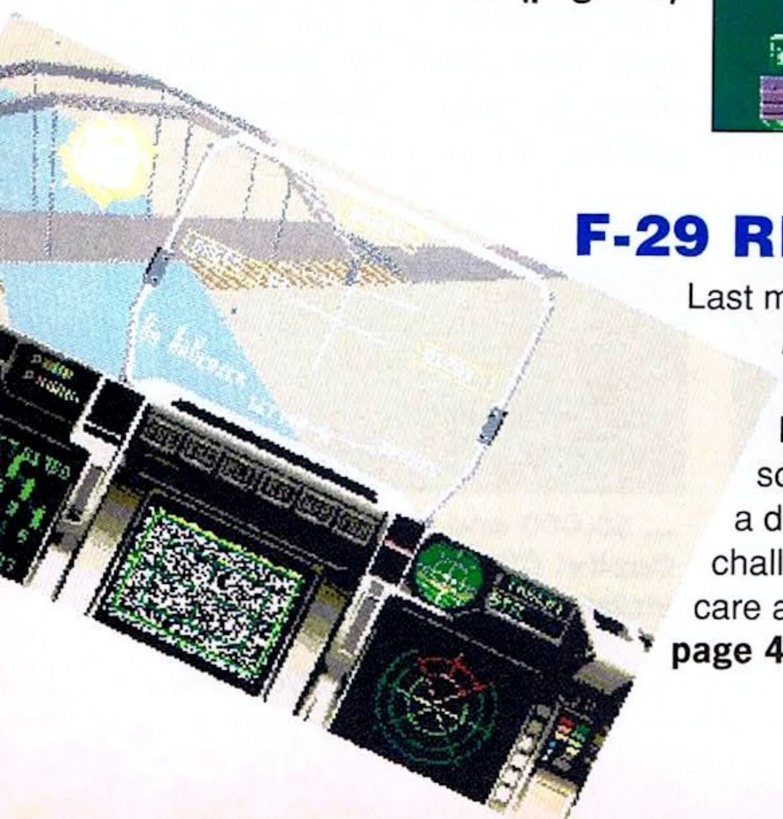
FLOOD

After the *Populous* sensation those wacky Bullfrogs aim to conquer the cutesy market. Is this one worth splashing out on? **(page 40)**



THUNDERSTRIKE

Welcome to the TV game show that makes Endurance look like the Care Bears. 3D graphics, blah blah – but is it likely to induce a coronary? **(page 50)**

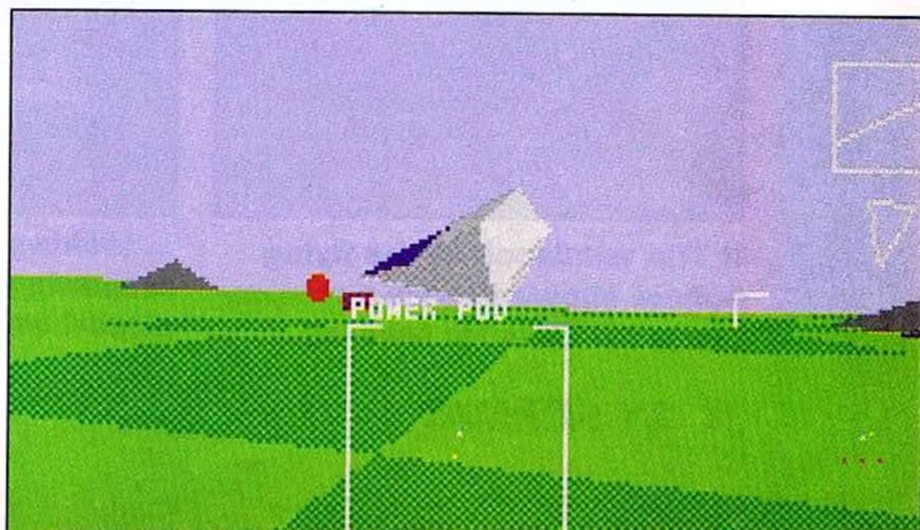


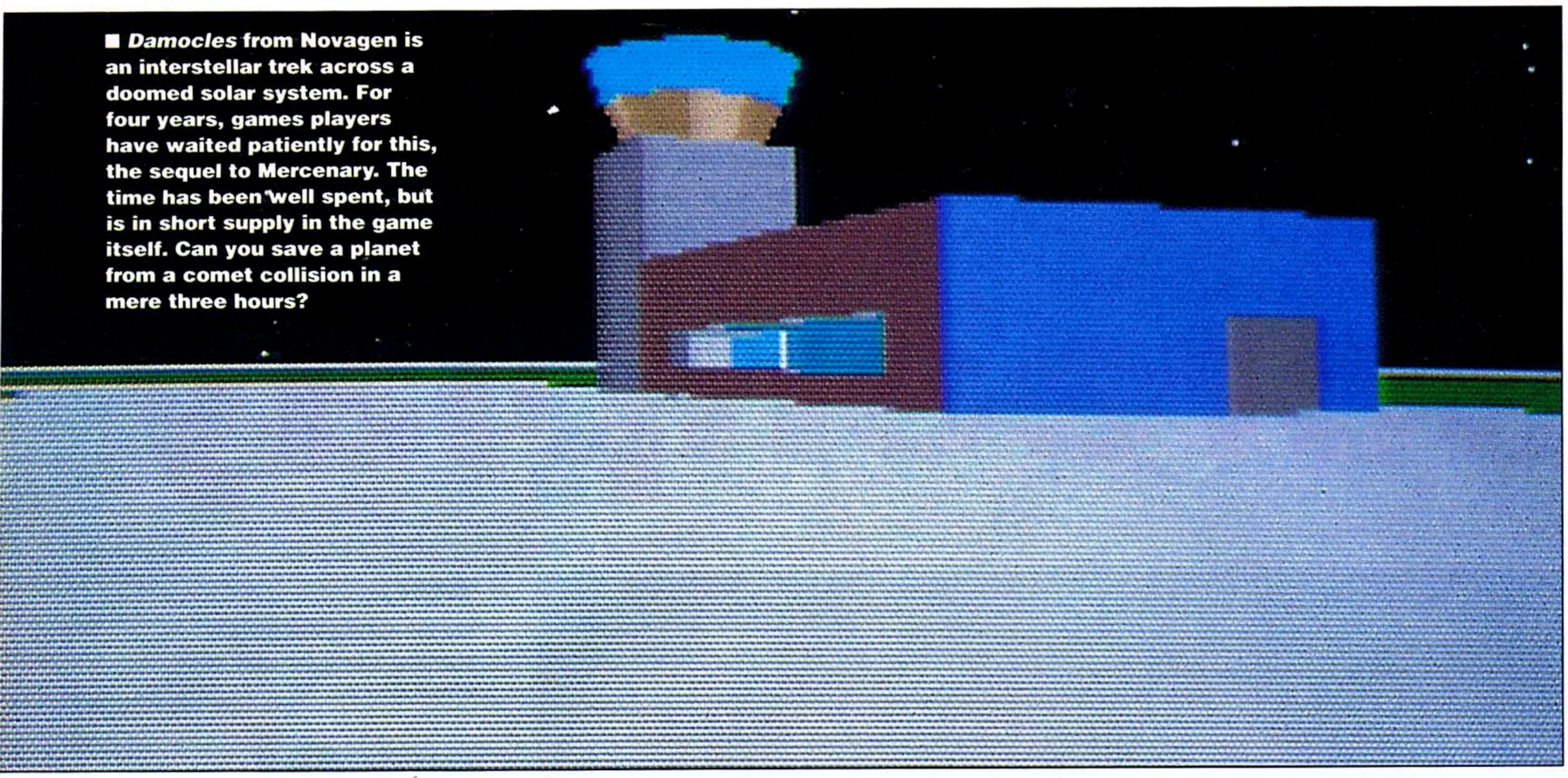
F-29 RETALIATOR

Last month we pronounced *F-19* the best ST flight simulator of all time. Now *F-29* comes screaming in with a devastating challenge. Take care as you open **page 45!**

ATOMIX

Where *E-Motion* trod before, *Atomix* comes tumbling after. Go for it, be a hero in a nuclear physics-stylie **(page 55)**





■ *Damocles* from Novagen is an interstellar trek across a doomed solar system. For four years, games players have waited patiently for this, the sequel to Mercenary. The time has been well spent, but is in short supply in the game itself. Can you save a planet from a comet collision in a mere three hours?

damocles

NOVAGEN £24.95

After four years pottering about in the garden it's time for all you ex-Mercenary bounty hunters to return to the action. Damocles, the long-awaited, earth-shattering sequel from Novagen is at last upon us. Neil Jackson talks to Benson, his shipboard computer, on the long, long journey into the heart of danger

If the prospect of thermo-global nuclear greenhouses and ice-age, polar eau-zones has you shivering under the bed-clothes babbling with fear, then *Damocles* is not for you. There are far more catastrophic ways to die if you look for them, and if you're a cash-loving mercenary you'll probably find them.

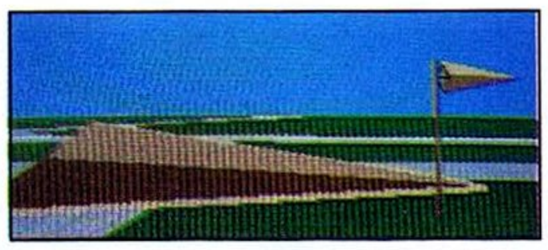
An old Greek legend tells of Damocles (a distant relative of Johnocleese?), who congratulates the king on how jolly nice it must be, being king and that. The king thought differently and showed Damocles how kingship *really* felt by hanging a huge sword, business-end down, over his head at a dinner party. It was attached to the ceiling by a single human hair. Damocles, as it were, got the point.

The legend neatly illustrates the death-threat hanging over the planet of Eris, where your game begins. A massive, planet-splattering comet (called Damocles, hence the title) is on collision course for Eris, whose leaders show similar bureaucratic inertia to the leaders on Earth. Nowt has been done except some talking, a bit of under-funded research and some more talking. They did send for you though, about four years ago, but had just about given up on you.

Arriving on Eris on a computer-controlled flight, you meet Benson, your ninth generation personal computer. In best Douglas Adams tradition, Benson (via his one-line text window) is sarcastic, immensely intelligent and bored stiff with the whole human/computer thing. He knows where to go, how to get there and which cutlery to use for the first course, but sure as hell ain't going to tell you until you work it out for yourself. *Then* he'll tell you.

His main purpose is to prevent you from flying too fast near the ground, and managing inventory and navigational systems. He also reads documents which are fundamental to the whole *Treasure Hunt*-type plot.

It transpires that you have a mere three hours to save the planet by either destroying or diverting the comet. Not surpris-



■ The windsock at the flying school shows there's a runway close by. Time for take-off...

... looking down from 50 feet presents a plan view of the airport and the road junction...

... firing up the main boosters shoots you up to 13,000 feet at lunch-repeating speed...

... 50,000 and the whole of Capital City island is clearly visible (ain't it cute?)...

■ **Screeching to a halt outside the State President's Office**

■ **Take a seat (literally), while President Maggie talks money**

ingly, the entire planet has been evacuated and you must find the solution yourself. Even the Eris state president, a chess-playing breadhead called *(ahem)* Margaret has run for cover and only communicates via Benson.

Your first task is to find her office and read the Damocles file which offers an insight into the problem and a possible solution. It seems a Professor Hantzen has been working on a massive Novabomb which could destroy Damocles, but he abandoned the project just before completion. After a game of chess he had a mega-tiff with the president and nipped off for a protracted sulk. If you can find his lab, you might, just *might*, be in with a chance.

You can walk or (considering the short time limit) run between locations on the planet surface. If you pick up a key from the spaceport office you have access to the high-speed car parked outside. It's simply a matter of point-and-squirt to control. Get in and out by pressing B(oard) or L(eave), select a forward speed (1-0 on the main keyboard) and hang on to the joystick. Staying on the road isn't absolutely necessary, but it helps navigation. Those all-important brakes are on the Spacebar.

If you can find them, alternative modes of transport are available, but you may need a key to use them. Aircraft cut down journey times and provide incredible views of Eris' earth-like surface. The planet is split into five islands so you can't visit them all just using a car. Use planes to island hop and cars to get around once you've landed.

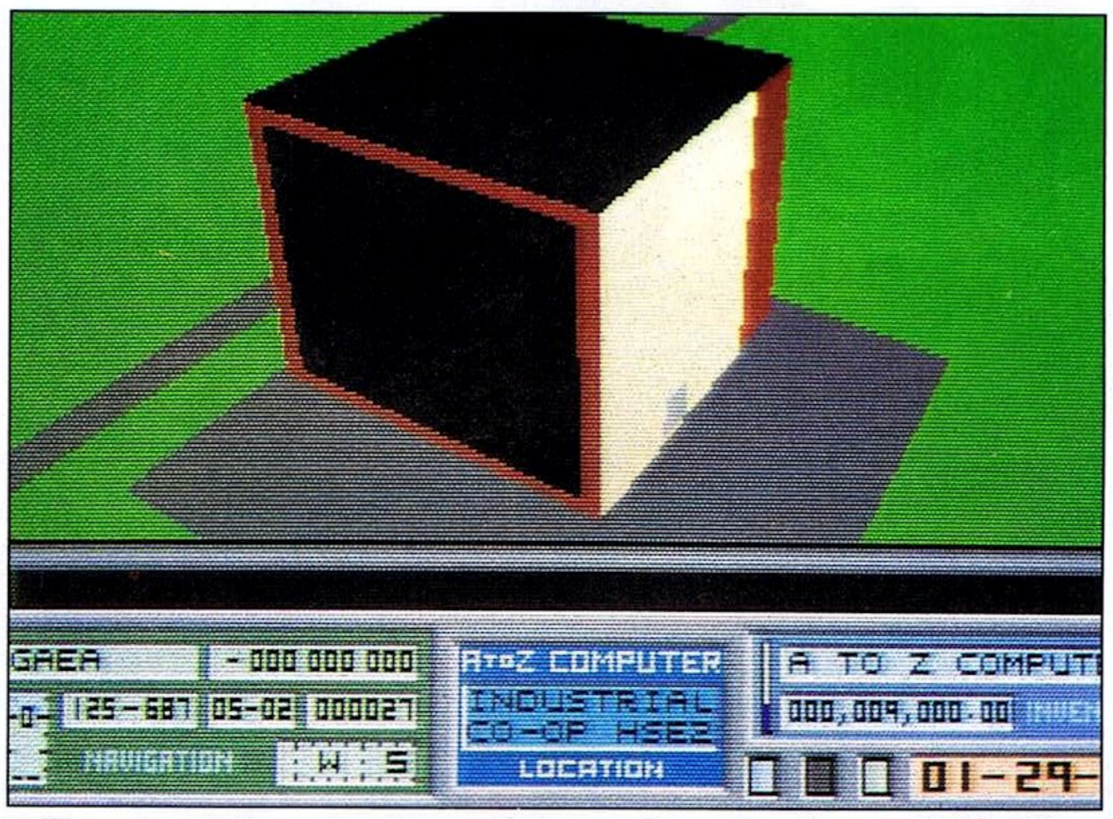
The spacecraft are best of all because they have the ability to leave the planet. A tap of the Escape key jettisons you at breakneck speed through the outer layers of the atmosphere. The whole planet fills the view, and then shrinks to reveal five shadowy moons. These include the oddly-named Vesta (home of packet foods perhaps?) and Lucan (so *that's* where he went). Before long the entire system vanishes to a tiny dot and the only visible object is the massive sun Dialis.

Be warned though, for interplanetary travel has an unpleasant side effect. As Einstein (confusingly) explained: time slows down for space travellers (but they don't notice it), while relatively, time passes faster on planet surfaces (and they don't notice it either). It's all got something to do with gravity dictating the speed of atomic clocks and other Tefal-head type stuff. What this means is the countdown clock that Benson displays simply *whizzes* around when you travel fast in space.

Your first space flight will probably result in Eris copping it full in the face from Damocles and showering planet crust throughout the galaxy. It's worth looking at a few times just for the effect. The moral of the story is to save your position before any space-flight. It's easy to get lost, and time slips through your fingers like sand.

A nice feature of the game is that you don't get the usual "You are crap, Game Over" when you mess up. You can keep on going, safe in the knowledge that it can't get any worse, and examine literally anything you fancy. There are nine planets and 19 known moons to explore, but not surprisingly if Eris has "hit the big one," then you aren't going to find any clues there because Eris is in bite-sized chunks floating round the galaxy. When you've had enough you can re-start and put plan B into action.

There's a sneaky way to save time, and that's by travelling faster than time itself. If you follow the trail of well-hidden clues you may locate a teleporter. These are strategically positioned around the galaxy, some on inhospitable moons and others deep in the bowels of locked buildings. It's not immediately obvious what they are when you first find them, but without giving too much away, *you can't pick them up.*



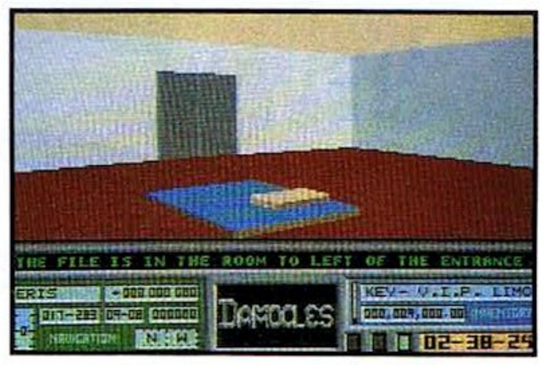
■ **The planet Gaea is a long distance from the doomed Eris. If you can find your way here in time, useful items can be found in the Industrial Co-ops. Open Bank Holidays, save £££s!**

The tutorial scenario is to blow up Damocles using the Novabomb, but because the teleporters enable you to cover more ground, they provide seductive glimpses of alternative solutions. As a mercenary, you should always be on the look-out for other ways to get the job done and maximise the cash.

If you can save Eris without destroying the comet, you stand to make some serious bucks. This is because the usual bunch of speculating pinstripes reckon there's money to be made out of a "pet" comet in the tourist market. Not that it matters a monkey's to you; why not have a bash for the cash? It means you have to do a lot more hunting to find one of the alternative solutions, but there are reputedly five ways that it can be done.

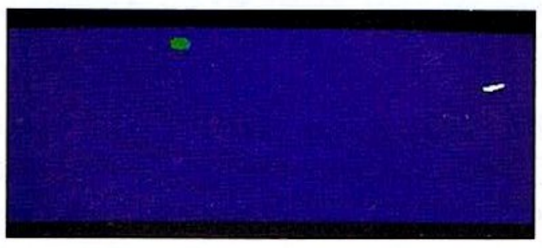
If you can't be bothered, or if you have a thing against comets, you can safely trudge along the most obvious trail, build the bomb and cream the comet. This still isn't particularly easy. You have to be on the alert for the slightest clue and search everywhere you go. This takes time, and on the way you'll experience some odd setbacks. A nearby planet, for example, is home to a large number of estate agents (who've all evacuated) and the cities are full of their old offices. Take care when you enter them, because there's one thing estate agents are renowned for, and it's *not* giving you money. You'll find out the hard way, but some good may come of it – if you're lucky.

You might also stumble upon trading posts, large buildings with huge picture windows facing the street. Put your nose up to the window and you might see an object in the centre of the room. Behind it, on a large black sign is the current price. If you have enough money you can enter the shop and buy the displayed item.

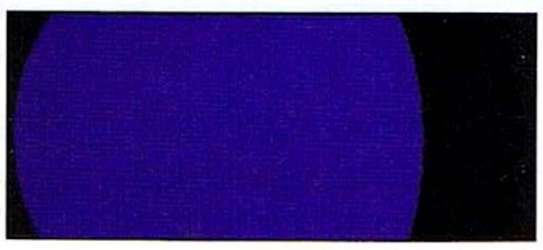


■ **Don't forget to read the Damocles file, will you? It contains tons of hints to point you in the right direction – if you can work them out!**

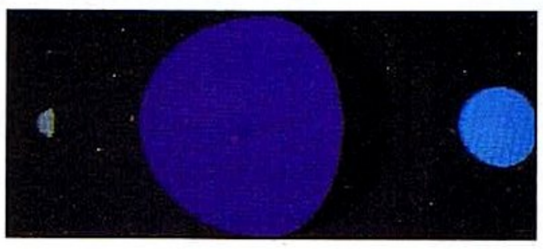
You may find an empty trading post, but this isn't necessarily bad news. Enter the display room and the black sign flashes up the offer price for the object currently



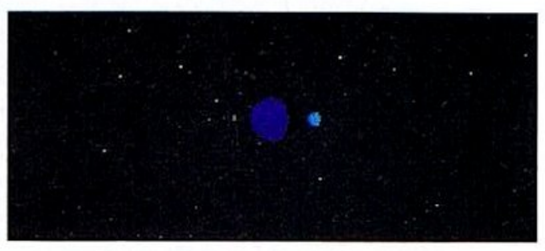
... at 240,000 feet Snow Island is visible. You're almost out of the atmosphere now...



... punching your way through the top of the sky, the planet Eris becomes a blue globe...



... as you zoom away faster than time, the whole Erisian system heaves into view...



... and rapidly shrinks as you penetrate the outer echelons of the cold, unforgiving galaxy

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Now, with the release of the Atari and Amiga versions reviewers are reaching for their dictionaries to find new superlatives. ZERO described the game as 'totally excellent', the sound as 'absolutely brilliant' 89%; Your Amiga rated it 'the best soccer simulation to date – 95%'; YC World Cup Winner 97%.

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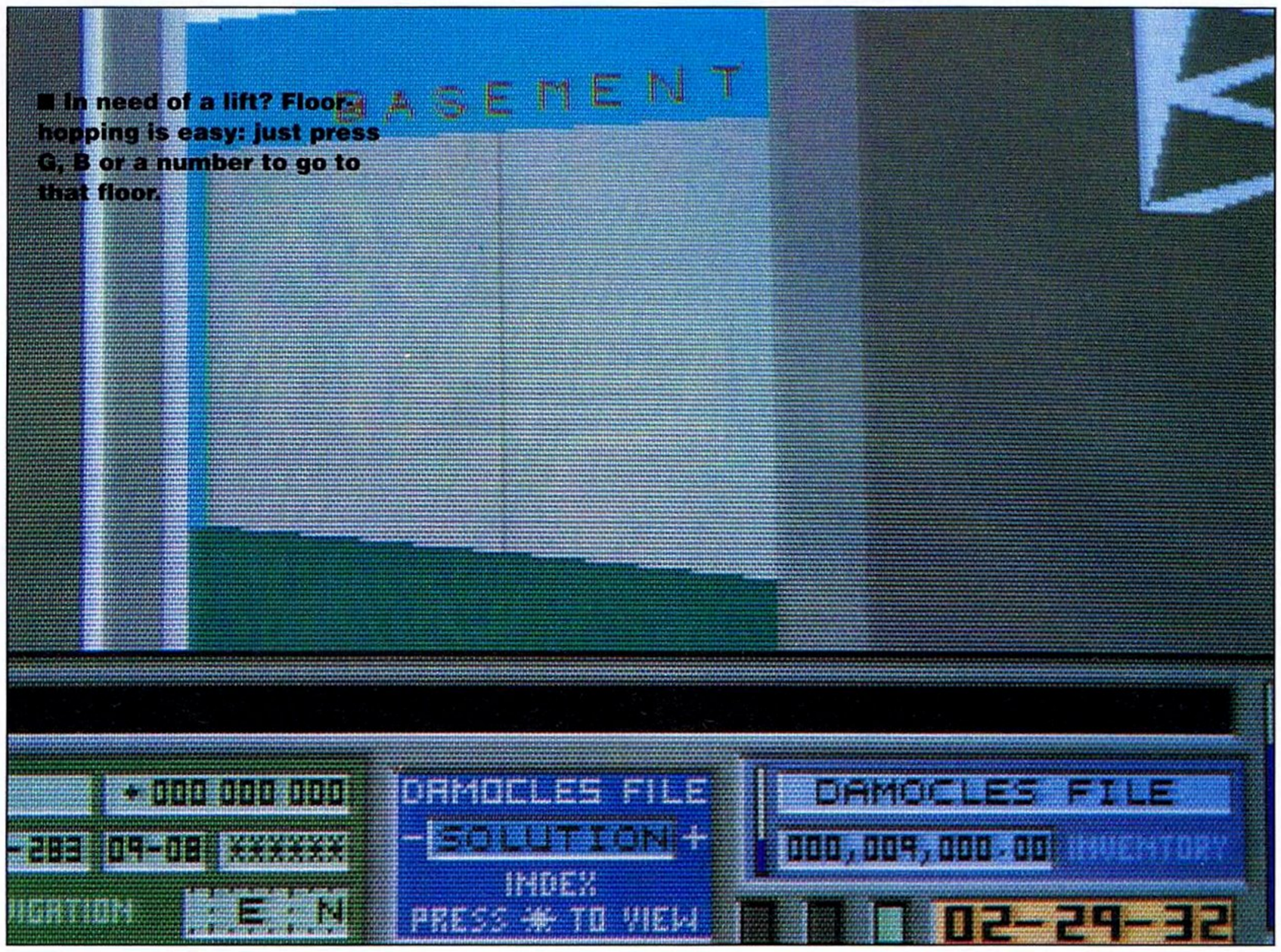
■ Ding! Ground floor, street level: menswear and pressure suits



■ In need of a lift? Floor-hopping is easy: just press G, B or a number to go to that floor.

selected in your inventory. Press the left and right arrows to cycle through your possessions, and the board makes an offer for each item in turn. If you get a good deal, drop the object by pressing the down arrow.

This method of trading may be easy, but it means you can only buy or sell one item at a time. To buy something with the profit you've made from an exchange, you need to find another trading post. Like most of the places in the game they don't exactly jump up and down and say "I'm a trading post." Unless, that is, you find a handy device called the A to Z computer, which can be opened and left on constant display.

The A to Z guide tells you the name of the nearest building even when you're flying at high altitude. You can fly in a systematic pattern over cities and islands to find the one you really want to land on, which saves heaps of time. The A to Z even handles planet-hopping by indicating the nearest planet.

There are plenty of other objects which are useful in your quest and the ones for the Novabomb solution are well-disguised. If you're not sure about the thing you've just picked up, press Enter to examine it in the *Damocles* window. If it can be used or read, the display alters and gives you either an index or a simple switch. Some of the most powerful objects in the game look really ordinary, so check them all.

EFFECTS

Damocles is bursting with atmosphere; after a simple title screen you're immediately plunged into the captivating plot. The control panel isn't visually stunning, but you spend most of your time checking the text and watching the world outside so you don't really notice. At least it's easy to read and provides all the guidance you need via Benson and the display windows.

The view of the game world is excellent, with the exagerrated perspective reinforcing the feeling of being there, at the same scale as the buildings, and the display's fast update speed being crucial to the illusion of fluid movement.

There are no major-league show-stopping sound effects. Instead there's an engine *whoosh* related to your speed, and the bleep-burble-bleep of Benson's teletype. Strangely the absence of music or samples doesn't register. By the time you notice it you're already sucked into the plot and it just doesn't matter.

VERDICT

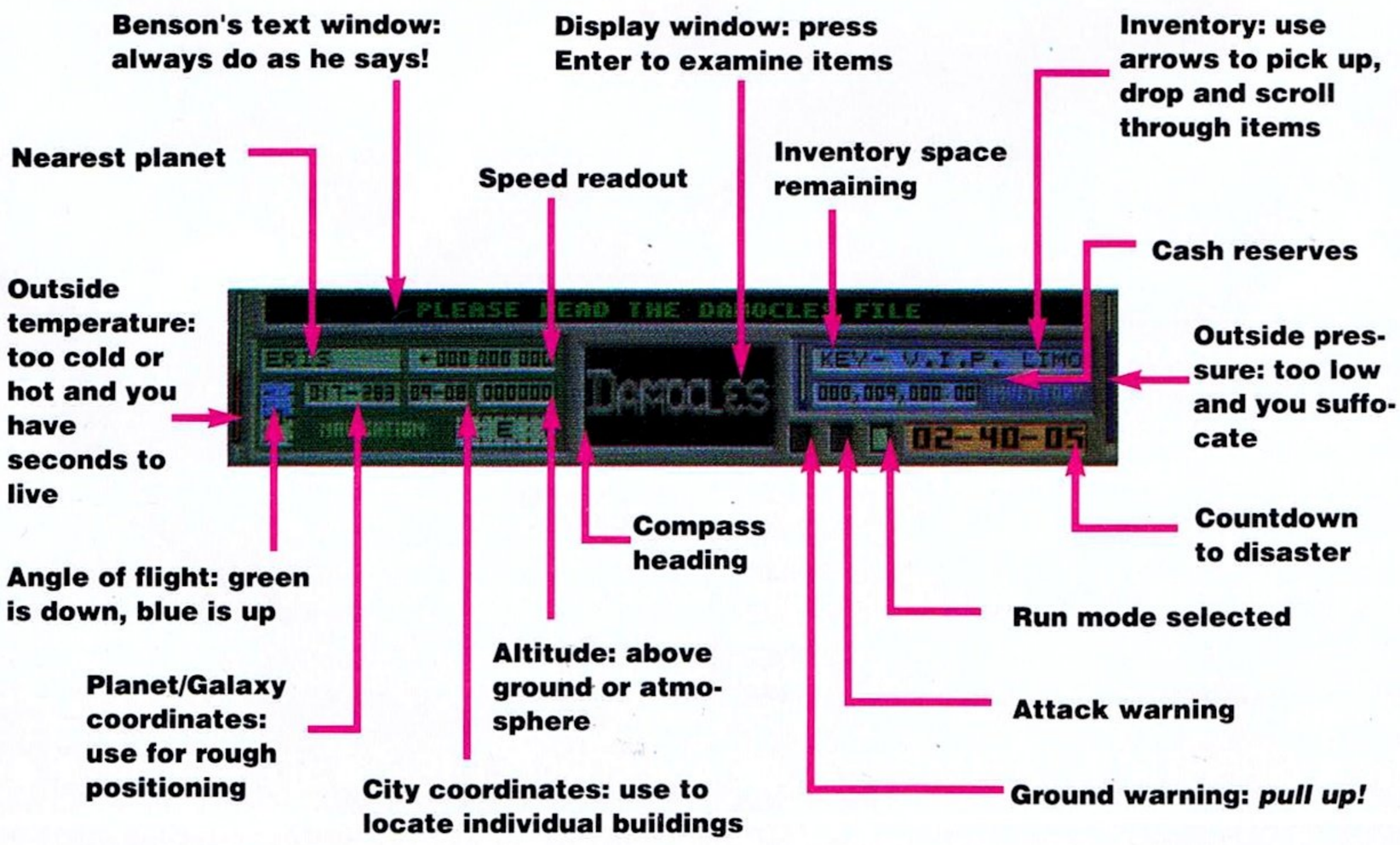
You can have masses of fun in *Damocles* just playing with the automatic doors, looking out of ninth storey windows and shooting through tropospheres at a million miles an hour. You really feel as though there's nothing you can't do and nowhere you can't go.

The superbly designed plot peels back piece by piece to reveal a wealth of intrigue, twisted logic and dry humour. There are some excellent observations of human behaviour parodied in the Erisian way of life, with Post Offices losing important parcels and an apparently sincere president who is extremely manipulative with money.

Damocles keeps pulling you back to the screen, no matter how much you want to go to bed. There's always something to do and maybe just enough time to try it. Switch on the coffee-pot, sit down, and watch the dawn come up again on Eris. Chances are the same will happen outside your window.

NEIL JACKSON

A MERCENARY'S GUIDE TO THE COCKPIT



GRAPHICS	8
SOUNDTRACK	5
INTELLIGENCE	9
INSTANT APPEAL	9
LONG TERM INTEREST	9
OVERALL	**94%**

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PALACE

■ A mechanoid and a human go for it in the best *Wipe Out* style: racing round a rectangular arena desperately doing their best to avoid the "Big Wall"

GONZO GAMES £19.99

wipe out

His name's Zup. Serf Zup. And he's all that stands between you and the Hall of Fame. Unfortunately he's the International Pan Galactic Universal Champion of the Hoverboard circuit.

In a cross between *Big Wednesday* and *Back to the Future II*, *Wipe Out* lets you join the futuristic sport of hoverboarding. Starting out as a lowly inhabitant of a backwater planet, your task is to ride the electromagnetic wave on countless planets in a search for fame, fortune and a presenter's job on *Grandstand*.

Playing hoverboard is easy in theory. You face an opponent in a small area, each starting from different positions, and the aim is to stay on your board longer than him/her/it. This is difficult because a hoverboard leaves a crystalline wall behind it. Tactics vary but the aim's the same: get your opposite number to crash either into your trail or the arena wall. If it sounds like a scene from that cinematic flop *Tron*, that's because it is.

Playing on a split screen, you have the eye-bending task of controlling your player, watching what the other guy's up to, and keeping an eye on the pitch radar which shows where you've been and what you're about to hit. Luckily the crashes which look terminal aren't.

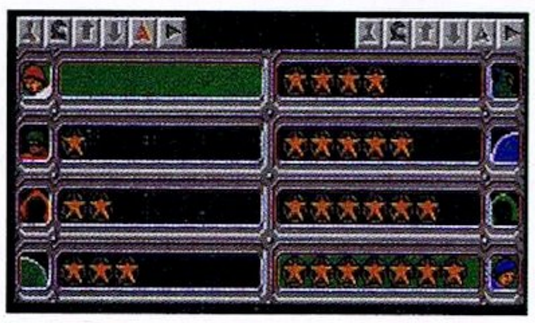
A match is made up of three sets of three bouts, with the final set being won by two clear bouts. You just have to boogie out there, hang ten (or more if your rider's an alien), and get mean. Winning games earns you cash with which to buy bigger, better boards, go-faster stripes and fluffy dice.

A series of victories earns you the right for a promotion play off. These pit you against the worst player in a higher league, take place on a much, much, much smaller arena and are decided in only three bouts – so there's no room for mistakes. A win promotes you to the next division.

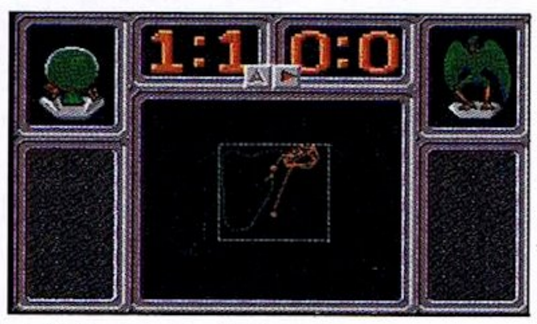
To begin with you've only got a poxy 500 credit overdraft limit, although this grows as you start to win. Riders have a choice of waiting for the league to arrange matches or going out and paying for the privilege of picking their own victim. Interstellar matches, when you arrange a board duel with a thing from another planet, require plenty of wonga, so it's advisable to start slowly and build up your cash before you begin star hopping. As the rewards get greater so does the danger; the foes you meet having the very latest in board technology.

Hoverboarding is a game of skill. Once you get over the initial "I wonder what happens if I hit that green wall?" mode, it allows the chance for some real self expression. And if you want to get seriously cocky you can use the practice section to pack some kickin' little tricks into the armoury. How does the chance to "slime," "coffin," "blip" or "swiss roll" an opponent grab you?

■ Player one comes a cropper despite the in-game radar screen



■ Select your next victim on the practice match screen



■ After a match you can see where you were wiped out

EFFECTS

While it's clear the Gonzo gang have imagination and humour by the bucketload, this doesn't make up for the lack of stunning effects in *Wipe Out*. The graphics are hampered by jerky scrolling and less than distinct backgrounds. Seeing you're straining desperately to avoid hitting that wall, it would be nice if it had the decency to stand still!

The soundtrack is a far from thrilling musical experience, and not the sort of music you leave playing loud while taking a bath. The effects are solid workhorses fulfilling their purpose, but doing little to enhance the game.

VERDICT

Wipe Out, despite technical limitations, is fun to play, especially against a friend. Sliming those you know is infinitely more satisfying than doing it to some computer generated enemy – possibly because they're easier to beat!

Once you start the competition you appreciate the sheer scale of the project. To become champion takes weeks of careful playing, because every time you take to the hoverboard your league rating's affected.

The scope for skill development gives the game a much longer life span than you'd expect from such a well-worn game format, but there's nothing in this imaginary universe that screams "Play me!". It's not so much an off-the-wall gaming revolution, as an into-the-wall game from a classic genre.

TRENTON WEBB

GRAPHICS	4
SOUNDTRACK	4
INTELLIGENCE	6
INSTANT APPEAL	7
LONG TERM INTEREST	5
OVERALL	**64%**

■ *Flood* is the Bullfrogs' contribution to the cutesy scene. Your task is to collect all the cans located on each level and find the exit to the next level. The game has an ingenious water theme to it. The longer you take, the higher the water rises. If you aren't quick enough you drown

flood

ELECTRONIC ARTS £19.99

After last year's extraordinary success with Populous, Bullfrog have opted to go cutesy. Powermonger may be their next big strategy game – catch our exclusive ST preview on page 80 – but before that comes Flood: Mark Higham wonders whether Bullfrog are out of their depth

■ Your first task in any level is to pick up the bonus weaponry. Without it you don't stand a chance against the bad guys

There are two kinds of ST games player: those who played *Populous* last year, and the unlucky ones. The fortunates will be avidly awaiting anything Bullfrog attempt, even if it's "only" a cutesy platform game; while those who found the very idea of *Populous* a big turn off are much more likely to be attracted to *Flood*. The former won't be disappointed, and the latter may well be persuaded to save up for *Powermonger*, the next project by the guys from Guildford. One way or the other, the Bullfrogs are well on course for world domination.

To *Flood*, then. The objective: to collect all the trash cans in a level and find the exit to the next level. On many levels water quickly builds up and submerges the cans. To pick these up you need to dive into the water and walk over them. With only limited supplies of oxygen you can't stay underwater for long without drowning.

Collecting the trash cans can be a nightmare in itself. Levels consist of platforms and blocks which need to be scaled if you want to pick up some of the more obscure cans.

Yet *Flood* isn't just a straightforward joystick exercise. Each level pulsates with bad guys, from tumbling balls to ghosts — and

even demonic teddy bars! When the game begins you have grenades you can toss at the bad guys: lob one and leg it fast or you get caught in the blast.

Other weapons are scattered around the levels. One of the best is the flamethrower: hold down the fire-button and singe anything that comes towards you with a long laser of red and orange flame. There's a comic element to the game as well. If you shoot the flamethrower too often, it ends up being temporarily transformed into a chicken the next time you attempt to use it.

Various icons scattered around the levels liven up the action still further. Some give you bonus points, extra energy or different weapons, while others can be an ordeal. One acts as a switch, setting off a line of missiles which make part of the level inaccessible for the rest of the game. Another is a mine which throws you into the air. In one of the later levels there are several mines joined closely together and arranged in such a way as to blast you all the way up to the top of a deep well.

The water theme forms a cohesive thread throughout the game. Streams of water flow from taps, and if you get caught in the current you can be swept away. The water often builds up at the bottom of the levels, quickly climbing to submerge caverns, ladders and trash cans.

There's one more hazard: a blue ghost. It can't be killed by anything and occasionally you run into it during the action and lose your energy. If you take too long to complete a level, the ghost follows you closer and closer, eventually stealing all your energy. It's a bugger, it really is.

BULLFROG: PLATFORM SOULS?

This isn't the first *Flood,* because the Bullfrogs have been working on a platform game for nigh on two years. In one version the game was based around the idea that water would rise and mould itself into caverns, then flow over the edges – by no means as easy to program as it sounds. To get to this final version the game has been enhanced by a series of intensive rewrites until the Bullfrogs were eventually happy with it.

"It started off like a *Joust* thing where you were on this bird that flew up," explains Bullfrog head honcho Peter Molyneux, "and there were all these different ships you could fly around on. Then it changed into a spaceship game, where you had to solve all these puzzles. It had a main view and four mini-views with these cameras you could send out. And then it turned into *Flood!*"

In that time several different programmers were put to work on the game, with the final rewrite accomplished by Sean Cooper.

"When we design a game we don't do detailed specifications – in fact the spec for *Powermonger* was only two pages long!" admits Molyneux. "We wanted to do a platform game, and it's nice to appeal to people who wouldn't be interested in *Populous* – any suggestion of strategy or anything like that and they run a mile. But that all sounds very market-oriented, as if we planned to get a bigger share of the market. Nothing could be further from the truth!

"What happens is, we get to a certain stage in a game, ask ourselves whether we still really like it and only then decide to continue or not. That's a very expensive and time-consuming way to do it, but at least we get something at the end of it that we enjoy playing. Tell you what, though: it won't be happening again!"

■ **You're stuck in a bonus section of the level. How the hell do you get back?**

■ **There's the exit looming in front, but you can't get there without bumping into the snail**

EFFECTS

Only a portion of each level is shown on screen at any one time. As you leap into the air or move in any direction, the display scrolls smoothly to show more of the level. The game is littered with hosts of enemies waiting to be blasted, but it's actually the weaponry which looks the most appealing. Weapons such as the flamethrower are amazing and the grenades leave behind such effective explosions that they make your journey through the maze of platforms perilous.

There's an excellent sampled intro tune composed by Charles Callet, the Frenchman who did *North and South.* And this is complemented by superb burp-and-fart spot effects that ring out whenever you fire weapons or fall victim to the bad guys.

VERDICT

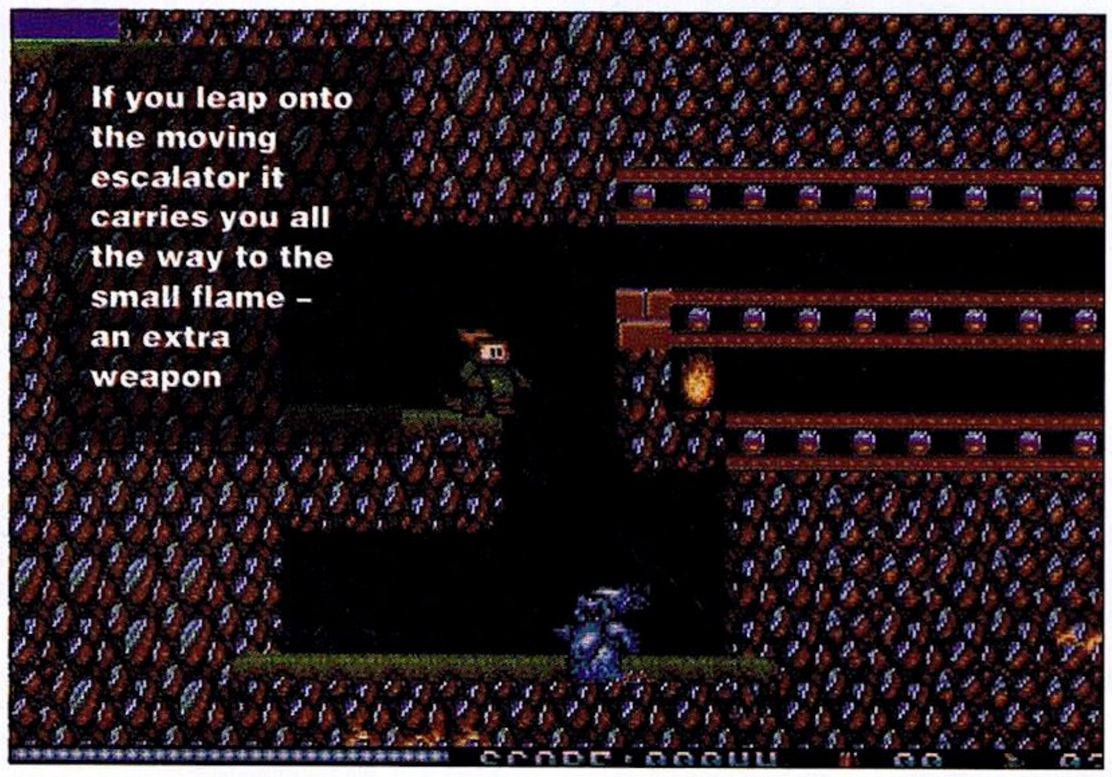
In *Rainbow Islands,* the baddies – giant spiders and fluffy toys – added enormously to the game's cuteness. In *Flood,* however, there's something horribly sinister, macabre, and violent about the murderous ghosts, missiles and bouncing balls.

On the other hand, *Flood* is a stiffer challenge, because to succeed you often need to work out the best way to scale walls or pick up elusive trash. As levels progress you find yourself hot on the tail of enemies who are busy strewing trash, but with the right weaponry at your disposal you can defeat anything.

Be prepared for a tidal wave of addiction. *Flood* is one of those "just-one-more-go" games. Start playing and you won't be able to stop. It's a frighteningly absorbing challenge, well worth all those hours you are going to spend playing it. It's just a question of whether you can finish it before *Powermonger* arrives.

MARK HIGHAM

GRAPHICS	7
SOUNDTRACK	6
INTELLIGENCE	4
INSTANT APPEAL	9
LONG TERM INTEREST	8
OVERALL	**91%**



■ **Level four is a tricky one. Climb the walls and leap onto the platforms**

■ **Pick up the flamethrower and blast the brains out of those Garfield characters**

■ **The water rises, but there are cans down there to collect. Dive for them!**

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■ After *Army Moves* and *Navy Moves* comes *AMC*, the latest Dinamic shoot-'em-up. Charge through five horizontally-scrolling levels, blasting aliens and picking up pods. All very good fun, but sadly overdone

Accompanying the recent surge in original games such as *Resolution 101*, *Sim City* and *Gravity*, we've seen a noticeable decline in the number of straightforward shoot-'em-ups. But if you're worried about the genre's extinction, relax, because Dinamic are coming to the rescue with *AMC (Astro-Marine Corps)*. With two platform games to their credit already (*Army Moves* and *Navy Moves)* Dinamic have a reasonable track record.

AMC is a the epitome of traditional shoot-'em-ups, doggedly refusing to deviate from the standard formula. The game is split into increasingly difficult zones. Fortunately you're given a password as you complete each zone which returns you to your last uncompleted level if you fail to make it through alive.

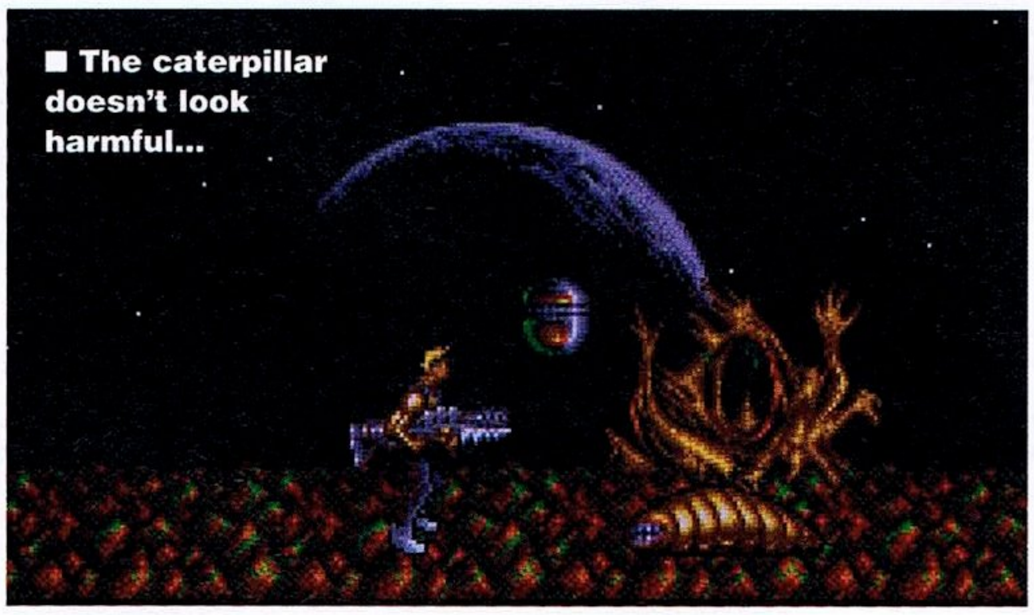
The objective of each zone is to walk through a horizontally-scrolling landscape, blasting at the hordes of menacing aliens. There are twelve types of enemies to defeat and many of them can stick to roofs or dart out of range.

Destroying some of them releases bonus pods which give you all sorts of special weapons. For example, a Positron shield gives you temporary immunity and a triple-shot laser divides your shots into three directions.

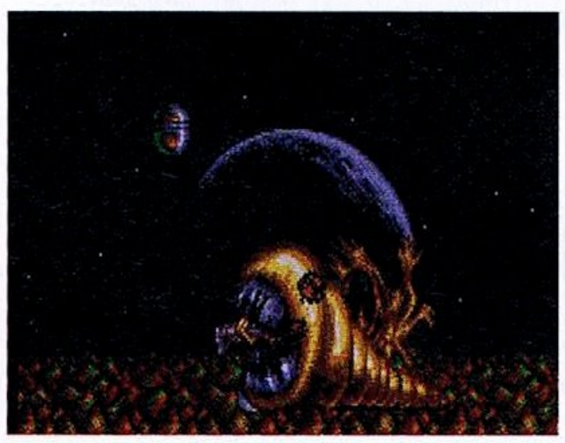
■ Level ten and the action is really hotting up. Zap this creature with your bazooka and pick up any bonus pods released

DINAMIC £19.99

amc



■ The caterpillar doesn't look harmful...



... until you get close (left). That's another life over

■ (right) Your enemies are well animated. This monster isn't even an end-of-level guardian

The landscape is absolutely full of problems: there are huge chasms to leap over, fatal plants which merge with the background, and cannons to avoid. At various points, laser barriers block your path and can only be switched off when you blast a nearby sensor.

At the end of each level there's the traditional guardian to defeat. They fill the entire screen and to annihilate them, you need to work out the precise place to fire.

EFFECTS

There's nothing original about the style of *AMC*, but it differs from other Dinamic shoot 'em ups because of its outstanding graphics. Sadly on an Atari monitor you miss a great deal of the excitement and the visuals look so dark it's impossible to make out much of the background. But with two planes of smooth parallax scrolling, much of the action looks sleek and each level is littered with brightly coloured aliens.

Sound and music are similarly effective. After a sampled intro tune, you're into the game proper and there's a spot effect for every single bullet, laser cannon and grenade explosion.

VERDICT

The *Moves* games weren't huge hits, largely because they were so maddeningly difficult to complete. In *AMC* Dinamic have avoided this problem with a surprisingly easy first level.

AMC is certainly a competent shoot-'em-up, but it's no more than that. There's nothing to make the game memorable, though that isn't to say it's boring. The action is fun, mindless, and absorbing, and the huge range of enemies and bonus pods keeps it that way for hours. Nevertheless, the day when hackneyed game styles can succeed because of brilliant graphics has gladly gone.

MARK HIGHAM

GRAPHICS	7
SOUNDTRACK	6
INTELLIGENCE	2
INSTANT APPEAL	8
LONG TERM INTEREST	5
OVERALL	**69%**

COMING SOON...

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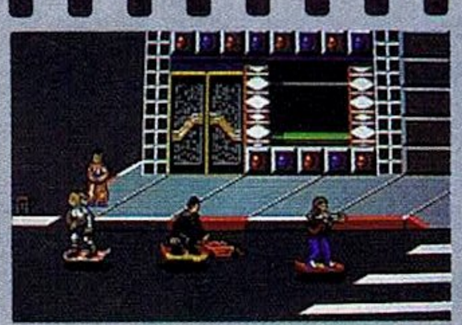

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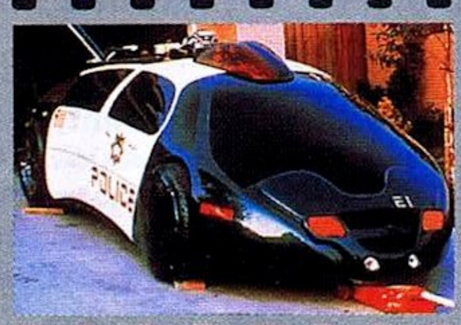

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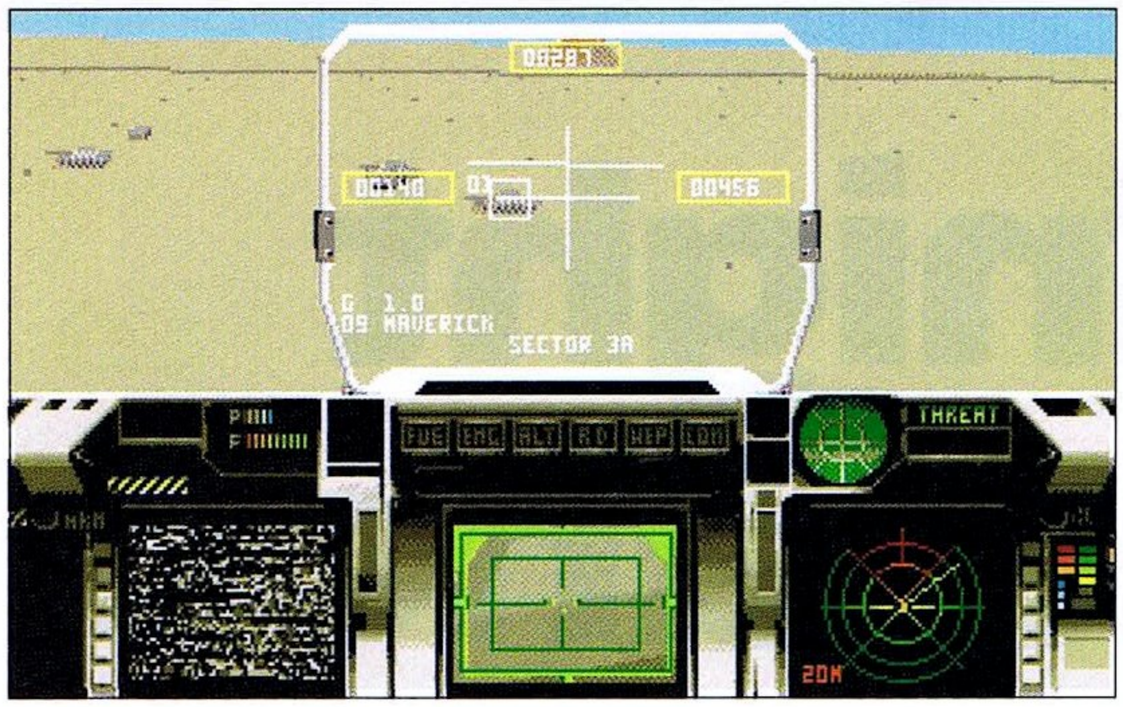
IMAGE WORKS, Irwin House, 118 Southwark Street, London SE1 0SW. Tel: 071-928 1454 **SCREENSHOTS:** Atari ST 4 & 5 Courtesy of MCA

F-29 retaliator

OCEAN £24.99

The world of 3D vector flight sims has taken a new twist. Bored with the same old planes in the same old sorry scenes, Ocean have created the Grumman F-29 Retaliator and the Lockheed F-22 ATF. Now you can fly new and exciting planes in the same old sorry scenes.

The aircraft designs are a mixture of existing information and foresight. Short Take-Off and Landing (STOL) is the order of the day and enhanced aerodynamics make handling in the air a piece of cake. Futuristic missiles, which shoot backwards, give these planes the edge over those in *Fighter Bomber* and *Falcon*.



■ Go tankbusting in *F-29 Retaliator*, the latest in high-tech flight simulations from Ocean. Its fantastic array of futuristic missiles and other weaponry makes it easy to get stuck into the action quickly

Like *Falcon*, you can fly at several military ranks which affect your point-scoring potential and the maximum number of weapons you can carry. Unlike *Falcon*, your craft's handling characteristics remain the same, but the F-29 is so easy to fly that this doesn't cause problems.

The action takes place in several arenas: a training ground in Arizona, the Middle East, the Pacific, and (big fanfare) Central Europe. It seems odd that in the 21st Century the human race is still slogging it out over the same bits of Terra Firma, but maybe Ocean know more than Reagan and Gorby.

The missions are very similar to *Falcon, Fighter Bomber* and *F-16 Combat Pilot*, with the usual destruction of tanks, convoys, bridges, factories and enemy planes. Visually these targets are exciting, but most of the terrain passed on the way isn't. The mountains have large invisible collision detection areas and roads appear chunk by chunk, destroying all credibility.

The cockpit displays are the best part of *F-29*, with radars sweeping from side to side, and missile cameras showing the full impact. Display panels can be altered to show a variety of instruments, including a scrolling map which constantly shows your direction. This makes navigation easy, which is useful because you often can't tell one bit of land from another when you look out the window.

■ "Angels! Angels! Ten o'clock!" And we're not talking flying nurses here. Keep a spare pair of underwear in the glovebox for those close-combat collywobbles. Once those MiGs spot you they won't let go!

■ Blowing up the bridge couldn't be simpler – if you avoid enemy planes. *F-29* provides gut-wrenching views during missions, making you want to lean away to correct heady feelings of vertigo

■ Bearing down on a battleship in the Pacific Ocean, you're too close to launch your air-to-surface missiles. Switch to standard cannon quickly and casually strafe the deck with lethal fire as you pass

EFFECTS

F-29 looks and feels really exciting, especially during heavy fire in the target zones. The range of colours is realistic and they are complemented by the excellent cockpit design. There are eleven possible viewpoints, internal and external, but not enough player-control over them. It's impossible to do the old *Falcon* trick of watching yourself land from the control tower or even look around the outside of the plane.

Sound effects are well-matched to the game's atmosphere. If the engine noise in *Falcon* annoyed you, you'll love the sound of the F-29 powerplant. Cockpit controls are enhanced with a good solid bleep, so you know for sure you've hit the button even if you're too busy actually to check the panel.

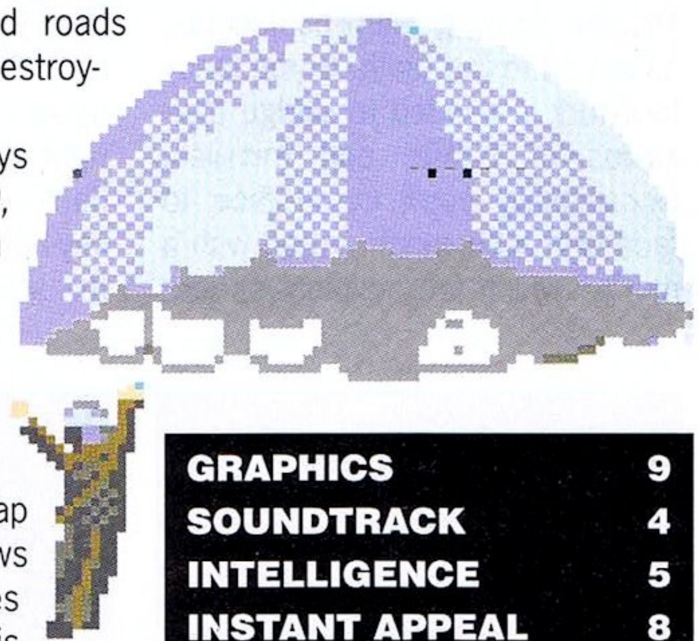
Sadly, *F-29* is lacking any music, a major oversight that's especially evident during the long, well-presented front end sequence. This makes disk-loading boring and does nothing to set the scene.

VERDICT

There's no denying *F-29* has instant appeal, but after a few missions you're left with the feeling that you've seen it all before. There's nothing particularly revolutionary about the game, so unfortunately you very probably have.

For newcomers to the flight sim world, it's an excellent game because it's so easy to fly and land. Hardened sim-freaks will enjoy it for a while, but scrape under *F-29's* glossy surface and there's nothing more than a rusting hulk. A good game, but a lousy simulator.

NEIL JACKSON



GRAPHICS	9
SOUNDTRACK	4
INTELLIGENCE	5
INSTANT APPEAL	8
LONG TERM INTEREST	5
OVERALL	**76%**

midnight resistance

OCEAN £24.99

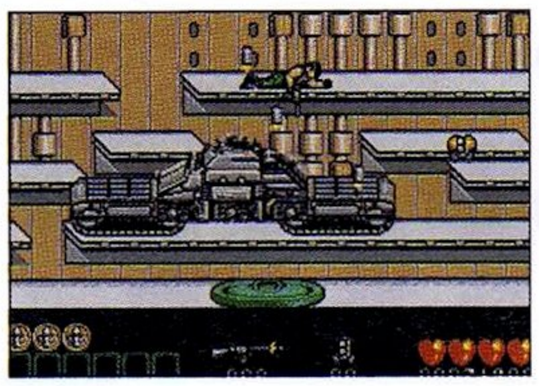
Sometime in the future the tranquil earth is shaken by the return of the evil, once-vanquished leader King Crimson. He's a mutant, a genetically-engineered powerhouse able to use telepathic powers to control a vast army of bio-mechanical slaves. Under his new reign of terror the Earth is decimated by his savages, and almost all the population is exterminated. Cities are laid to waste as the army marches further south to complete its destruction of the planet.

But one tiny bunch of foolhardy die-hards, all previously civilians, teamed up and became the Midnight Resistance Group. Most were slaughtered by the bio-mechs, and now only two brothers remain. With little in the way of serious military hardware and less in the way of experience, these two hold the fate of the Earth in their hands. It's not looking good for the planet.

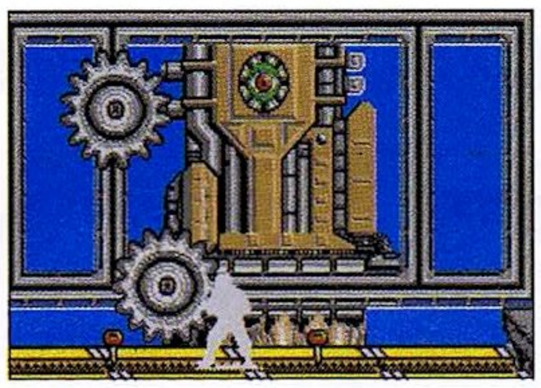
You play one of these two survivors, armed with a small and fairly ineffective rifle. Moving off to the right, you confront the enemy, ducking, crawling and jumping, but most of all firing. Simple joystick controls allow fast movement, and the player-character can fire in eight directions, even while lying down. To jump onto objects and platforms you push up on the stick and follow through with the direction in which you want to land.

Enemies consist of hordes of strange looking semi-humanoids, all armed to the teeth. Some fancy footwork is needed to dodge their salvos of bullets and missiles. Occasionally you'll come face to face with a bio-mech armed with a mortar which fires explosives into the air: touch 'em and it's goodnight Vienna. A shot square in the face is enough to pop off these pests, but a different member of Crimson's Corps soon nips in to hassle you still further.

■ Have you the staying power for *Midnight Resistance*, Ocean's latest army shoot-'em-up? Take on King Crimson's futuristic hardware and you'll go head over heels



■ Caterpillar on a hot tin roof – get past this metallic monster to remove the green lid



■ Get too close to the buzzsaws and you'll be half the man you used to be

Some enemies carry keys which fly into the air when you kill them. If you can pick them up by running over them before they stop spinning, you can use them later in the game. Trouble is, every time you get thrashed and take a hit, all the keys get scattered again. Sometimes they'll bounce right out of shot and you can't go back and pick them up. Often the key-holding creeps only appear at the start of a level, so you've got to make it all the way to the end without getting into trouble. Easier said than done.

If by some amazing combination of luck and judgement you make it through, a door appears, begging to be shot at. Give it a couple of bursts and it'll cave in. Once inside you find a room filling with flashing lights, glass cabinets and the whine of electric equipment. Inside the cabinets are weapons of a highly desirable nature, if you like that kind of thing (which you do). You can grab a machine gun, a shotgun, homing missiles, scatter guns and nitro packs. Under each display panel is a number of keyholes, showing how many keys you'll lose in return for the weapon inside. The ones you can afford flash and all you need to do is place your man in front and click the button. Barrelled weapons have one major drawback, though: finite ammunition. Before long, you'll run out of ammo and the gun will be useless. This can mean serious problems if you get into trouble. Once you're out, you'll automatically revert to your old rifle, and this won't always cope with the enemies in later levels.

EFFECTS

Midnight Resistance differs hardly at all from the accepted, time-honoured tradition of left-right scrolling shoot-'em-ups *(Predator, Double Dragon, Dragon Ninja).* Graphics are unimpressive, with the usual assortment of nasties bearing the usual assortment of destructive mega-death weaponry.

Highlights are reduced to the end of level enemies, which usually appear as armoured tanks or huge flesh-chewing circular saws which take a heck of a lot of joystick-throttling to deal with.

Sound effects are again the standard *boom-smash-crump* type explosive noises, along with the rat-a-tat of your gun. Stunning they ain't, and they're unlikely to induce instant flashbacks in even the jumpiest 'Nam vet.

VERDICT

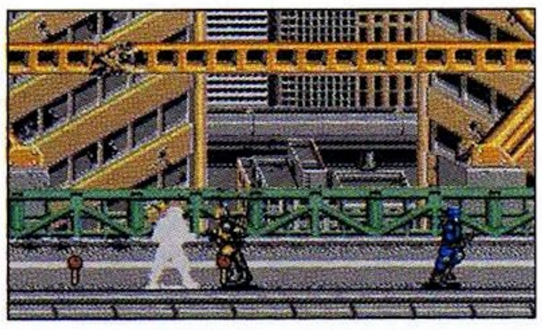
Chances are if you like shoot-'em-ups, you'll find *Midnight Resistance* reassuringly familiar. It's guaranteed to be a good long-lasting slog in order to get to the finish. Whether you make it depends on how patient you are and how much repeti- repeti- repetitive gameplay you can stand.

If you're thinking of avoiding pre-exam homework to play *Midnight Resistance*, it's not a good idea. Geography revision is probably far more stimulating.

NEIL JACKSON

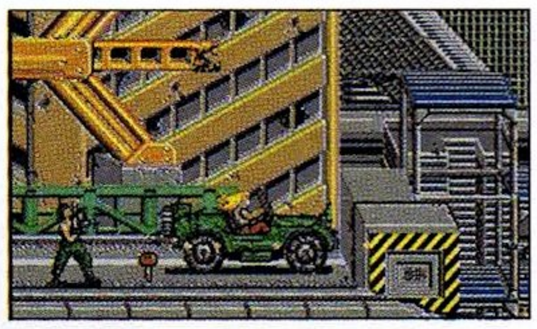
GRAPHICS	5
SOUNDTRACK	5
INTELLIGENCE	2
INSTANT APPEAL	4
LONG TERM INTEREST	4
OVERALL	**41%**

■ King Crimson's bio-mech troops rush to attack you...



... with deadly results if you're too slow. Fire like crazy to...

... stay alive or take the easy ride in. A jeep trick like this...



... won't work for long though. From here, you're on your own

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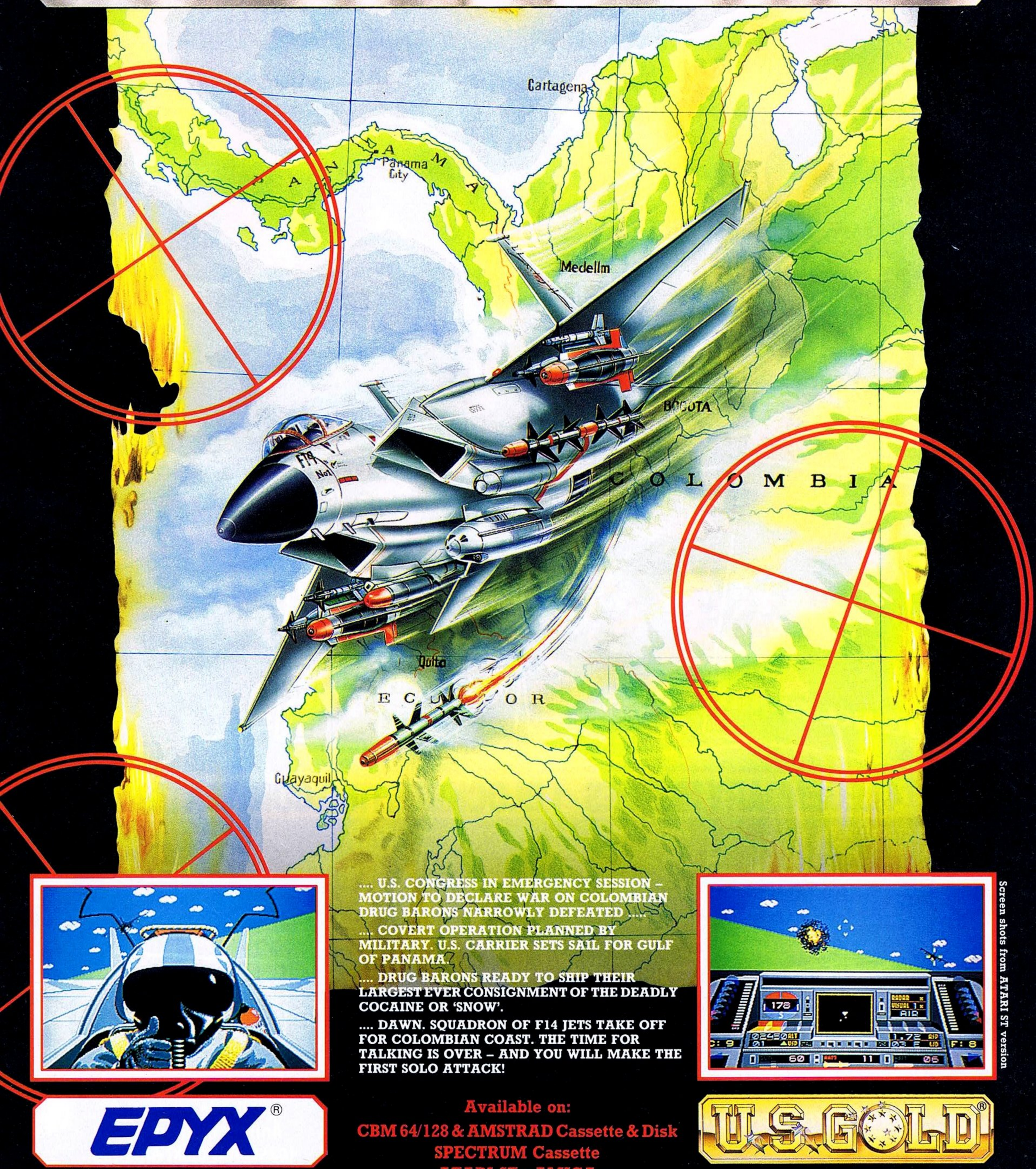

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Screen shots from ATARI ST version

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RAINBOW ARTS £24.99

khalaan

New from Rainbow Arts comes another animated strategy game, similar to previous offerings *Joan of Arc* and *Journey to the Centre of the Earth.* Set in the 7th century, in what's now Iraq, the game takes place in the fictitious empire of Khalaan.

The rule of this great land was divided between four powerful caliphs known as Abu Bahr, Utman, Umar and Ali. None are content with partial rule and there is conflict between their armies.

A wise sage then tells of the coming of an alien intruder and maintains that only the caliph who destroys it can rightfully be called the Grand Caliph of Khalaan.

You take the role of a caliph and build armies to extend your rule and outdo the others. When you have enough strength, you can attack the alien intruder and its army. Defeat him and the other caliphs bow down before you.

To do this you move your armies toward enemies or independent fortresses and attack them. Destroying another army causes great financial problems for an opposing caliph, and provides you with extra income and resources. Raising the army is a simple matter of clicking on the caliphate (a kind of castle) icon and selecting "military" from the menu. You can build or disband armies, group them together, supply them, or make them attack or defend nearby objects.

If you choose "raise" you're presented with a screen enabling you to designate the number of archers and infantry in your army and allocate resources to them. If you don't give them enough grub or cash, they disband after a few miles of trudging, so it's wise to note how much they need.

All armies use a lot of resources until you get them to a fortress where they can trade cash for caravans. Then they move faster and consume less.

If your army meets an enemy-controlled army, a battle usually results. The screen switches to an arcade-action scene with a digitised picture of an attacking figure armed with a scimitar. He attempts to slash you to bits and you respond, if you have any sense, by blocking his shots and returning your own. Defeat him and your army is victorious: lose and your army is dog food.

You also enter an arcade sequence when attacking a fortress. Fire at the figures rushing out and dodge their fatal arrows. If you make it inside, you're confronted with another digitised screen showing the inside of the fortress. Move left to right, hacking at the defending guards. If you can defeat them the fortress is yours for the taking.

You can also send spies to opposing caliphs to corrupt their armies, steal valuables and find out the strength of their fortresses. Unfortunately spies cost a lot of money and can't be trusted to stay on your side.

The most important item in the game is a magic lamp – well worth sending a spy to steal. The lamp can bring prosperity, plague, immobility or invincibility, to the caliph of your choice, providing you have it in your possession. Without it you're at the mercy of another caliph who can use it against you. Its effects last for a month of game time and this could mean that your army is rooted to the spot for that period, effectively preventing you from doing anything to improve your position.

EFFECTS

Khalaan features a large number of neatly retouched digitised pictures, but the main control screen is not well-drawn and the digitised cameos don't sit comfortably on the background colours. Animation of army movement is slow and occasionally interrupted by reports of enemy activity, which can be confusing because the screen jumps to that area of the map.

Music is tedious, featuring the most depressing Turkish Delight tune you've ever heard. It's like The Cure meets Rolf Harris's Stylophone, but much worse. Luckily you can switch it off and listen to the clear sampled in-game effects.

VERDICT

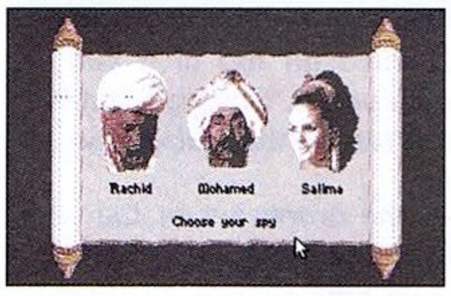
Khalaan has the same problems as its earlier (and better) stablemates, namely slow graphic animation and very poor mouse/joystick-reading. The digitised action sequences lift what would have been a bland strategy game into something that's sporadically fun to play and good to look at.

Unfortunately the poor translation of (presumably) German into something vaguely resembling English leaves you scratching your head at the mis-spellings and odd sentence constructions. It takes a while to figure out that extradition really means surrender (as far as the game's concerned).

If you enjoy Eastern exoticism, were brought up on *Arabian Nights,* and want to play Islamic versions of *Defender of the Crown,* then *Khalaan* will satisfy your every desire. But if you enjoy absorbing action and a visual feast you're much better off watching matinee re-runs of *Lawrence of Arabia.*

NEIL JACKSON

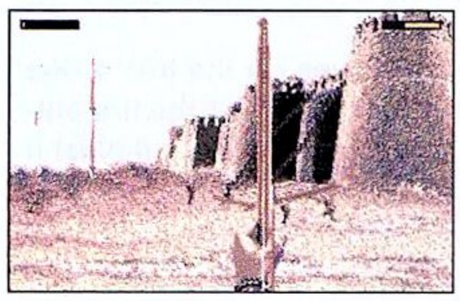
GRAPHICS	6
SOUNDTRACK	2
INTELLIGENCE	6
INSTANT APPEAL	6
LONG TERM INTEREST	6
OVERALL	**59%**



■ **Click on a spy to send into enemy territory. They could bring important information – or defect**

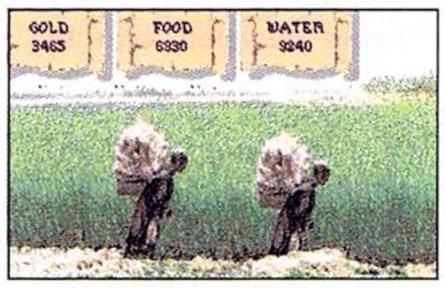
■ **The map on the control screen can be scrolled left and right to show other caliphs' bases and independent fortresses**

■ **Once inside the fortress, use the joystick to battle enemy invaders. The pole on the right is for bashing them with, if they get too close for comfort**



■ **Attacking a fortress with your bow and arrow is hard work. Aim carefully to knock down your enemies one by one**

■ **Raising armies requires careful management of resources. If you don't give them enough food or money they desert you**

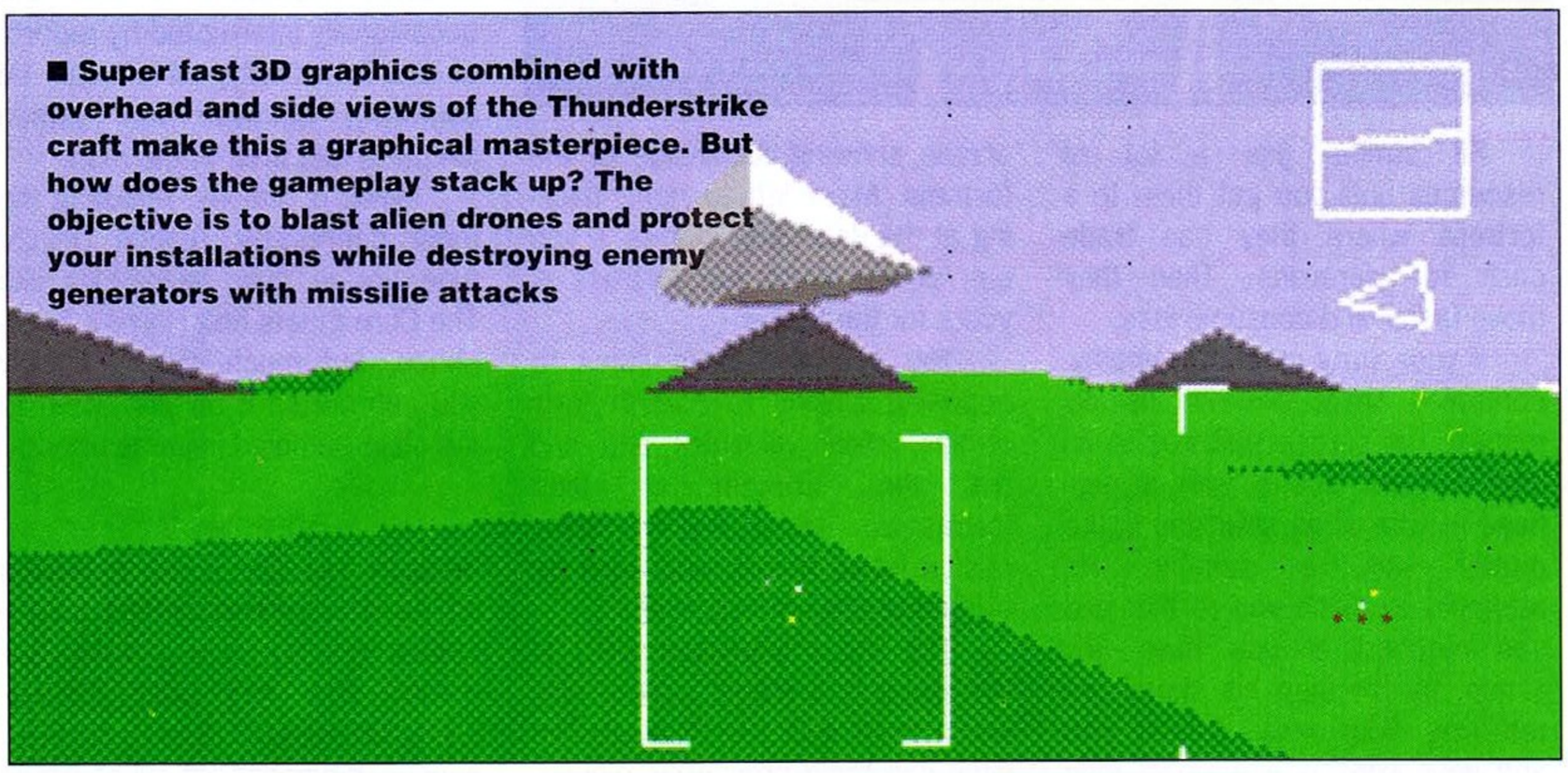


■ **(right) Each month your current income is displayed and poor slaves walk across the screen carrying your ill-gotten gains. (But enough of the editor)**

MILLENNIUM/LOGOTRON £24.99

thunders

Two months ago Millenium released Resolution 101, a game with the fastest ST graphics ever. Not content to rest on their laurels, they've followed up with Thunderstrike, not only boasting faster graphics, but also a unique perspective on 3D environments. Mark Higham investigates this latest technical wizardry



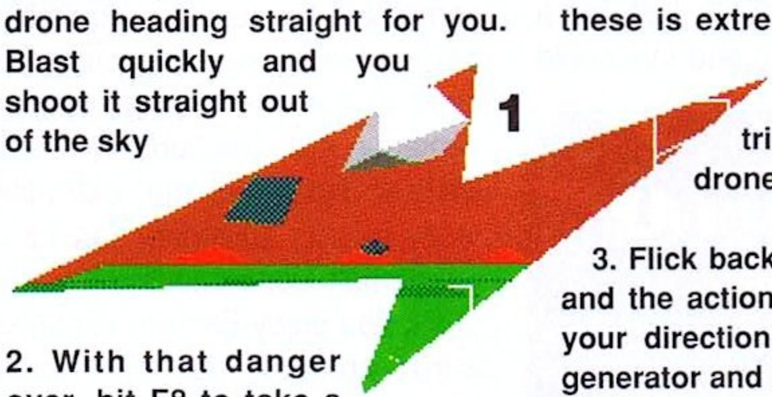
■ Super fast 3D graphics combined with overhead and side views of the Thunderstrike craft make this a graphical masterpiece. But how does the gameplay stack up? The objective is to blast alien drones and protect your installations while destroying enemy generators with missilie attacks

Setting a game in the distant future has two major advantages. For a start you can create completely original environments specifically suited to computers. Trees, for example, are a nightmare to simulate, so why not populate this new world with rectangles or prisms? You're also at liberty to come up with all sorts of unexpected scenarios, introduce weird craft and adopt strange control methods. Millennium game designers Brian Pollack and Tony Beckwith have exploited all these opportunities to the full in their brilliant new game, *Thunderstrike*.

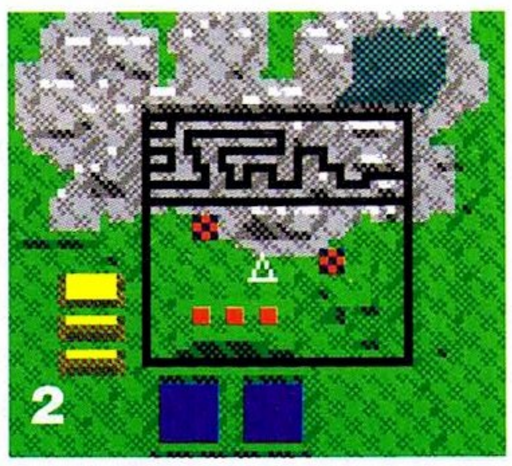
The game is set in the 23rd Century. The Greenhouse effect has been eradicated, but other social problems have arisen. Football has become so boring that hooligans prefer to sit at home watching TV. This has resulted in incredibly violent TV game shows – and you're set to appear on the most vicious of them all, *The Ground Defence Game*.

THE ESSENTIAL FORMAT GUIDE TO SUCCESSFUL MISSIONS

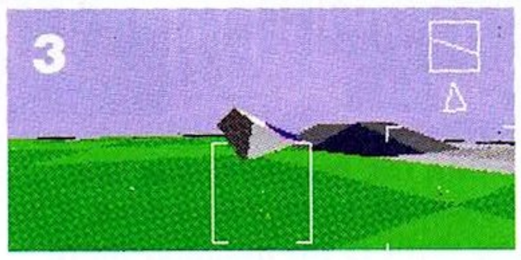
1. This is the first scene to greet you when you start to play. In the distance you can make out a drone heading straight for you. Blast quickly and you shoot it straight out of the sky



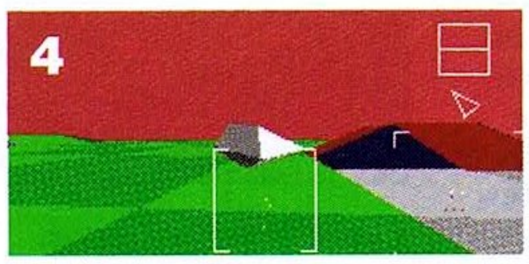
2. With that danger over, hit F8 to take a look at the terrain map. This gives you an idea of the installations which have to be protected and the drone generators which must be taken out. In this display you can see there are three installations to be defended and two drone generators. One of these is extremely close to your current location so take an immediate trip out to destroy the drone generator



3. Flick back to the main screen and the action continues. Change your direction to hone in on the generator and be poised for attack



4. The generator looms into sight, surrounded by a host of drones. Avoid collision with the drones because they eat up massive amounts of energy. After you've hit it five times, it explodes and sinks down into a flat black plain



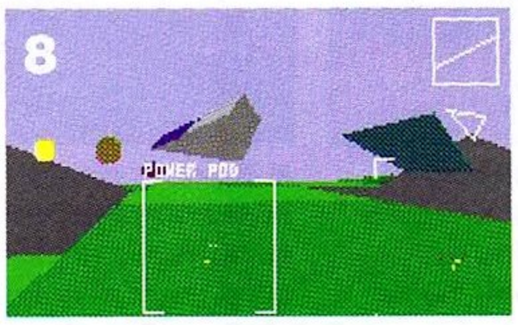
5. Looking at the terrain map again shows that one generator has gone. If you look at the red dots, you also realise that you've lost one of your installations. Since you have two more left, you don't need to worry too much. In later levels, it's important to try and defend every installation

6. You patrol your installations and come across one which is under attack. The drone

has perched on top of it and is taking its power. Quickly blast the drone to rescue the installation

7. With the drone out of the way you head for the next generator. With skill you manage to blast it enough times to destroy it. The level is only completed when you blast all the remaining drones

8. You set eyes on the last drone left. Hit your finger on the fire button and blast it from the skies. One level may be over, but there are many more difficult ones waiting to test you



trike

■ **The game is seen through a TV camera following the Thunderstrike craft. You see the landscape from all sorts of angles, providing the most imaginative viewpoints ever and giving you the most exhilarating flight of your life**

The idea of the game is to fly a Thunderstrike, the latest state-of-the-art flight craft, and knock out alien drones. The drones are 3D flying machines and they race out of drone generators to attack your installations. Your job is to protect your installations and fire missiles into the drone generators. A level isn't finished until all the generators have been wiped out and the remaining drones killed.

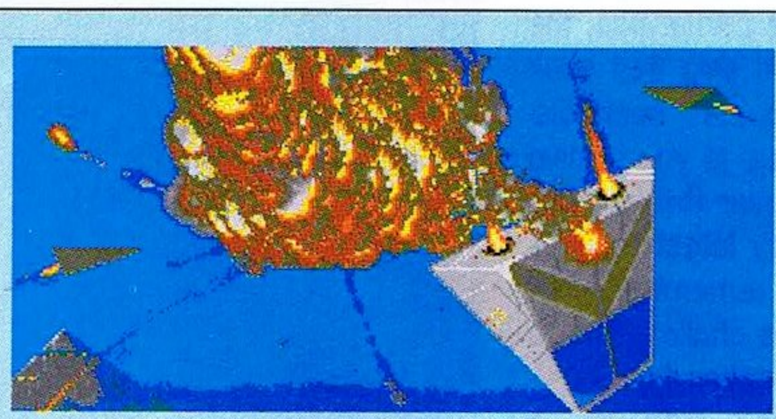
The terrain is represented by a series of 3D plains used to shape the contours of valleys and hills. In the first level, three installations and two drone generators are positioned on the map ready for action (see the *FORMAT* guide, left).

The installations are shown as pyramids and the drones sit on top of them to steal their energy. You need to blast the drone before it takes all the energy. If you're not quick enough, the installation turns black, leaving you with one less to defend. The game ends if all your installations fall prey to drones.

To destroy the drone generators, you need to score five direct hits and then they sink into the ground. Drones circle round the generators and if you whack into them or stray into the path of their fire, you lose massive amounts of energy. Lose too much and you can kiss goodbye to your game. Luckily when you shoot some drones they explode, releasing bonus pods. If you're fast enough, you can pick them up, gaining extra power, energy or weapons.

As you advance through the levels, more installations need to be defended, the drones become more intelligent, and you have more generators to attack.

At any point in the game, you can hit F8 to show a terrain map. This pauses the action and shows you the position of generators and installations. Those that have been destroyed are blacked out. Tracks are also shown and you can land on these and cover ground at high-speed. The map is invaluable for working out your location in relation to items on screen.



■ **Still graphics are used to reinforce the television aspect of the game. Shown here are your Thunder-strike craft after a lethal explosion and a smarmy newscaster cheerfully reporting your sad demise**

EFFECTS

Thunderstrike can be played in two modes; stippled and non-stippled. In non-stippled mode, the game moves fast, but the graphics don't look particularly three-dimensional. In the other mode, graphics are realistically detailed, but lose the incredible speed.

Still graphics have been designed by the same artist who's working on Ocean's *Lost Patrol*, and the detailed and effective visuals magically reinforce the TV atmosphere of the game.

The TV angle isn't just an add-on plot device. Besides inspiring a host of still screens, it's also an excuse for the original viewpoint. A TV camera follows your Thunderstrike everywhere, looking at the craft from all angles and presenting realistic TV coverage of your performance.

One of the challenges of the game is to constantly keep your craft in full view of the camera. Making fast moves, radical turns, or climbing too high can take the Thunderstrike out of sight, leaving it difficult to control.

Sound effects blast out to let you know if your installations are under attack. There are also spot effects for collisions and explosions. A sickly but effective TV game tune plays throughout.

VERDICT

This game has astonishing effects. There isn't anything to match the fast 3D graphics and the exciting swings of the camera. The result is a thrilling game to play.

Getting used to the control method to pick up bonus armoury and manoeuvre around attacking drones, takes a while, but it's a dream to manipulate compared to Electronic Arts' *Powerdrome*, which featured the same kind of futuristic craft.

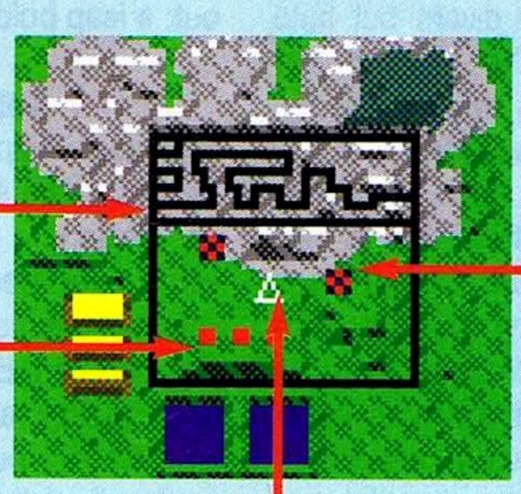
■ **The pilot climbs into his Thunderstrike craft. Get ready for some *real* action**

Progressing through the levels brings more and more complex assortments of aliens to obliterate. Although they certainly keep the game challenging and turn your trigger finger blue, there aren't enough variations to each level to make this a classic. Nevertheless, with such innovative graphics, it's certain to scale the software charts.

MARK HIGHAM

GRAPHICS	9
SOUNDTRACK	8
INTELLIGENCE	5
INSTANT APPEAL	9
LONG TERM INTEREST	7
OVERALL	**88%**

CHECK OUT THE TERRAIN



■ **Look at the terrain map to see the location of important sites. Tracks are marked with black lines. If you pull your craft down onto these you follow them at high speed**

treasure trap

ELECTRONIC ZOO £24.99

It's official! The *Esmeralda*, the legendary gold ship that sank 70 years ago, has been discovered. Now it's up to you to dive 300 feet and recover the lost bullion. Using the very latest technology (this is 1927, remember – not the dark ages!) the challenge is to raid Davy Jones' Locker itself.

The *Treasure Trap* is a strange, dangerous place and the diver's task a far from simple one. Each room and corridor has to be individually searched for the gold scattered when the ship sank. The cabins are displayed in isometric 3D, allowing a would-be Jacques Cousteau a sporting chance of finding every single bar of the world's second favourite obsession.

Wreck diving is one hazardous occupation. For starters there's the very real chance of running out of air. Never a pleasant experience, but 100 metres down inside a steel box a constant air supply is essential. Compound this problem with the vast number of dangerous creatures who've made the *Esmeralda* their home and you can just tell it's going to be a rough ride. What's worse, some ship's doors are locked. Most push open, but some require keys, which must be located too.

That initially off-putting 3D display, with everything on the diagonal, allows the necessary depth of detail needed for a thorough search of the ship. Undersea explorers can move the furniture to help them climb on or jump over objects. Being neutrally buoyant, divers can leap vast distances in a single bound. They can even stand on floating flotsam and be washed on the tide, to reach gold bars in the most ridiculous places.

■ **Mines home in on the diver's position, so be quick!**

The purpose of the game is personal gain and picking up gold couldn't be simpler. Stand on it and the bar's in the bag. The real art is finding the bullion in the first place. Due to the tremendous blast which sank the ship, there are bars in almost every room, and you can bet your weight belt that they aren't just lying in the middle of the deck. Oh no missus, they've all found themselves nice little nooks and crannies. Some are hardly visible, let alone retrievable.

■ **The jellyfish, one of the more, er, *annoying* creatures featured in the *Treasure Trap*. Pretty, huh? (Pretty deadly, more like!)**

There are two game mechanisms – as well as avarice – to push divers deeper into the wreck. Firstly, the game can only be saved every time 50 bars are collected. Secondly, every 80 bars the submersible scavenger collects earns him a "Friendly Fish" *(get serious, guy!)*.

The *Esmeralda* is teeming with marine life, fish, crustaceans, editors and countless other monsters *(I heard that, pardon – Ed)*, and touching one kills a diver. The only sensible course of action is to wait. The fish move predictably so it's possible to cross beast-filled rooms with only a few panic attacks. Eventually, though, you'll have to call in the "Friendly Fish," beautiful creatures adore which divers but hate everything else. Call them in and they swim into the room devouring everything in a piranha frenzy.

Pockets of air have been scattered throughout the wreck to help divers who are short of breath, and keys are left lying on the floor where the crew dropped them as the ship sank. Their locations never change, so it's worth keeping a map on your underwater slate so you know where everything is for future, more profitable, raids.

EFFECTS

Each step the diver takes is accompanied by the authentic sound of leaden boots hitting rusting metal. The doors slide open with a grating metallic scrape, suggesting they're none too keen on the idea of working again after nearly a century off.

The 3D itself allows real detail to pervade both scenery and and the ship's inhabitants. Everything's easily recognisable and has enough comic charm to carry this visual adventure. Even the annoying aspects of the 3D work to the game's advantage. Sometimes the diver and/or object is partially obscured, and while this is irritating, it creates the scenario where the diver has to enter small dark corners trusting to luck. Was that a glint of gold – or the tail of a stingray? There's one way to find out: a leap boldly into the unknown.

VERDICT

Treasure Trap is a game that echoes some early 8-bit legends in its design – anyone remember *Head Over Heels* or the first *Batman?* – but now it's more refined and polished. Even the environment itself makes a refreshing change. Everybody, but *everybody*, has explored oodles of space stations and "Goth" castles galore, but how many have risked their lives in the deeps of the ocean?

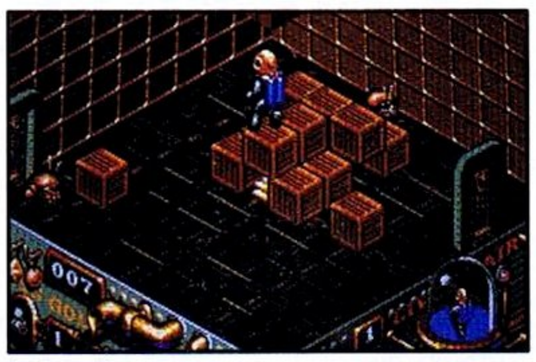
The puzzles are often elementary and do not lend the game lasting interest, but the sheer size of the ship counters this. The game designers have also thrown down a challenge to players, for *Treasure Trap* can only be finished if played through from beginning to end in one go – and saved adventures don't count. Going one step further, they've even had the audacity to try and goad you into speedy completion with the enigmatic line "escape a final surprise"! Well now, wonder what *that* might be? By the way, has anyone seen *Return to Poseidon Adventure* recently?

TRENTON WEBB

Trenton went scuba diving in Malta for his hols, didn't you Trent? "Yeah! It was great! I can't wait to tell you about it –"

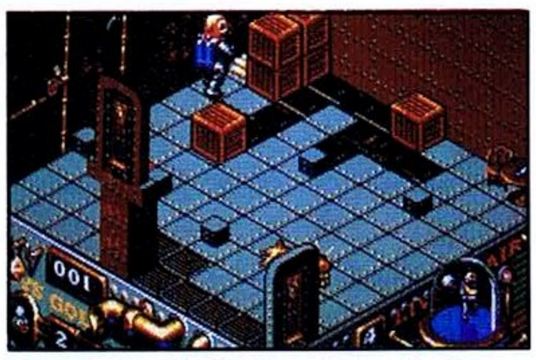
(cont'd p. 297)

GRAPHICS	9
SOUNDTRACK	5
INTELLIGENCE	8
INSTANT APPEAL	6
LONG TERM INTEREST	9
OVERALL	**81%**



■ **Gold!... But how the hell do you get your hands on it?**

■ **Four crabs plus one stingray equals Trouble with a big T!**



■ **Tough choice: spare air (on the table), or the gold?**

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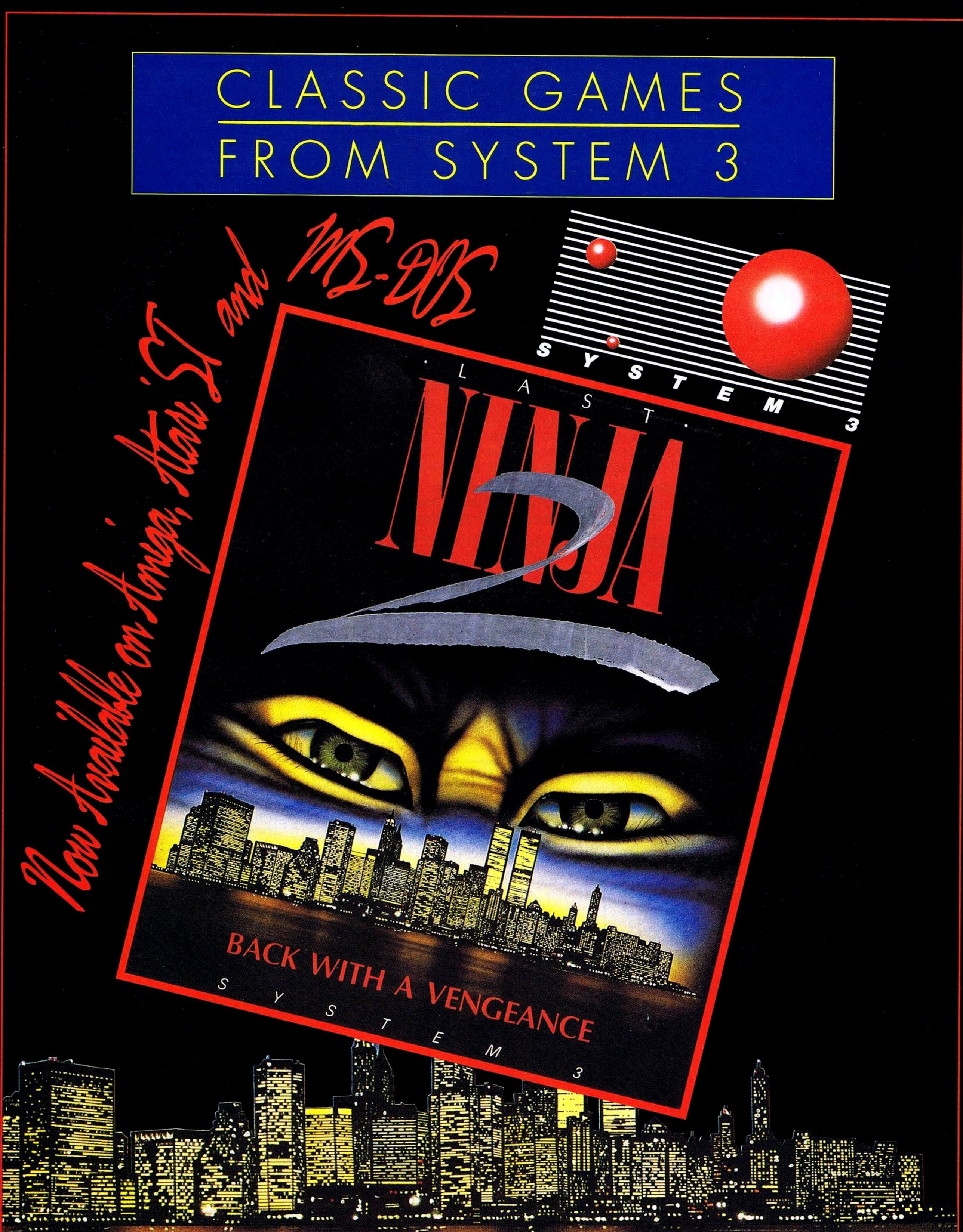

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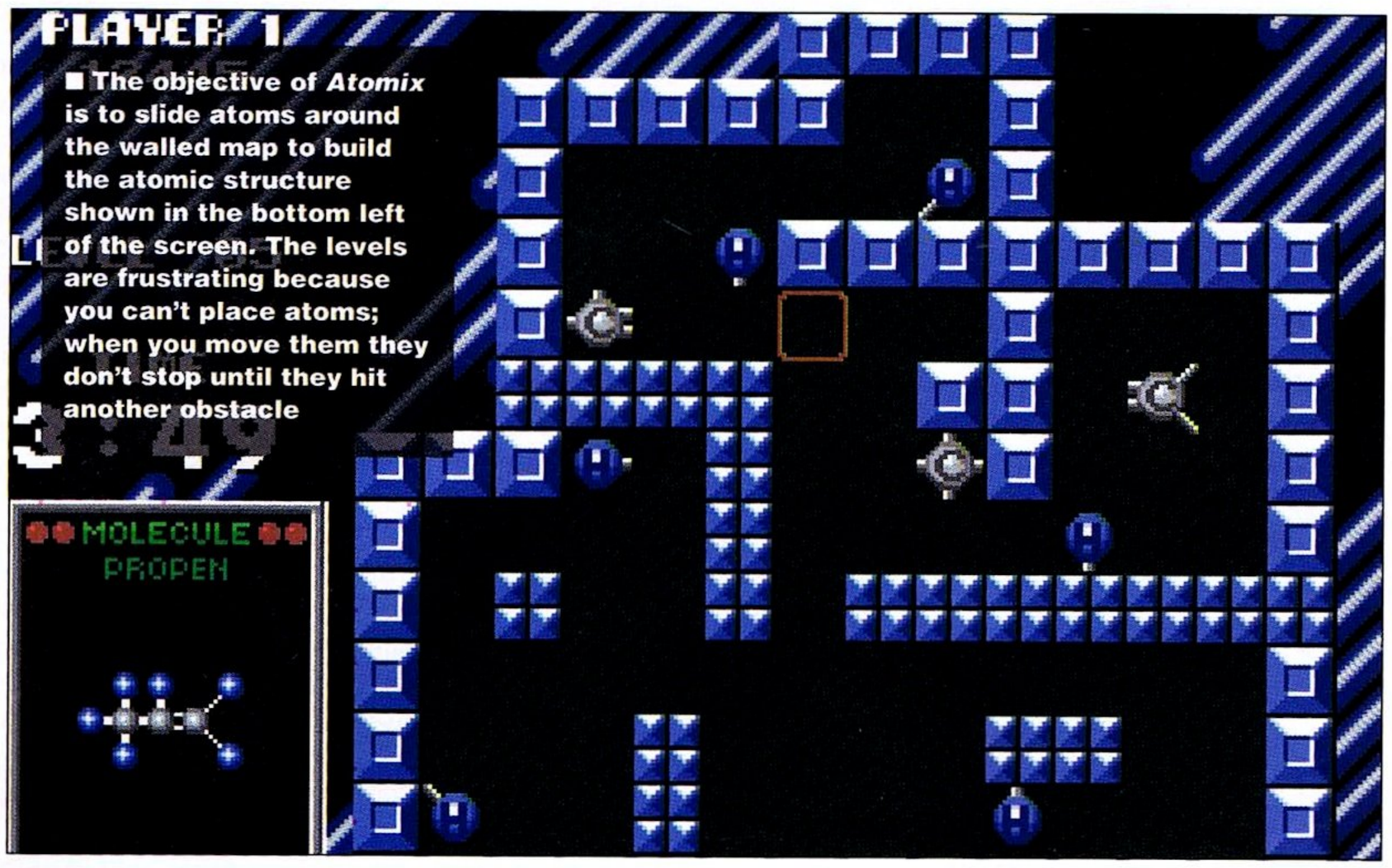
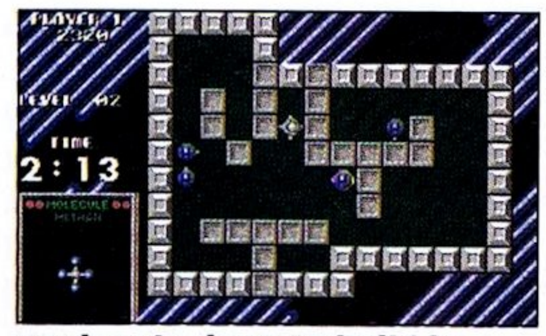
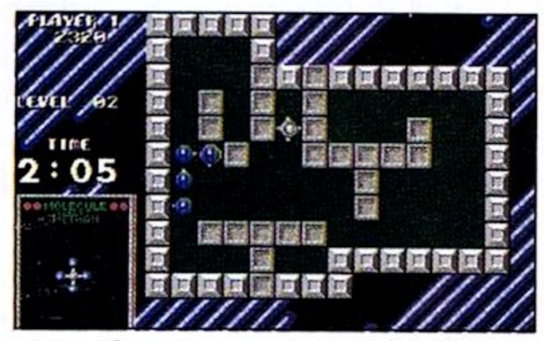


■ The objective of *Atomix* is to slide atoms around the walled map to build the atomic structure shown in the bottom left of the screen. The levels are frustrating because you can't place atoms; when you move them they don't stop until they hit another obstacle

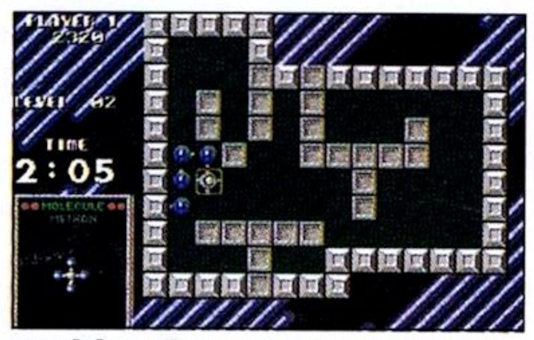
■ The start of level two:



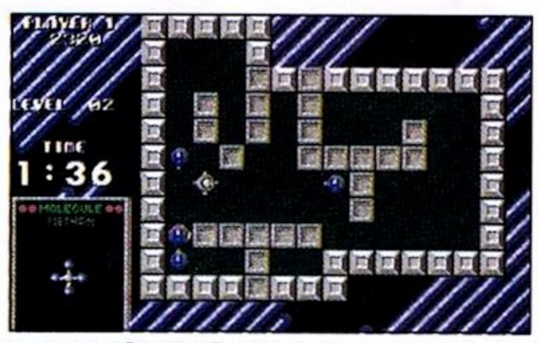
work out where to build it...



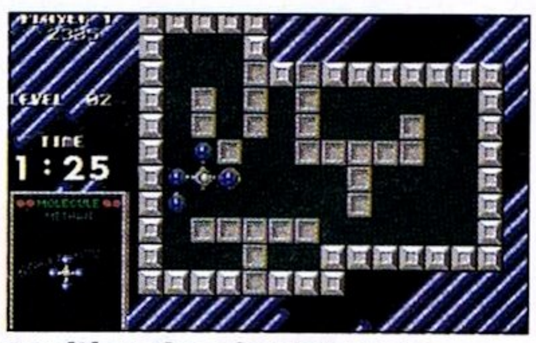
stop the atoms at the wall...



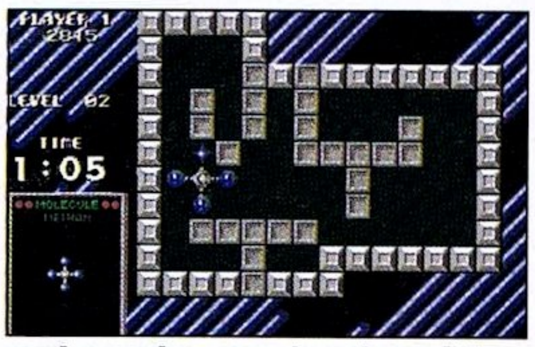
position the centre one first...



move the others around it...



position the chosen atom...



and *eureka* – you've done it!

atomix

THALION/US GOLD £19.95

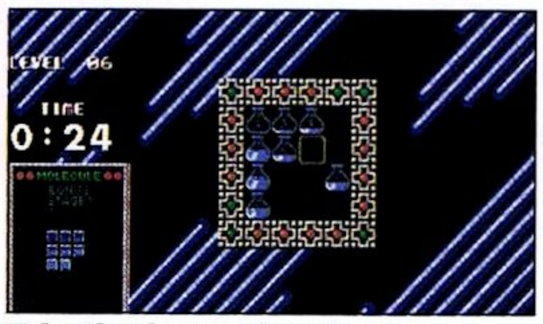
The last game using molecular structure as the basis of its gameplay was US Gold's *E-Motion*. *Atomix* treads much the same ground, but lacks *E-Motion's* hypnotic visuals and creative sound.

In the left-hand bottom corner of each level, you're presented with an atomic structure. Your job is to pick up atoms, move them around a series of walls, and assemble the required structure. Sounds simple? Wait until you start playing.

Use the joystick to select the atom you want to move. Unfortunately you can't just pick it up and position it anywhere you like. Once you move the atom, it only comes to rest when it bumps into a wall or another atom. The trick is to arrange atoms so they come to rest in the right position. If you build it in the correct spot, the nearby walls act as a barrier so that atoms stop close to the desired location.

In the first level you construct a water particle by linking two atoms of hydrogen to one of oxygen. This is remarkably simple, but by the time you reach level two you're building ether molecules ($C_2H_5OC_2H_5$) where your brain power is really put to the test.

Each time you complete five levels there's a bonus puzzle for you to solve. The first of these features glass containers filled with different volumes of liquid. You have to arrange them in increasing order using the same sliding technique employed in the main part of the game.



■ In the bonus level arrange jars to mimic the pattern in the bottom left-hand corner

All the levels have a time limit ranging from two minutes for easy levels up to four minutes for the near-impossible ones. Each time you reach a new level you spend much of the time working out the best place to build your molecule. This often means suffering defeat the first time you tackle it, but at least you're prepared the next time the challenge arises.

EFFECTS

Played with a handful of colourful atoms over the top of a grey background and grey walls, this is one of the most visually uninspiring games ever. The only redeeming point is the nifty intro sequence and some clever sound effects when you make a move. Bonus screens are presented every fifth level and offer a reprieve from the overall drabness.

VERDICT

This is a wonderfully addictive challenge which, apart from the dull visuals, is actually more appealing than *E-Motion*. The puzzle element is more thought-provoking, the skill required to complete many of the later levels is exhausting, and you don't need to be a master of the joystick.

The only real criticism is that if you lose a level, the game comes to an end. With every fifth level you complete you're given one extra credit, but this isn't nearly enough. The game would have been much more appealing if your position could have been saved to disk or if passwords could have been used to take you back to the last level.

If you're the kind of games purist who wants absorbing gameplay rather than flashy graphics, then *Atomix* is going to keep you perched on the edge of your seat for hours. Extra touches in the effects department would improve the game enormously, but it wouldn't enhance the gameplay. *Atomix* is undoubtably one of *the* most engrossing puzzle games to ever hit the ST!

MARK HIGHAM

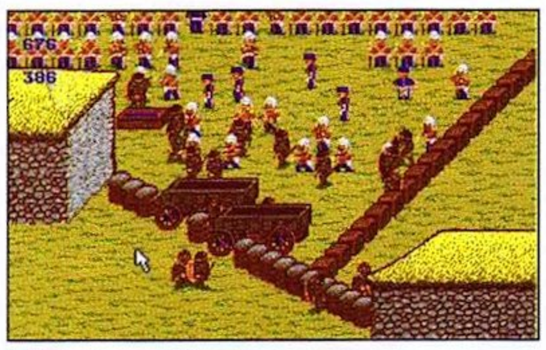
GRAPHICS	6
SOUNDTRACK	6
INTELLIGENCE	7
INSTANT APPEAL	8
LONG TERM INTEREST	7
OVERALL	**79%**

Imagine yourself as a British soldier 111 years ago. If you were really unlucky, where would you be? North Natal in Southern Africa, that's where. Way back in 1879 the British followed the Boers to the Transvaal to search for goldmines. Not surprisingly, Zulu tribesmen grew tired of the occupation and decided to kick some white ass.

In the ensuing conflict 50,000 Zulus, led by their warrior king Cetewayo, beat the crap out of the British Redcoats at their camp at Isandhlwana. Mind you, armed with only spears and loud voices, over 45,000 Zulus bought it in the process. 4,000 limped on toward the British outpost in Ulundi, known as Rorke's Drift. It consisted of a church, a hospital with 36 sick soldiers and 101 able-bodied Royal Engineers.

In the game of this historic scrap you use icons and mouse to send orders to these troops. Soldiers fight and shoot, medics tend the wounded, storemen replenish dwindling ammo and officers use pistols for short range defence.

Your first task is to prepare for the coming onslaught by positioning men in strategic locations around the map. Hiding behind barricades of crates and mealie bags is hardly the safest place to be, but at least it's better than being out in the open.



■ **Zulus attack your camp. Rifles are no good if you're wrestling with your enemy, so choose another man to shoot**

When the time runs out – coming, ready or not! – the Zulus arrive. You then have the desperate task of loading each man's rifle, firing it at an attacking Zulu, clicking on another, reloading, resupplying the empties and aiding the fallen. You do this by pausing the action and issuing one order to each man. Each shot registers either a hit, a miss, or a level of wounding for the Zulu.

Meanwhile you're taking spears in the gob, as well as the aforementioned white bottom, and reports warn you of your impending rout. It's up to you whether the soldiers stand and fight or do the sensible thing and run like hell.

This goes on and on until dawn the next day – provided you survive that long.

EFFECTS

Rorke's Drift suffers from appalling graphics and one of the slowest screen scrolls that's ever appeared in a full-price game. Blocky, badly drawn Redcoats and short, fat Zulus who look like the golliwogs on Robertson's jam jars make the whole thing comical: the Zulus were actually renowned for being tall and frightening.

Music consists of an annoying patriotic tune that sounds like it's played on a toy piano. Sound effects are wholly and unforgivably absent. Worst of all, though, is the operation of the game itself. The cursor is jittery, occasionally disappearing completely, and mouse buttons have to be held for ages before anything happens. Characters don't always move where you want them to, and screen updates are desperately slow, even in non-active parts of the game.

VERDICT

Poor programming is to blame for *Rorke's Drift's* failure to convey any atmosphere or excitement. There are no *North and South*-style action sequences, beyond what you see at the start. Compared to Turcan scenarios like *Armada* and *Waterloo*, *Rorke's Drift* has no obvious battle logic. It's just random, toss-of-a-coin stuff. The game may have marginally better graphics than *UMS*, but none of its operational ease.

This is a shame because the Zulu war is an ideal choice for an exciting wargame. The immense difference between the opposing sides' manpower and weapons makes it a perfect contender for a rip-roaring battle. As far as *Rorke's Drift* goes though, I'd rather have been there than play it on my ST.

NEIL JACKSON

GRAPHICS	4
SOUNDTRACK	0
INTELLIGENCE	4
INSTANT APPEAL	5
LONG TERM INTEREST	4
OVERALL	**46%**

rorke's drift

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■ *Rorke's Drift* depicts the Redcoats' last stand in the Zulu Wars. In real life, the Brits won, despite being heavily outnumbered. It's a tough fight in the game as well, if you're to defeat the Zulu onslaught

■ The map of Rorke's Drift is used for zooming in on the fighting – but no action takes place on this screen!

■ Orders are issued with the soldier icons. See! He runs, walks and shoots in a variety of positions

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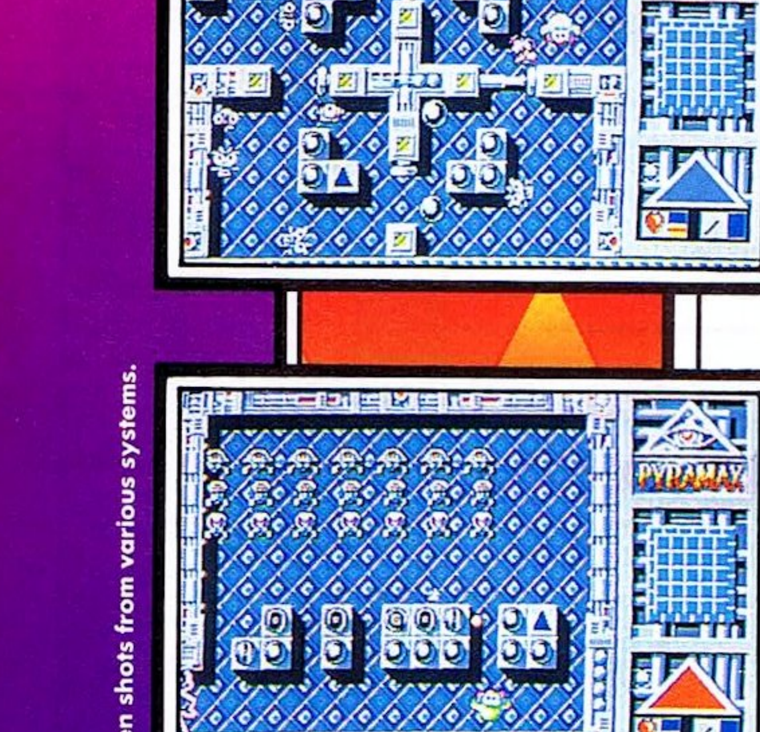
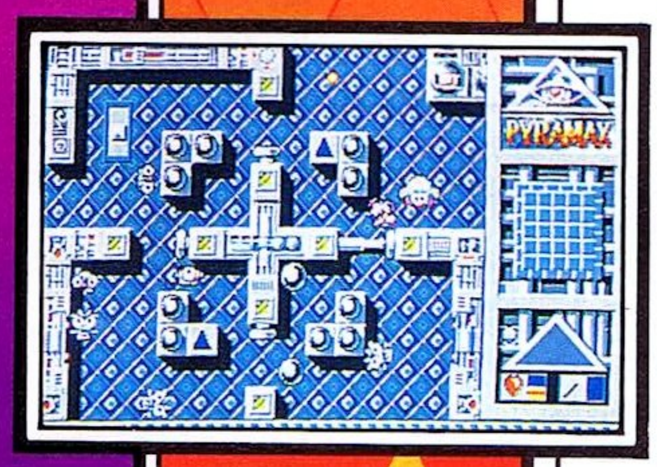
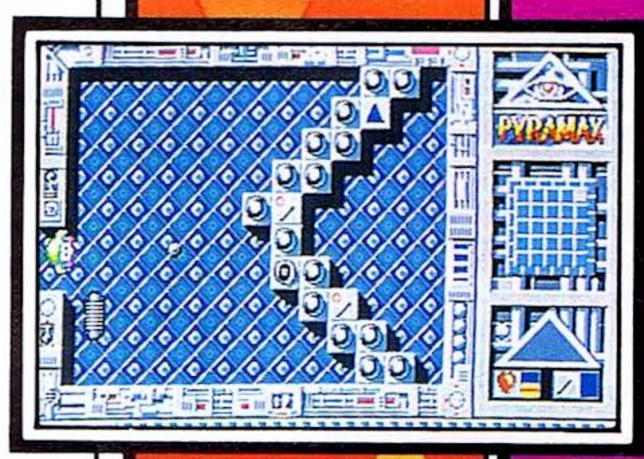
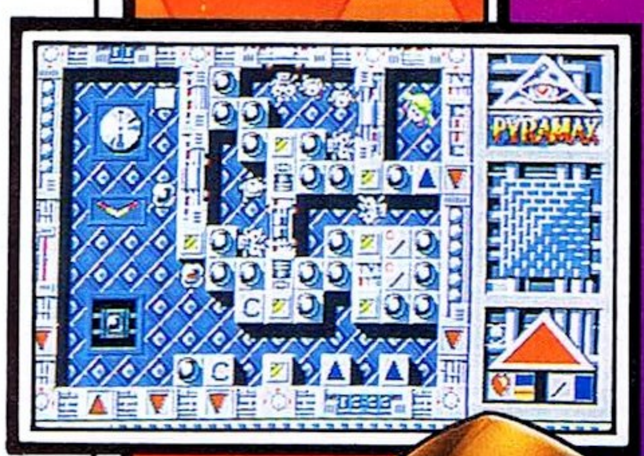
THE POWER OF THE PYRAMIDS

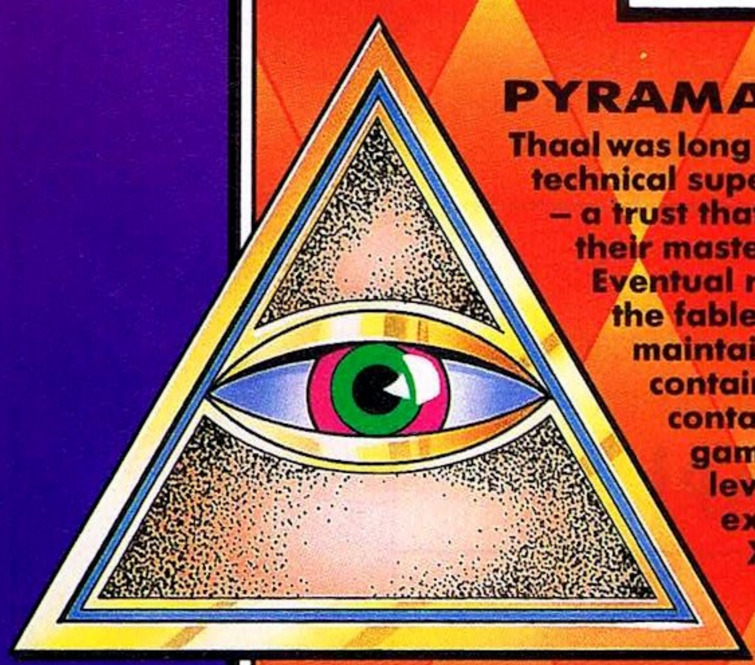








Screen shots from various systems.



PYRAMAX

Thaal was long inhabited by a race of intelligent humanoids who in a quest for technical superiority placed evermore trust in their Roboslave creations – a trust that was eventually misplaced as the slaves grew resentful of their masters. The rebellion was swift. The Thaalian defeat everlasting. Eventual remorse at their masters' downfall led the androids to create the fabled Pyramid of Thaal – a shrine in which the robotic devices maintained a perpetual vigil over the Thaalian Crystal – said to contain the total knowledge of this former race. The pyramid also contained fabulous recreations of the Thaalians favourite video games and immense riches were scattered throughout its six vast levels, held in secret until the day, you, Pyramax – intrepid explorer of the galaxies – finally penetrate the acid forests of Xandar and discover the long lost treasure hoarde of ancient Thaal.

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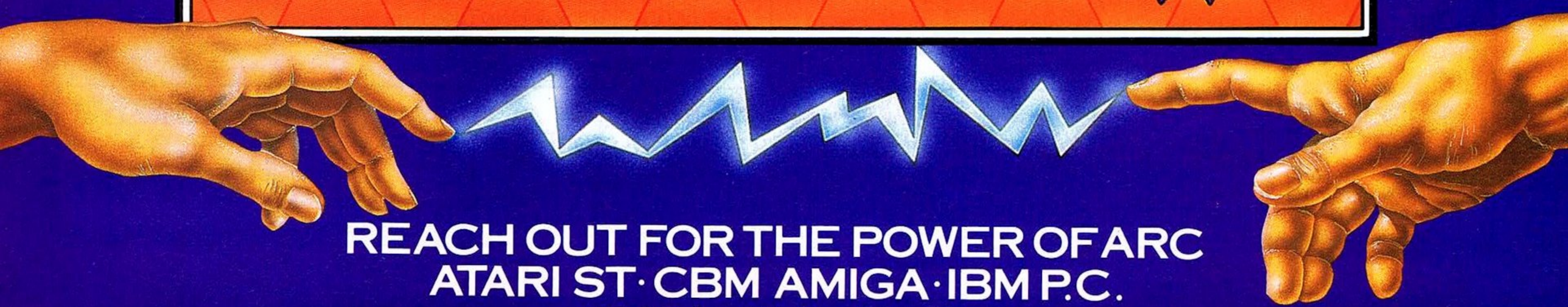

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skidz

You've overdosed on violence, beaten up street thugs by the score, blasted every mutant thing that moved, and now Gremlin have come up with the ultimate challenge in *Skidz* – picking up rubbish and putting it into dustbins!

OK so it's not the kind of game likely to have Mrs. Whitehouse foaming at the mouth, but popular titles like Elite's *Paperboy* and the *Summer* and *Winter Games* from Epyx have demonstrated that tame games do sell.

■ **You have eight levels to tackle. They must be completed in turn and each is harder than the last**

No matter how civic-minded you are, picking up litter is a back-breaking chore, but in *Skidz* you just sail over the debris on your skateboard or BMX without even bending your spine, collecting rubbish simply by riding over it. Pick up food for energy and clocks for extra seconds and steer through eight levels in a dramatic race against time. To be successful you must collect at least 75% of the rubbish and put it in trash cans.

The streets are free of traffic, but your progress is hampered by dogs, cats, holes in the road and pedestrians. Even pigeons get in your way and slow you down.

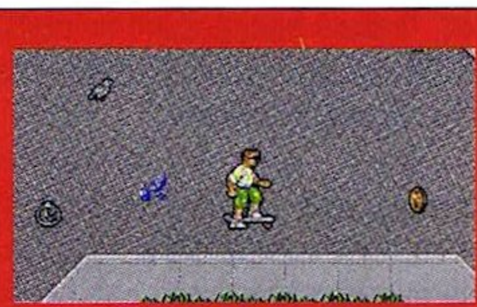
There are eight levels to negotiate, each one presenting more and more obstacles. With three speeds available, you can build up enough velocity to climb onto the pavements and pick up bonus coins or leap across tricky obstacles.

EFFECTS

The eight levels take you from city streets to parkland, beaches and canals. The main character is finely detailed and even extras like the workman with the pneumatic drill are brilliantly animated.

Collision detection is suspect; it's tricky to pick up rubbish even though it looks as if you've driven straight over it. But fast, perfectly smooth, eight-directional scrolling makes it a delight to play.

Sound effects are limited to a monotonous tune played throughout. It uses the ST's sound chip and can fortunately be switched off by hitting the M key.



■ **Level one is relatively easy but by level two there's the added complication of a waterfront. Take a wrong turn and you go for a dive**

VERDICT

Skidz makes a welcome change from the violent shoot-'em-ups currently littering the shelves. The action isn't exactly nail-biting, but it's surprising how absorbing the game becomes once you get accustomed to the uncomfortable control method.

The Epyx set of *Summer* and *Winter Games* had enough different challenges to keep you glued to the edge of your seat for weeks. *Skidz* lacks that variety and quickly becomes repetitive, but for the first few absorbing hours your fingers run with sweat and you refuse to give up the joystick for anything.

MARK HIGHAM

■ **Bonus coins can be picked up along with the rubbish and spent at the shop in between levels. These enable you to purchase kneepads, extra tyres or a helmet – at a price, of course**

■ **Besides eight different levels, you also have the opportunity to compete in a race against a computer opponent. In this case there is nothing to pick up, but you do need to overcome a variety of tortuous turns and bothersome bumps (eek!)**

GRAPHICS	7
SOUNDTRACK	3
INTELLIGENCE	1
INSTANT APPEAL	8
LONG TERM INTEREST	5
OVERALL	**71%**

■ **You thought *Blood Money* was boring? *Gravity* wasn't gruelling enough? *Resolution 101* just wasn't thrilling? *Skidz* is a game all about fun – career round the streets on a skateboard, picking up litter and dropping it into dustbins**

With so many platform games in the *Super Mario Bros*, *Wonderboy* and *Rainbow Islands* mould, it's difficult to design new ones without re-hashing old ideas. *Prophecy* dispenses with this predicament by making no attempt at all to do anything different, choosing instead one of those good, old-fashioned little-boy-battling-evil-Lord scenarios.

You play Brian, a small Viking nipper whose family has been transmogrified into another astral plane by a freak whirlwind. This was sent down by the Dark Lord Loki, to capture *you*, but luckily you were out gathering herbs when the whirlwind arrived.

You return to find your village wrecked and a benign God waiting to comfort you. He tells you the prophecy of a small boy who saves the kingdom from the evil Dark Lord. Pennies drop, mists clear, and you realise you are the Viking saviour destined to search for Loki and rid the world of his evil presence.

Controlling Brian is simple; move the joystick left or right and he walks, push up and he jumps. You still control him when leaping and can land on roofs, platforms and (whoops!) monsters.

There are lots of monsters in *Prophecy* and they're difficult to avoid. Most you deal with at close range using your sword, but others require long-distance bashing with weapons you buy on the way. You can use bombs, bolases, fire-sprites and lightning stuns to kill difficult monsters, but for really hectic moments, nothing beats a smart bomb which kills all the gribblies on screen. Use the spacebar to cycle through the weapons you possess and pull down on the joystick to trigger them.

■ Extra strength is cheap in this shop

Pressing return in front of a weapons shop opens the door and takes you into a dark room where a strange shopkeeper shows you the goods. Point to your chosen item, press fire and a small hobgoblin pushes it off the shelf.

If you have enough money and the shop sells them, you can buy shields, invisibility cloaks, and magic boots that make you run faster or fly. Occasionally you can buy extra lives or strength and it's wise to do this whenever possible.

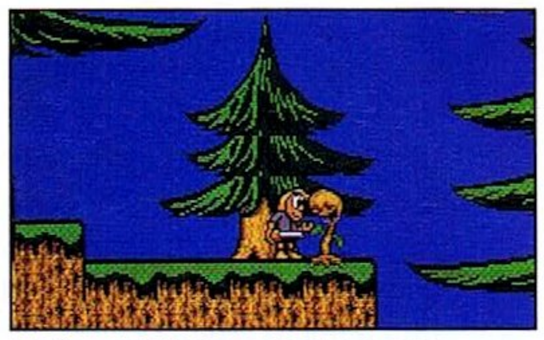
After battling your way past jumping toadstools, buzzing flies and spitting flowers, you're confronted by one of eight super-nasties. These are friends of the Dark Lord, and need some skillful stomping before you can progress to the next stage. After 16 different magic lands you finally meet Loki himself and you need all your wits about you if you're to trash him too.

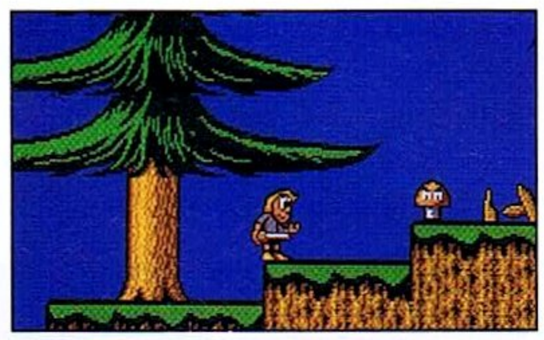
EFFECTS

Prophecy begins enchantingly with a long illustrated intro story which, thankfully, you can skip with the fire button if you've seen it all before. The main game contains interesting creatures, but sadly on a fairly standard *Wonderboy*-type background.

Brian is well-animated, complete with comic quizzical expressions as he tumbles head over heels down long drops. A few scenes, such as the bottom of the well, feature background animation which add atmosphere to an otherwise mundane game.

Sound effects consist of squeaks and whistles, reinforcing the arcade-cutesy style graphics. The in-game tunes are catchy and you soon find yourself humming along, though humming arcade ditties is seriously bad for your street-cred.


■ Smashing snapdragons requires face-to-face fighting


■ Beware of the dangerous magic mushrooms which trip you up as they grow

VERDICT

The major problem with *Prophecy* is the complete lack of originality in the game's design. It bears too many resemblances to other platform games, notably *Wonderboy in Monsterland*, right down to the shops, weapons and money dropping from clouds. The music and programming of the game show definite talent and it's a shame that it wasn't used in a better scenario.

Prophecy is an enjoyable way to waste a few hours when you're babysitting for next door's five-year-old, but buy it with the money his parents pay you, don't spend your own.

NEIL JACKSON

GRAPHICS	8
SOUNDTRACK	7
INTELLIGENCE	3
INSTANT APPEAL	6
LONG TERM INTEREST	5
OVERALL	**67%**

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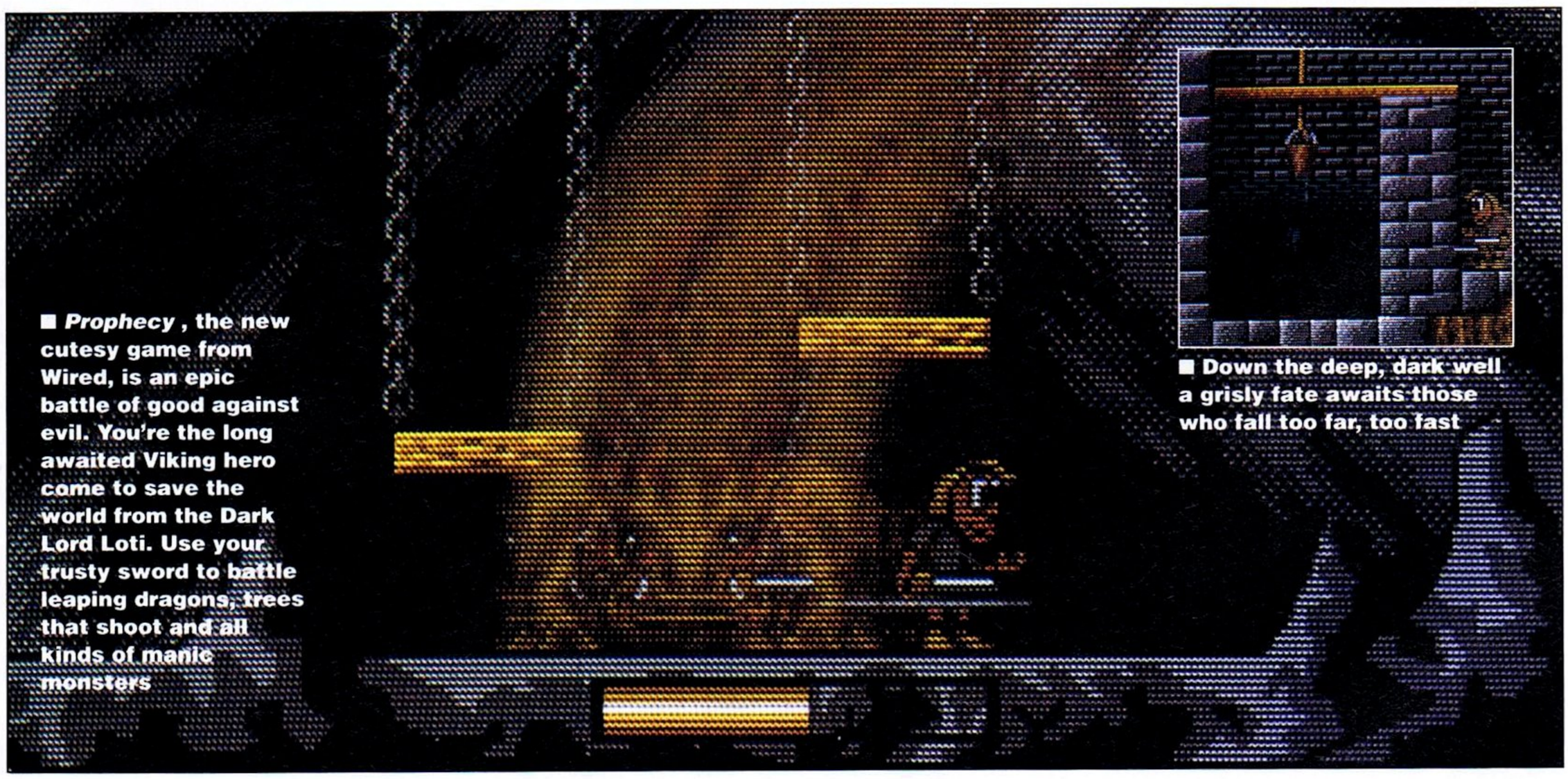
prophecy 1

THE VIKING CHILD


■ *Prophecy*, the new cutesy game from Wired, is an epic battle of good against evil. You're the long awaited Viking hero come to save the world from the Dark Lord Loti. Use your trusty sword to battle leaping dragons, trees that shoot and all kinds of manic monsters

■ Down the deep, dark well a grisly fate awaits those who fall too far, too fast

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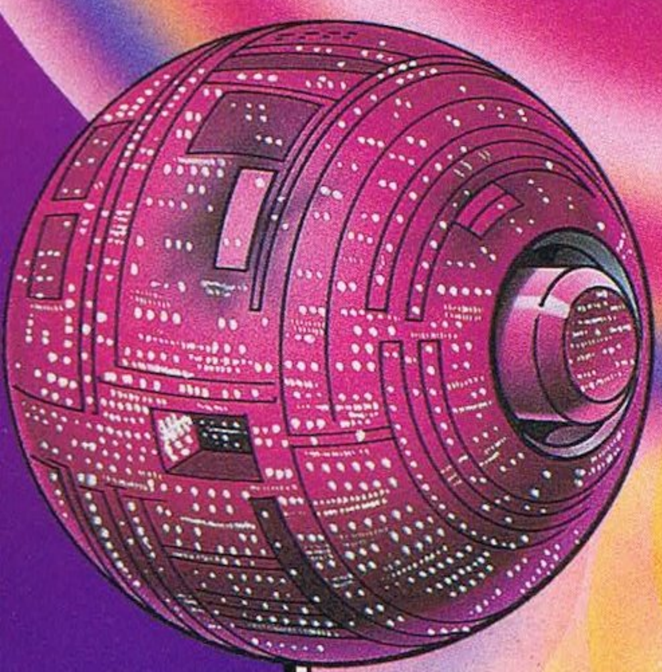

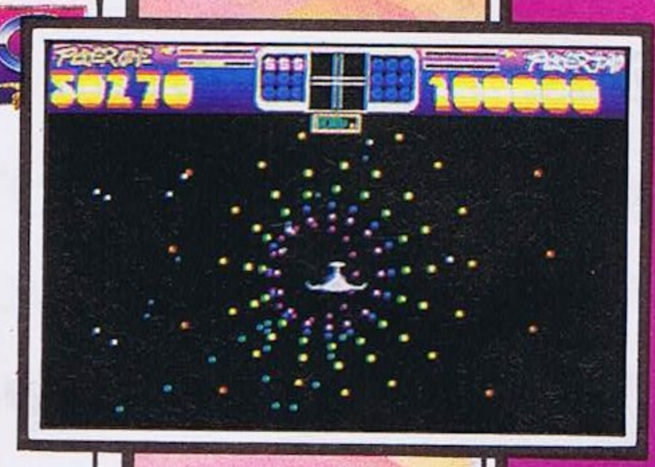

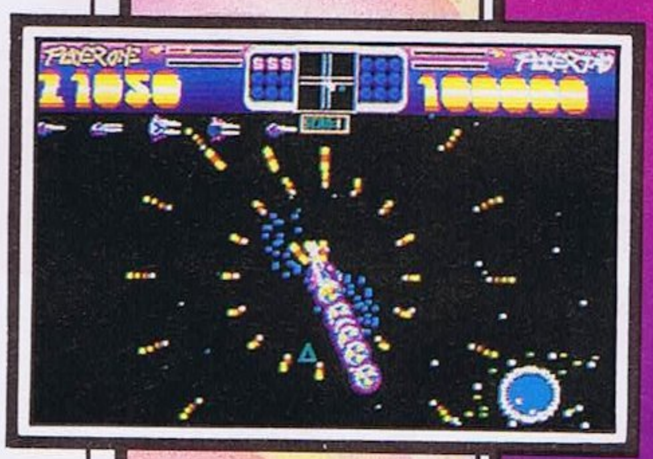

Screen shots from various systems.

PHOTON STORM

A classic space shoot-em-up from the master of addictive arcade classics – action, colour, excitement and mind boggling destruction make Photon Storm the definitive example of manic alien encounter. Patrolling outer space a desperate command suddenly orders you on a mission to seek an alien Battlestar, menacingly forming in a remote universe. Quickly you turn to your scanner and head-up display, desperate to locate the Stargates that will allow you to enter the time warp zones and speed across the galaxies. Instantaneously your attention is drawn to your lazer systems – their awesome power is immediately required – the Battlestar has released fleets of space fighters to halt your progress and return with the plutonium vital to its progress. If your skill lets you down or your nerve fails you in your encounter with the collisions, minetraps and fireballs released by the alien fighters, the Battlestar will grow in strength, activate and unleash hordes of reeking Ferrets that will not only bring to an end your mission, but the future of mankind as well. On with the navigator, out with the blasters and give those homicidal, psychopathic aliens pure hell!!

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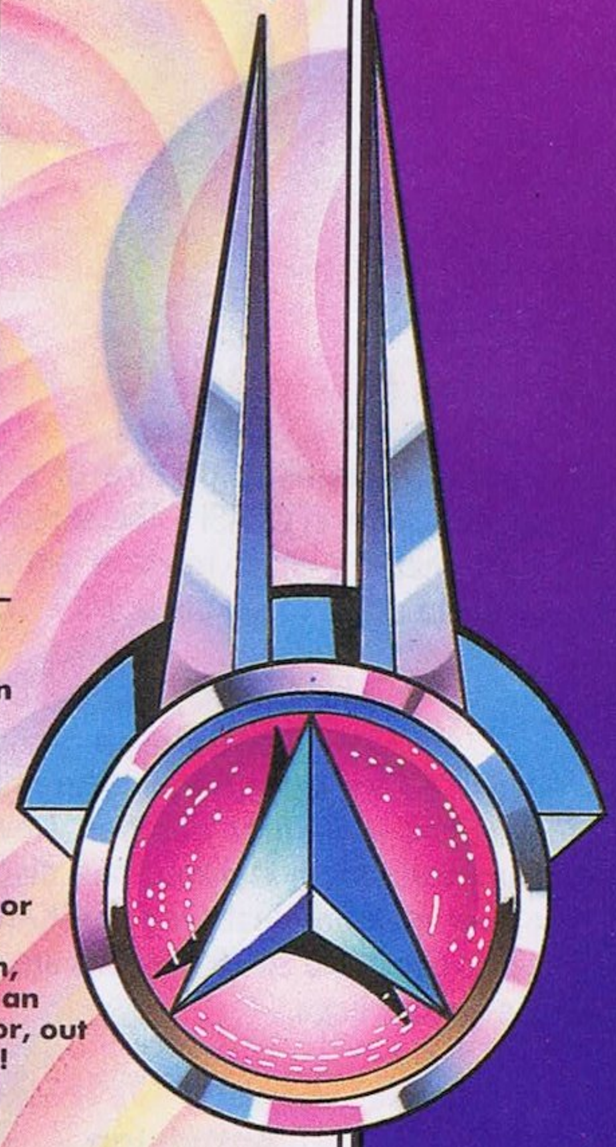

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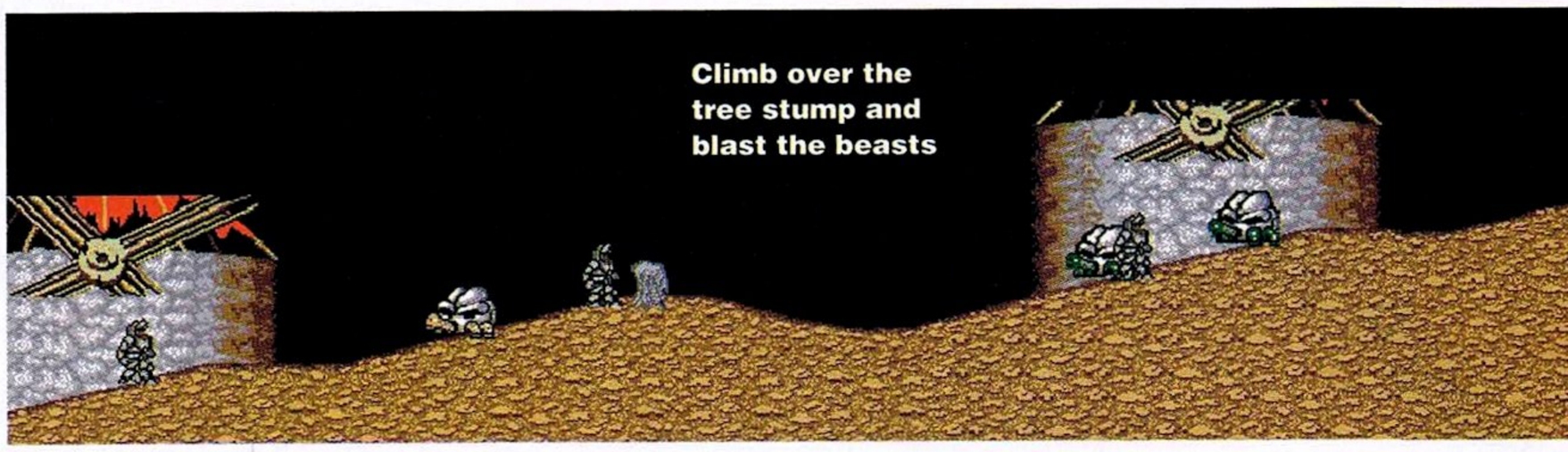
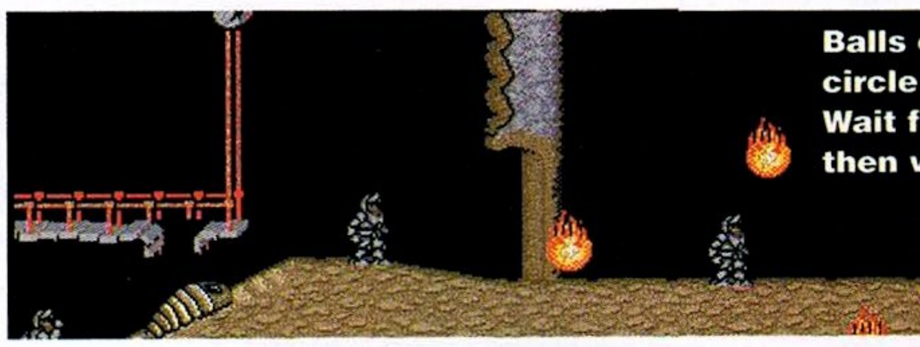
GHOULS 'N' GHOSTS
US GOLD

This month we print level two of US Gold's famous arcade conversion. The sequence shows all the monsters you come up against, gives advance warning of what to look out for, and shows you how to avoid an untimely end



Climb over the tree stump and blast the beasts



Balls circle Wait then

This month we have seven magnificent pages stuffed full of gamebusting maps, cheats and hints. Mark Higham shows how Delboy can get you into the high-score table and Anne Frank can help you out of a tight spot

game busters

THUNDERBLADE
US Gold

When the digitised picture of a helicopter appears, type in CRASH. The screen flashes to show that the cheat mode is active. Now hit UNDO to skip through the levels.

FIGHTER BOMBER
Activision

In *STF 11* we showed how to work through the missions in *Fighter Bomber*. Now **Michael Duckfield** from Oakham has discovered an easier method. Just type BUCKAROO as the pilot's name and all 16 missions are available on the options page.

AFTERBURNER
Activision

Pause the game during play and type THUNDERBLADE. The following keys now give you extra bonuses:

G – extra missiles
T – reduces missiles
< – previous stage
> – next stage
N – extra lives

AFTER THE WAR
Dinamic

Jamie Rogers from Altringham has been putting all his efforts into battling through the two levels. He's now discovered the access code to part II. Use 101069 (101039 on some versions) to progress. Trying out this cheat in the *FORMAT* office, we also came up with a couple of our own. To gain immunity in part I, press Alt D and 1 together. In part two press Alt J and 1.

SEVEN GATES OF JAMBALA
Grandslam

Another tip from Jamie Roberts is going to help you scream straight through this arcade adventure. On the title screen, type YICKE YACKE H:HNERKACKE. Press the left shift key and then 1. Let go of 1 then let go of Shift. The flashing line "Press Space to Start" should turn blue. With the cheat activated, you can press F1-F5 for weapons, 1-7 for levels, G for more gold and F10 to turn the power jump on or off.

PIPE MANIA
Empire

Forget the encroaching water and plumb new depths of chicanery by entering codes to reach the later levels. Try these for size, courtesy of **J. Thorpe** from Cambs: **OOZE WILD BLOB GRIP DOCK BALL.**

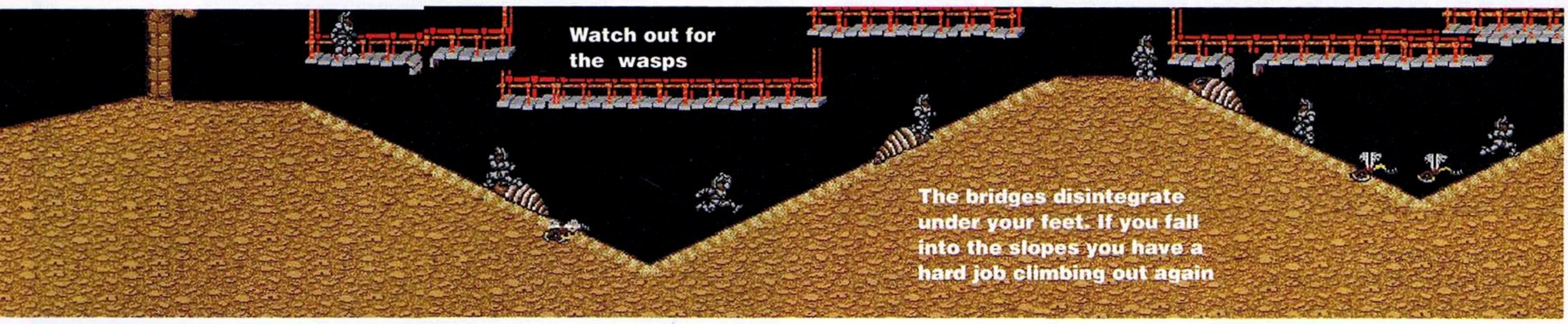
EYE OF HORUS
Logotron

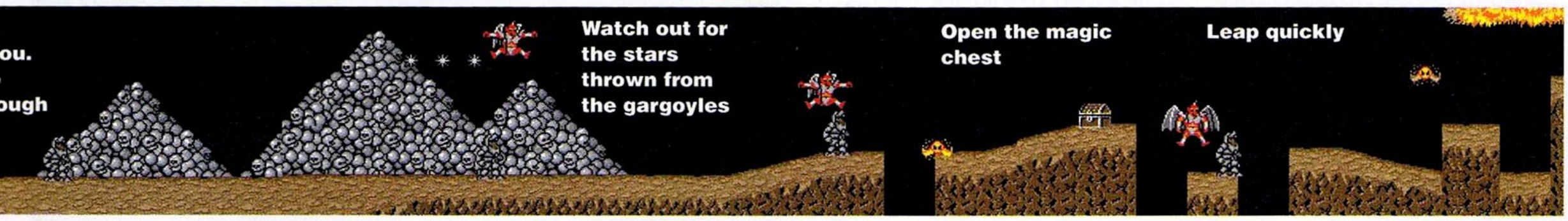
Type SPAM in the credits section and the game begins. You now have infinite lives and there's no need to use colour-coded keys to move into locked lifts. Set is located through the blue locked lift.

R-TYPE
Activision

When you're asked for the second disk, press the Help key, then M, then the Up cursor key (Help me up).

During the game the function keys perform various tasks. The first two keys disable collision detection, F5 makes you invincible, F6 makes you invulnerable to lasers, F7 gives infinite credits and F8 enables you to play with another person using the mouse.





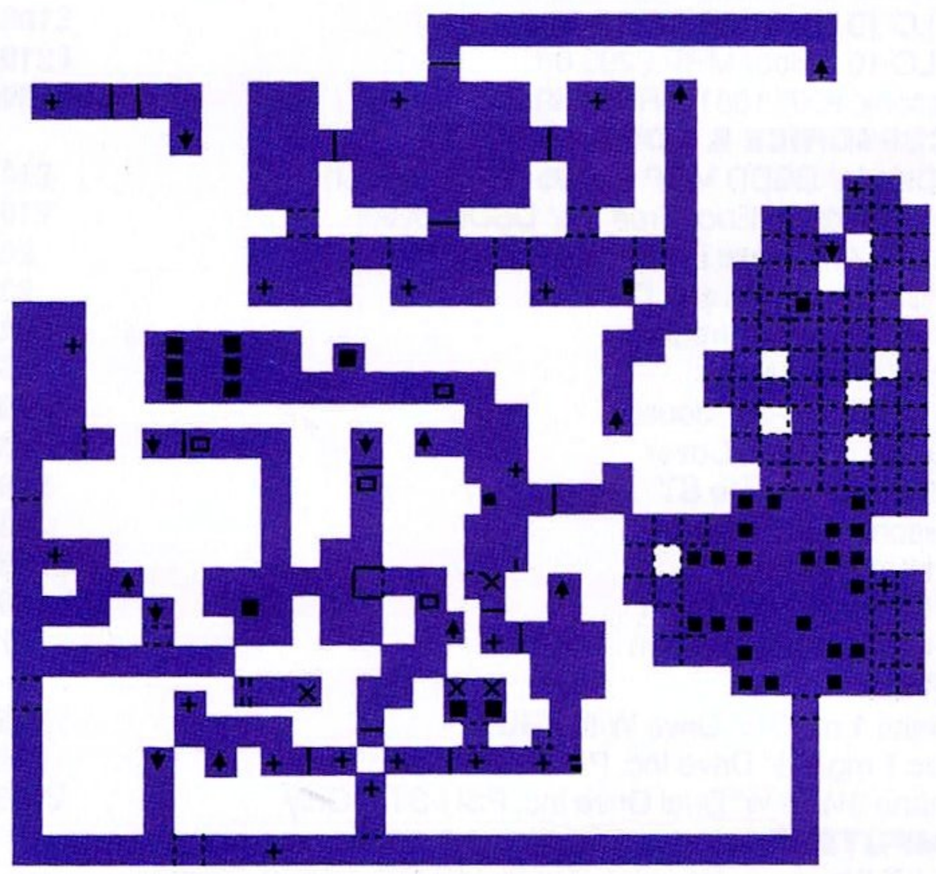
CHAOS STRIKES BACK

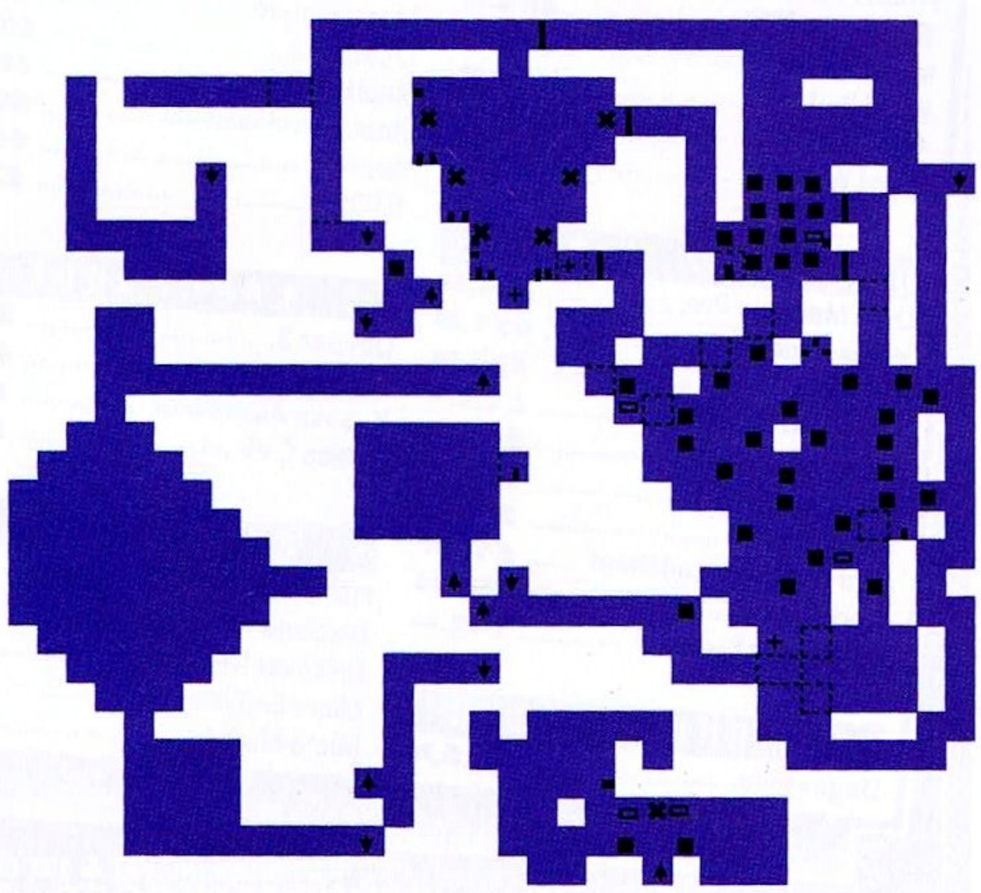
Mirrorsoft

LEVEL FOUR – THE DRAGON'S LAIRS

This level is swarming with dragons. In the large cavern made up of imaginary walls, there can be up to eight dragons waiting to cause you trouble. Deal with them one at a time. You reach the dragon's den from the long passage behind the door of Ku. All the doors can be blown away with fireballs. There are five dragons to begin with and they're invincible. Use the power towers to open the secret passage which leads to the corbum pillar.

Two exits from the dragon room under the demon director level allow you either back up to the demon director level (in the black flame room) or down to the start level in "Supplies for the quick." The middle of the map contains the entrance to the way of Neta which requires the turquoise key. Use the magic field to teleport a skeleton through the door. Kill it using rocks and lightning bolts. If you show a poison dart to the eye, it closes the pit in the demon director which gives access to the way of Ros. In the secret room (facing north) the left-hand field teleports you to the maze area containing the jawa with the square key and the right-hand field teleports you to the room with the flying scroll.





LEVEL SIX – SLIMES AND POISON

This is the most frustrating level. Use iron keys or lockpicks to deactivate the field round the junction of the ways. In the area containing the flying scroll, walk north destroying everything in your path to reach the other side.

In the cone room, get to the vorpal blade and try to take it out. As you pick it up, huge fireballs fly between the magic fields. A single fireball is usually fatal to your entire party. The easy way out is through the secret passage which opens when you take the blade. Unfortunately it only stays open for a short time. Make sure the area is clear of monsters, especially the Rives (the invisible claws). Each time you pick up the blade it opens the passage.

In the area where you prove you're a wizard, use ZOKATHRA and hold it to the eye. At the bridge, press the button and walk to the square where the BRIDGE message appears. This teleports you to the next part. The map shows which button in the alcove opens which wall. Two green buttons are presented, press A and a winged key opens the secret passage.

- ▭ Pressure Pad
- × Magic Field
- ■ Pit
- ▲ Stairs Up
- ▼ Stairs Down
- + Key/coin/object
- ▮ Button
- ▭ Launcher

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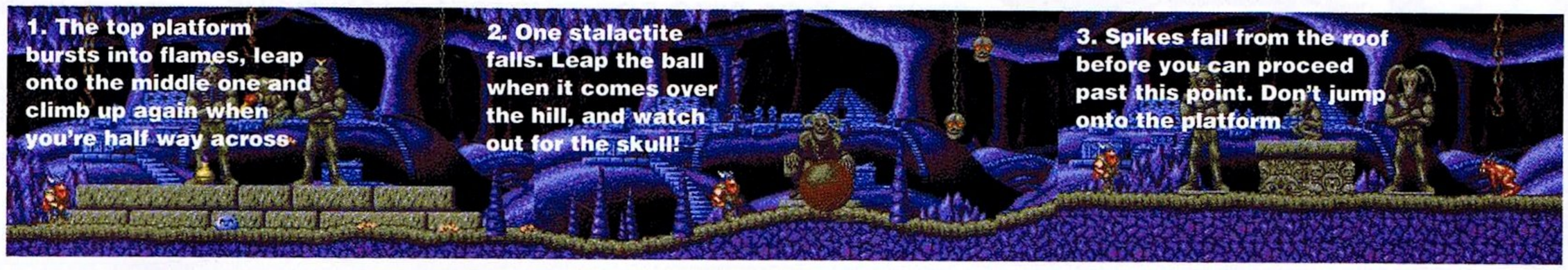

FIRE AND BRIMSTONE

MICROPROSE

(LEVEL 3) The game is played as a series of 15 static screens: numbers correspond to the screen being played

MICKEY MOUSE

Gremlin

Type in 61315688 when playing and a flickering line appears in the border. Now hit F2 to open a door to a subgame. F3 starts a fight between you and the witch and F4 refuels your water pistol.

FLYING SHARK

US Gold

On the high-score table enter HSC to gain infinite lives, or type KDJ to be instantly invincible. When you enter the last letter of these cheats, hold down the 5 key on the keypad.

DEFENDER OF THE CROWN

Mirrorsoft

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2. Transfer all seven men from the garrison into the army and then conquer Gloucester.
3. Buy one catapult and seven soldiers and on your next move buy an additional ten soldiers.
4. Go back to your home castle in Clwyd and transfer nine soldiers and one catapult from the garrison and into the army.
5. Conquer Dorset. In the following move conquer Cornwall by catapulting four boulders through the wall and throwing three Greek fires over it to kill the remaining army. Don't worry if other territories start taking your land – they can be conquered later.
6. Buy as many soldiers as possible.
7. Move back home via Dorset and Gloucester and transfer soldiers into your army. Leave 45-50 soldiers in the garrison.
8. Conquer Buckingham by making four or five holes in their castle wall, throw two Greek fires

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over it, and battle it out with their soldiers.
9. Buy as many soldiers as possible.
10. Move back home to Clwyd via Gloucester and transfer 50 soldiers to your army.
11. Conquer Cambridge and then take Norfolk. Defeat Norfolk by knocking four or five holes in the wall and throwing two greek fires over it. Now start battling.

You should now have completed the game. If you don't want to cheat then here's a few tips that might help:
Battle: always click on "Soldiers Fight" to battle unless you have Knights. In this case click on "Knights Charge."
Jousts: never hold a joust, they cost five pieces of gold and you rarely win.
Raids: always raid immediately after an enemy has attacked you – their cash flow is much greater then.

Upgrade your computer to 2.5 MBytes so that the entire game can be loaded into memory in one go.

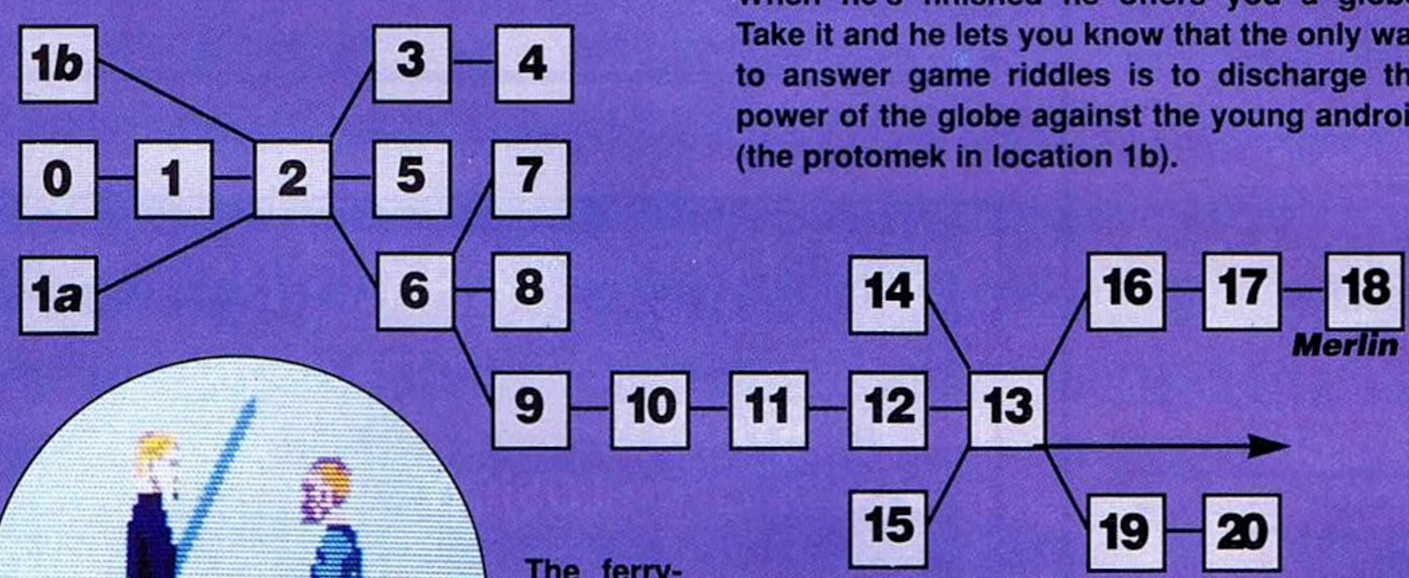
Lloyd Burley from County Durham has discovered that you get a host of new armies by holding down K while the second disk is loaded.

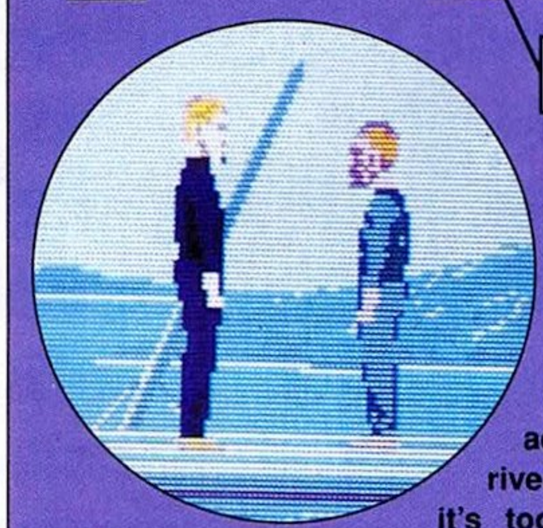
THE UNTOUCHABLES
Ocean

Pause the game and enter the following passwords:
Level 1-2 – BRIDGE ROLLS
Level 2-3 – MAC NALLEY
Level 3-4 – KID ZAPPING
Level 4-5 – A NIT IN TIME
Thanks to **Kirren Craske** from London for unearthing this one.

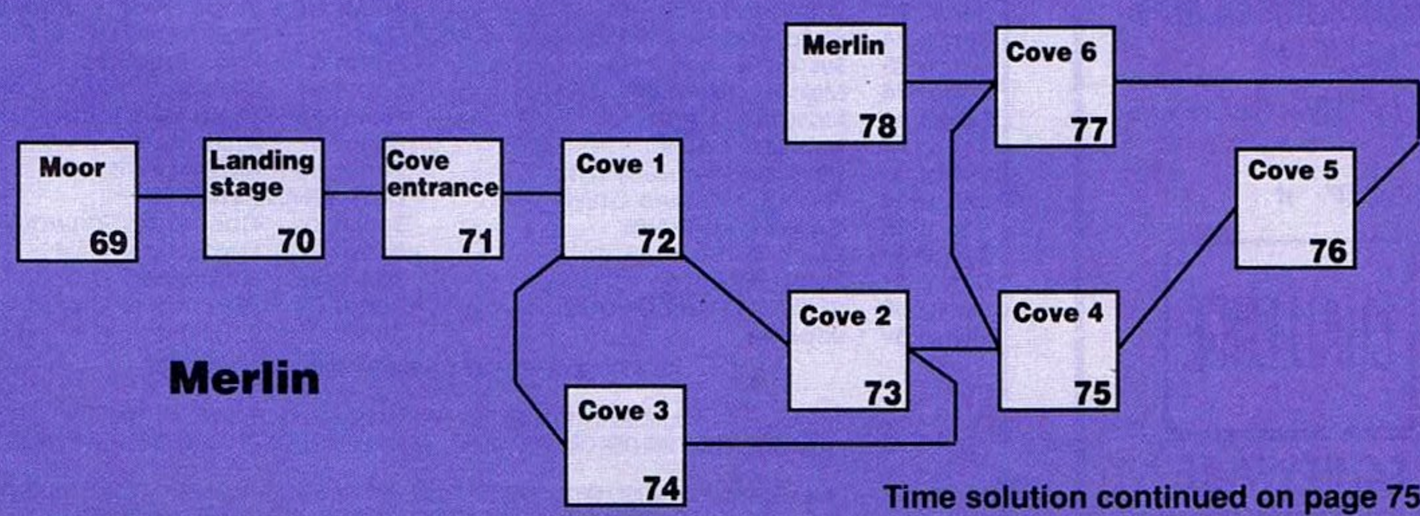
TIME
Empire

1 Last month's solution to *Time* took us as far as the Merlin period. This month we continue where we left off. To visit Merlin, move across the river by going left and picking up the sheep's eye on the sacrificial altar. When you do this the half-crazed servant thanks you so much he gives you a crown. the ring in cave two of the first set and cave six of the second. Eventually you're given access to Merlin's cave. Merlin then spouts a load of bad rhyme. Some of it may be useful. When he's finished he offers you a globe. Take it and he lets you know that the only way to answer game riddles is to discharge the power of the globe against the young android (the protomek in location 1b).





The ferryman won't accept a crown to take you across the river because it's too much. To get change go back to the altar, place the eye on it, and offer the coin to the servant. He treats you with scorn and offers you a groat in exchange. You can now use this to catch the ferry over the river. On the opposite side is the entrance to the magic caves. Get the magic ring from the ferryman and go inside the caves. If you don't use the ring, you go in circles. There are two sets of three caves. Use



Time solution continued on page 75

IMPOSSAMOLE
Gremlin

Tony Bones from Herts has discovered the first cheats to Gremlin's big game. On the high-score table type the following passwords:
HEINZ – gives you three full power bars
LUMBAJAK – provides a double-length energy bar
ANNFRANK – tops up low energy
OOCHOUCH – enables you to walk on water
COMMANDO – extends time limit on weapons
JUGGLERS – just try this one and see!

ROBOCOP
Ocean

Type BEST-KEPT-SECRET after pausing and you get infinite energy. Thanks to **Alex Phipps** from Plymouth for this one! Alternatively, follow the advice of **Matthew Barson** from Surrey and hold down the UNDO, HELP and Backspace keys while typing in "alexmurphy." Now hit the left mouse button for extra energy.

LED STORM
US Gold

Be incredibly forthright and type DAVID BROADHURST WANTS TO CHEAT for infinite lives. Thanks to **Andrew Ashmore** for this one.

DOUBLE DRAGON
Virgin Mastertronic

Start a two-player game and hold down the fire buttons on both joysticks. Now keep hitting ESC until the credits go crazy and you get infinite lives.

PLATOON
Ocean

Passwords to this bloody challenge have been discovered by **Andrew Ashmore** from Newark. On the title screen type HAMBURGER HILL. During the game press F2 to use explosives, F3 to go directly to the bridge, F4 to find the village and F5 for immunity.

STRIDER
US Gold

Play the game as usual then press F9 to pause. Now hold down the Help key with the left shift key and the 1 key. Release the keys and unpause the game with F10.

By hitting keys 1,2,3,4,5 you can skip through the different levels. Hitting the first four function keys takes you to different points of the level, including the really nasty end-of-level bad guys. Unfortunately this useful tip doesn't give you infinite lives. Many thanks go to *Strider*-addict **Christopher Smith** from London for this one.

CRACKDOWN
US Gold

Type SMURF and then hit F1 and F2 to give unlimited lives to your two characters.

FORGOTTEN WORLDS
US Gold

After hours of play, **Craig Groves** from the West Midlands has discovered this cheat to the famous shoot-'em-up. On the title screen hold down the Shift key and type ARC. Now release the Shift key and hit Help to start the game. Press S during play to venture into the shop and N to advance to the next level.

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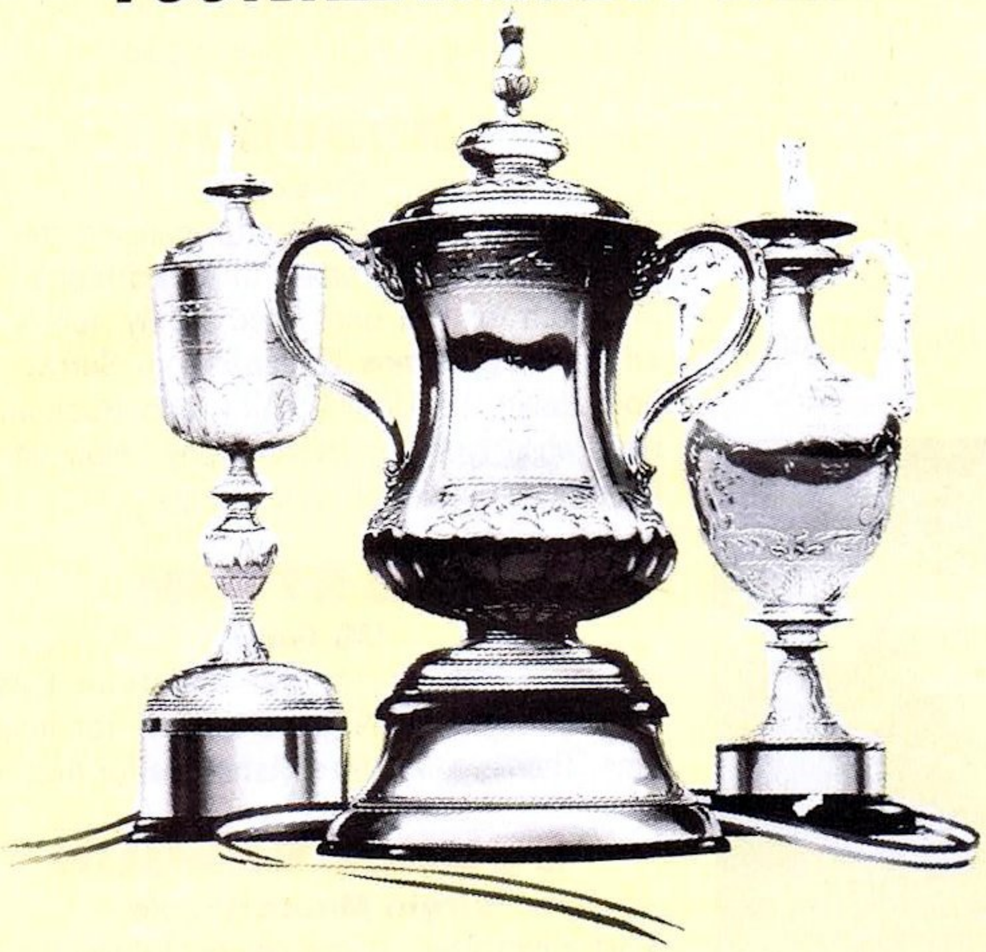

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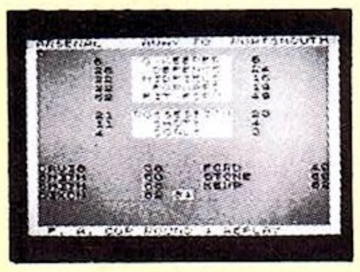
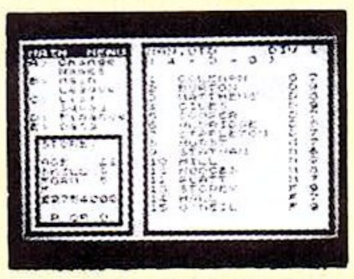

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STARGLIDER II
Rainbird

This cheat has been wrongly quoted in a host of other computer magazines. *FORMAT* comes to the rescue with this tried and tested tip. Pull the joystick back to stop the ship and press F4-Delete. Now enter the words "Were-on-a-mission-from-God1" (remember the one). If the cheat mode has been activated your energy levels should halve, but pressing K gets you all the extra weapons you need.

BEVERLY HILLS COP
Tynesoft

Philip Currie from London has discovered a way to play all four games in *Beverly Hills Cop* without playing them in sequence. Click past the high-score table and onto the screen where you select a difficulty factor. Now type MELLIE and all levels are available.

ARKANOID REVENGE OF DOH
Ocean

Nicholas Ward from Herts has come up with a solution for *Arkanoid*. When the game has loaded, wait for the title screen to appear and type MAGENTA. Now when you're playing just hit S to skip through the levels.

DOUBLE DRAGON II
Mastertronic

Start a two-player game, press both the fire buttons and hit Escape to gain infinite credits.

VIGILANTE
US Gold

Build up a high enough score to reach the high-score table and enter your name as POOKY IS MY PAL. F1 now increases your lives and F8 takes you to the next level.

PAC-LAND
Grandslam

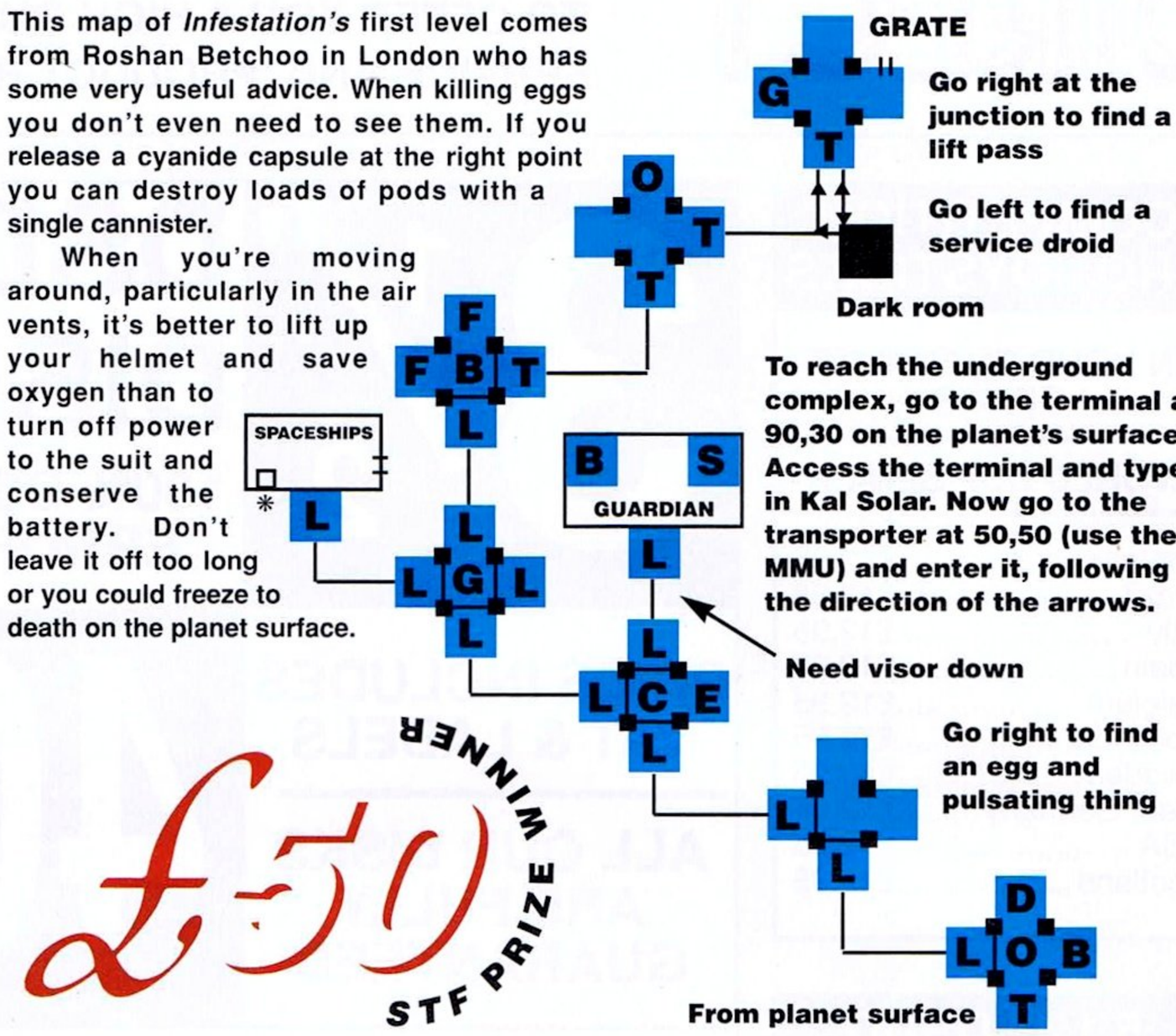
If you push the third fire hydrant as far left as possible, you can pick up a new hat. This enables you to eat the ghost bombs which fall from the aeroplane. When you lose a life, your character loses the hat. On the third cactus after the break, push left. The Pac Man flashes indicating that you are now invincible to other ghosts. Unfortunately, this tip doesn't work on the way back with the fairy boots. Thanks go to **Joe Holmberg** from Oxford for this gem.

For the ultimate cheat try typing AVALON on the title screen to obtain infinite lives.

INFESTATION
PSYGNOSIS

This map of *Infestation's* first level comes from Roshan Betchoo in London who has some very useful advice. When killing eggs you don't even need to see them. If you release a cyanide capsule at the right point you can destroy loads of pods with a single cannister.

When you're moving around, particularly in the air vents, it's better to lift up your helmet and save oxygen than to turn off power to the suit and conserve the battery. Don't leave it off too long or you could freeze to death on the planet surface.



ALTERED BEAST
Activision

There's a bug in some versions of *Altered Beast*, noticed by **Andrew Jackson** from Liverpool. When standing on a ledge press fire and keep it pressed. As the screen scrolls across you can slide off the edge and stay standing in mid-air. You can now perform any attacking move as long as the fire button is pressed. When you wish to drop down then jump up or walk left or right.

To tackle the different guardians, follow this advice:

Level One: ram the guardian and keep hitting it. You only lose energy when you're hit by its shots.

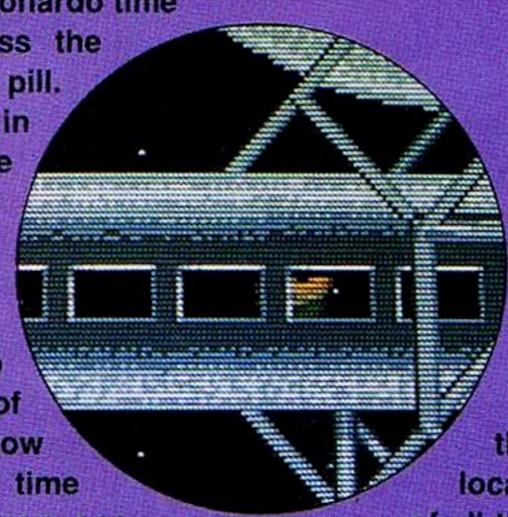
Level Two: keep firing and advancing towards it. When you're close enough, hit fire and move the joystick up or down. Repeat this action for around 15 seconds until the guardian dies.

Level Three: walk forward and breathe on the creature until it's pinned against the right-hand edge of the screen. Pull down so that you're in a sitting position and you avoid the swirling line. Keep repeating this action, jumping up to avoid the swirling line after the second pass. Keep jumping over it and run forward, breathing onthe creature until it dies.

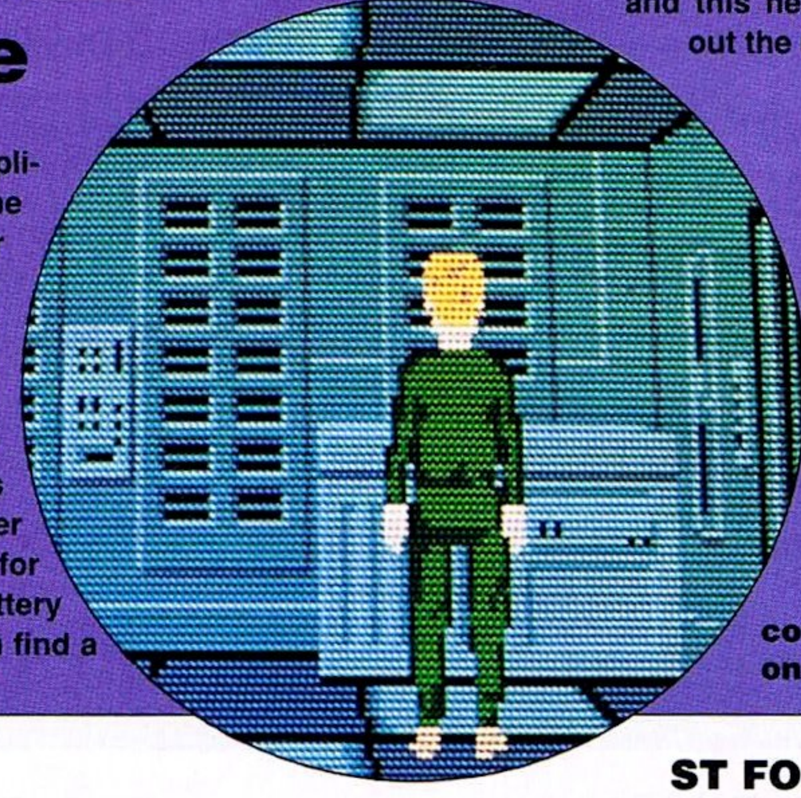
Level Four: walk under the creature and press fire as often as possible. You need to crouch on the floor occasionally to avoid it. Watch out when the creature moves to the bottom of the screen because you need to leap over its shot.

TIME
Empire

2 (continued from page 73) **Take the charged globe to the protomek. Hand it to him and then take it back and you find he's now at 20% of his full power. Now head back and try to reach the Leonardo time machine. As you pass the diner, grab a curry pill. These are useful later in the game. Each time you take one, USE it and eventually you become ill in the Gents loo (location 7). This is a great way to move from one end of the ship to the other. Now go to the Leonardo time machine (20) where you can work out the code (14521519) for the machine from the statues. Don't forget to take the globe with you.**



Things get complicated now because the Leonardo and Caesar time machines are faulty. To repair them you must go through to the labs at the end of the ship. In the computer locations you see the status of all the time machines. Further on there are control panels for each machine. One has a battery missing, but can be fixed if you find a spare one. You can swap components from one panel to another – each needs a working battery and micro chip. The sonic screwdriver can be found on your travels and this helps to lever out the chips.



continued on page 77

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VOYAGER
Ocean

On the option screen type "when the sweet April showers fall" and the cheat option screen appears. In the game use:

F1 – go back a level
F2 – advance a level
F7 – pause
F8 – show position
F9 – number of objects
F10 – frame rate

On the option screen use:
F3/4 – change language
F7 – pause
F8 – show position
F9 – number of objects
F10 – frame rate

In the object designer use the arrow keys to rotate the object, Help for the previous object and Undo for the next object. The keypad keys 7 and 4 enlarge and reduce the object and Space quits back to the option screen. Many thanks to **Iain Nolan** for that one!

BATMAN
Ocean

When the title screen appears type MAJJJJ and the words CHEAT MODE ACTIVE should appear. You now have infinite credits.

FALCON
Mirrorsoft

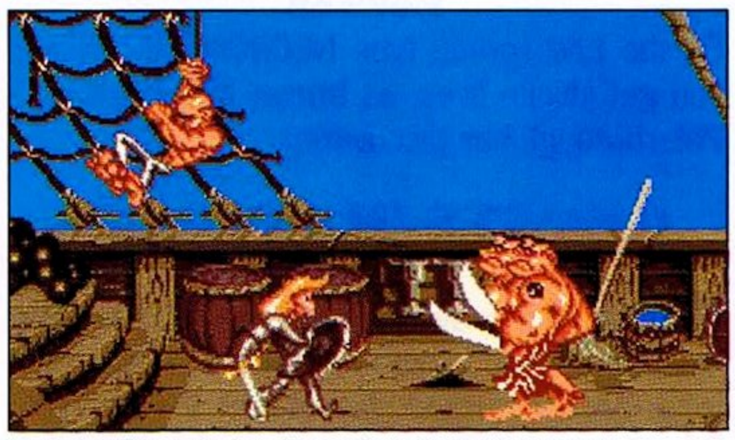
When you're on a mission hit Ctrl X to receive eight AIM-9Ls and 500 rounds in the canon.

NINJA WARRIORS
Sales Curve

Hold down the Alternate key and type CHEDDAS for infinite lives and MAY THE FORCE BE WITH YOU for infinite energy.

IVANHOE
Ocean

Pause the game and type JC IS THE BEST [Return]. Now hit N to advance a level and Delete to kill all the bad guys on screen. On the intermediary bonus screens, hit Control to wipe out the nasty heavyweight.



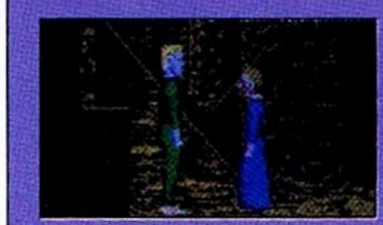
■ ***Ivanhoe* gets the cheat treatment**

NAVY MOVES
Dinamic

The code for part two is 948411. **John Barker** also discovered how to get past the reactor door. To open it use the terminal next to the reactor. Enter the reactor, walk up to it and the computer confirms the bomb is planted. Head out and use the terminal next to it to trasmit OABERYAMD. Now type end and run within the time limit to the conning tower.

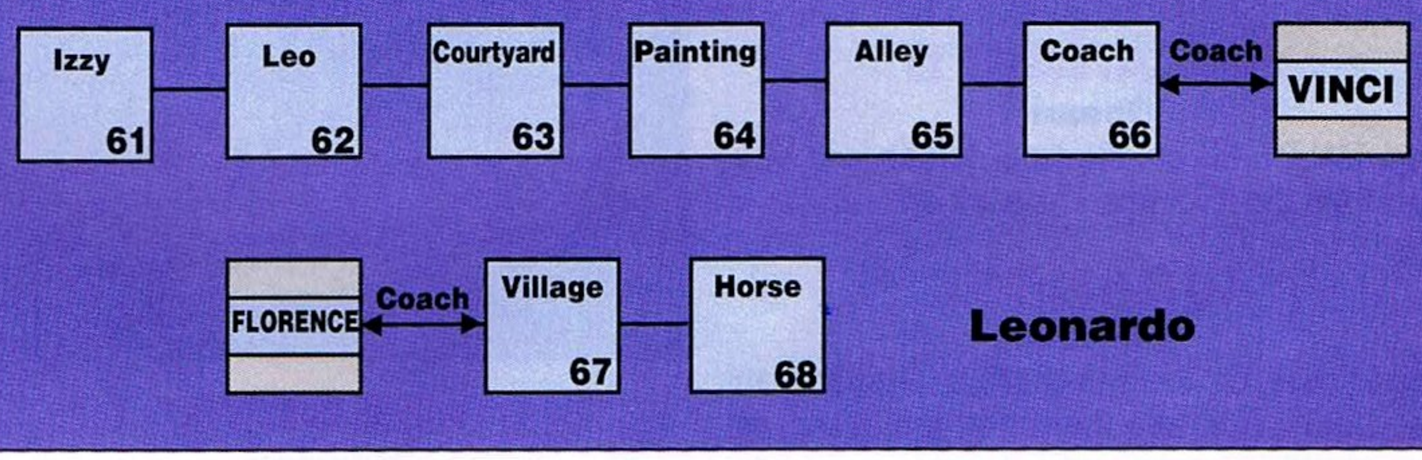
TIME
Empire

3 (continued from page 75) Take the time machine to the Leonardo time period and you end up in the bedroom of Isabella of Aragon (the model for the Mona Lisa). You leave the room and find Leonardo skulking outside. You need to find a way to make Isabella "sit" for him. Go to the courtyard where you find Salai. He gives you a rose which you need to take back to Isabella. She thinks it's come from Leo and "sits" for him again. Leo is so pleased he gives you a diagram to take you to one of the Borgias in Florence. To reach Florence you must go through the alleyway, but a murderous thug lurks there. When Salai asks you to help him steal one of Leo's paintings, let him think you've checked that the coast is clear and he gets caught up with the thug. Take the coach to Florence and give the plans to Borgia. He gives you a gem which you must take back to Leo. He accepts the globe, charging it up ready to take to the ship.



Take the globe to the protomek and discharge, then head back to the galleries. You cannot proceed past location 21 until the security man has found out who broke the smoking regulations. He needs evidence so go to the nurse's room and pick up the medical gloves. Wearing these, go and find the cigarette butt in the foreman's office and give it to the security man. The Sekurimek has been following your movements with interest. By this stage he may be suspicious and could attack you. The way to prevent this is to learn his movements and keep out of his way. The first time he catches you, you're locked in the scrap room. To get out, pick up the screwdriver and activate the alarm so he comes in. Now switch on the electromagnet with the screwdriver so that he gets trapped.

We'll provide the solution to the last three time periods next month, but in the meantime make the most of these tips and see how much further you can get on your own.



PUFFY'S SAGA
UBI Soft

Press F5 and F6 together during the game and you're transported to level seven. Hit UNDO to go to level eight and press it again to go to level nine.

DYNASTY WARS
US Gold

When the title screen appears type CHEAT MODE. Now hit F2 to advance a level.

BARBARIAN
Psygnosis

Start a game, enter 04-08-59 on the keypad and swing your sword. It's now impossible to die.

BOMBUZAL
Electronic Arts

Try out these passwords from Chloe Mackay in Bromham and Michael Kerley from Manchester.

Level 8 – Ross	Level 52 – Tape
Level 16 – Ratt	Level 56 – Weed
Level 24 – Lisa	Level 60 – Vase
Level 28 – Sink	Level 72 – Girl
Level 32 – Dave	Level 80 – Gold
Level 36 – Bike	Level 96 – Song
Level 40 – Iron	Level 104 – Fire
Level 44 – Bird	Level 112 – Lamp

Level 120 – Tree

E-MOTION
US Gold

If you're getting dizzy watching the hypnotic visuals in *E-Motion*, type in the name from the title screen when the game has loaded. F1 then advances you through the levels in turn and F moves you forward ten levels. You can hit F3 and F4 to move backwards.

QUADRALIEN
Logotron

The codes to the levels have been provided by **Mark Wright** from Herts. If you're having trouble, use these nifty cheats:
Level 2 – 170961
Level 3 – 010655
Core – 610169

IK+
System Three

Extra special effects can be introduced by typing FISH, BIRD, PERI, FREZ, PAC, JUMP, TOTO, STEW, SHAH, OFF while playing. Thanks to **John Barker** from Notts.

RETURN OF THE JEDI
Domark

Craig Groves from the West Midlands has sent in a barrage of tips for ST games including this one for *Return of the Jedi*. Enter DARTH VADER on the high-score table. Now start the game and hit F2 to skip to the next level.

BAAL
Psygnosis

Mark Wright from Herts has discovered the transporter codes in *Baal*.

Level One codes are:	Level Two:
13 00 29 16 24	12 12 48 56 30
64 53 50 25 04	17 54 35 02 34
58 49 48 38	24 34
32 68 00 29	02 06

GEMINI WING
Sales Curve

If you're still battling through the aliens, try these passwords from **Richard Plater** in Northumberland.

Level Three – Classics
Level Four – Whizzkid
Level Five – Gunshots
Level Six – Doodguyz
Level Seven – D.Gibson

SHINOBI
Virgin Mastertronic

Pause the game and type LARSXViii to gain infinite credits.

DOUBLE DRAGON
Virgin Mastertronic

Attain a high-score and enter your name as NEIL HARDING to obtain an infinite number of credits.

ARKANOID II
Ocean

Type DALEY 88 on the title screen and you start from the level where you left off.

GIGANOID
Microdeal

While you're on the select player screen, tap the CAPS LOCK key then start the game as normal. When you've read the message, you can proceed with 100 lives. Thanks to **Craig Groves** from the West Midlands for this one.

ROLLING THUNDER
US Gold

On the title screen type JIMBBBY [Return]. You now have infinite life and health.

DRAGONS BREATH
Palace

If you're having trouble breathing life into your dragons, try the following spells listed with their ingredients so you don't need to spend hours deciphering the books. The first column signifies the name of the ingredient, the second is the mixing method followed by the heating method and the ratio of ingredients.

To give strength to your dragon use:

AYHE	NORM	COOL/HEAT	2
ULIN	MIX	HEAT	4

If you're adventurous, add:

ACRUS	MIX	HEAT	1

To speed your dragon:

AYHE	NORM	COOL/HEAT	1
RASGON	MIX	HEAT	1
MAGIAN	NORM	COOL/HEAT	2

To strengthen your dragon's egg:

MAGOEM	GROUND	HEAT/COOL	1
ULIN	MIX	HEAT	4

To improve egg growth:

CEEOCOR	CUT	HEAT	1
OREGANSE		NORM –	1
ACRUS	MIX	HEAT	4

To heal your dragon:

RASGON	MIX	HEAT	1
MIONACAL		GROUND COOL	2
ACRUS	MIX	HEAT	4

NEBULUS
Hewson

Type HELLOIAMJMP on the title screen and then use the function keys to select a tower.

CRACKDOWN
US Gold

Pause the game and type SMURF. Now hit F1 and F2 for unlimited lives.

RAMBO III
Ocean

Type RENEGADE on the high-score table. Now hit 1, 2 or 3 to access the level of your choice from the title screen.

TOTAL ECLIPSE
Microprose

Lloyd Burley from County Durham has discovered a cheat to this major Freescape game. Hold down 1 and 9 (not on the numeric keypad) and hit fire for impressive results.

RINGS OF MEDUSA
Starbyte

Daniel Nock from Suffolk has stumbled across the password for *Rings of Medusa*. When the game has loaded, enter your name as DESOXYRIBONUKLEINSAEURE. Now hit the Help key to bring up a cheat menu.

■ **Careful with that *Rings* password, y'all!**

ELIMINATOR
Hewson

At the start of the game press Help and type MIKADO to get straight into level 14. Thanks to **Imran Mubarak** from Peterborough.

LEONARDO
Starbyte

Use these passwords to get through to other levels: IVANHOE, MATTERHORN and EMMENTALER.

BLACK TIGER
US Gold

Having trouble shooting everything that moves? When prompted to insert disk two, insert a blank disk instead. No bad guys are loaded.

CYBERNOID 2
Hewson

On the title screen type NECRONOMICON and you get infinite lives, as **Imran Mubarak** from Peterborough has discovered.

GHOSTS 'N GOBLINS
Elite

Battling your way through this horizontally-scrolling arcade hit can be hell if you lack good joystick technique: **Jonathan Webb** from Bristol has come up with the codes to cheat. Wait for the game to load and when the credits appear on the screen, type DELBOY. The words CHEAT MODE ACTIVATED appear and Arthur is invincible. He can still die, though, if he falls down a pit.

STRYX
Psygnosis

When the game begins, press Help, M and D simultaneously to replenish your energy. Use Help and P to obtain the door passes. ***stf***

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We shall be doing all this again, so don't worry if you miss out on September's draw.

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My tip is: Games ☐ **Desktop** ☐ **Music** ☐ **Graphics** ☐ **Cover Disk** ☐ **Other** ☐

Brief description of tip _____

_____

Please complete this form and send it, with your tip, to: Night of 1,000 Tips, *ST FORMAT*, 30 Monmouth St, Bath BA2 2AP.

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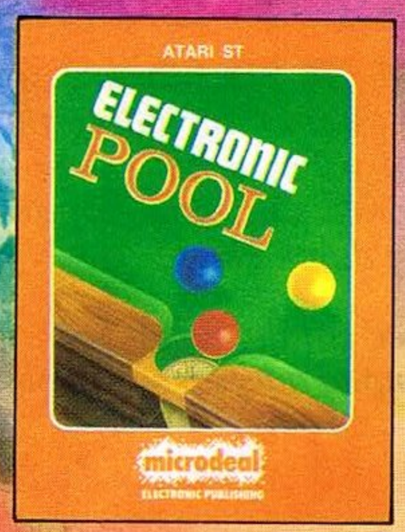
Our top selling shoot em up from Steve Bak and Pete Lyon.



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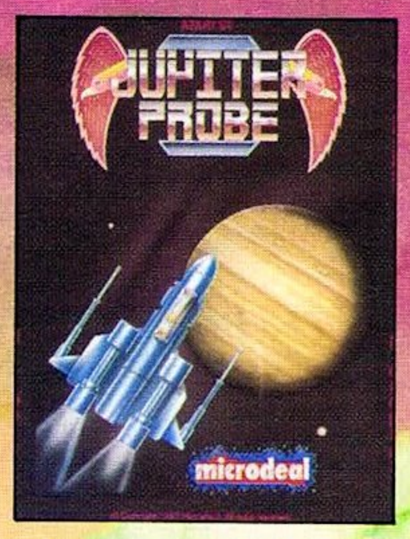
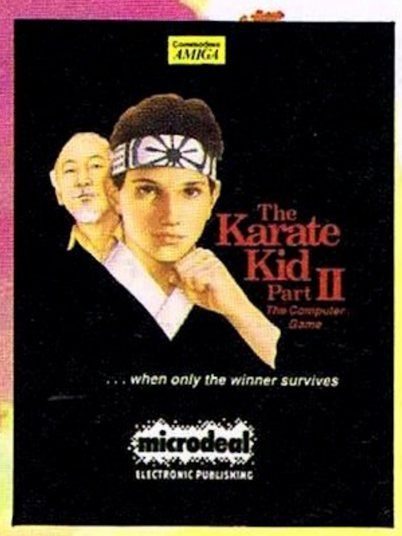
Mono or colour version of 'Video Pool' arcade game.



JUPITER PROBE
Vertically scrolling shoot em up by Steve Bak.



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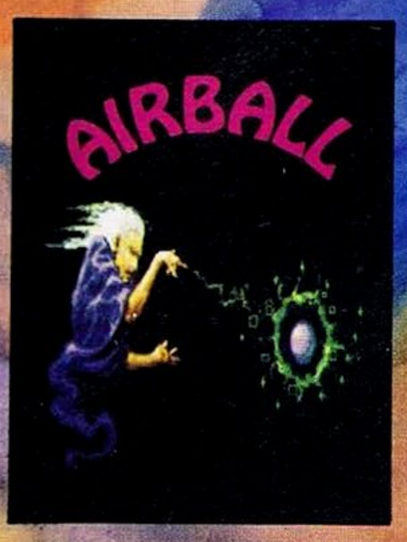
Our top selling karate game.



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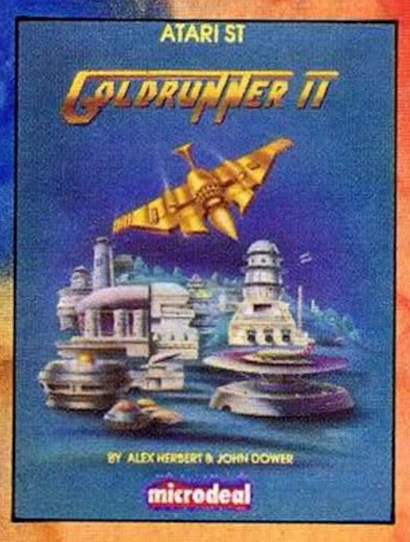

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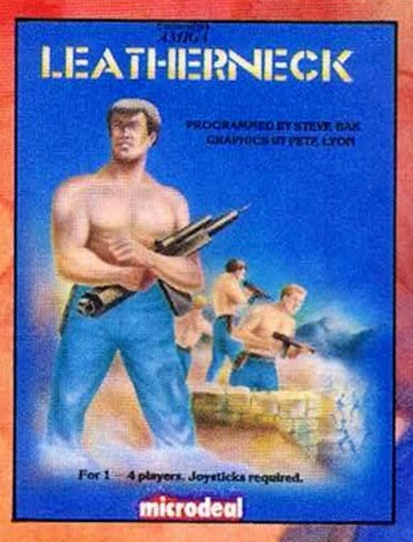

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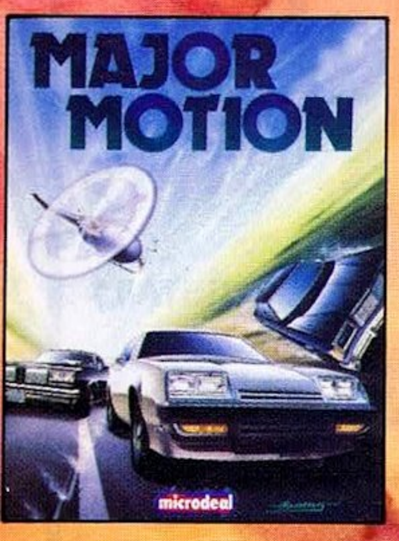

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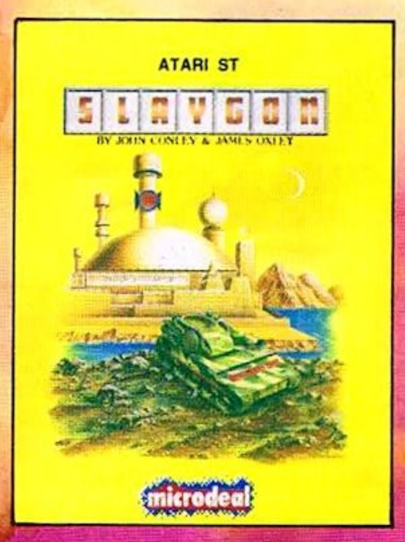
Spy car chase arcade game.



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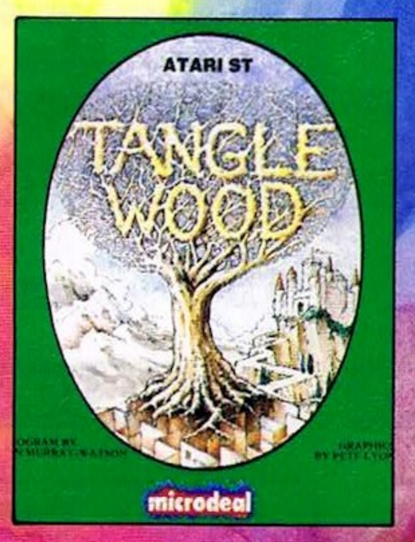

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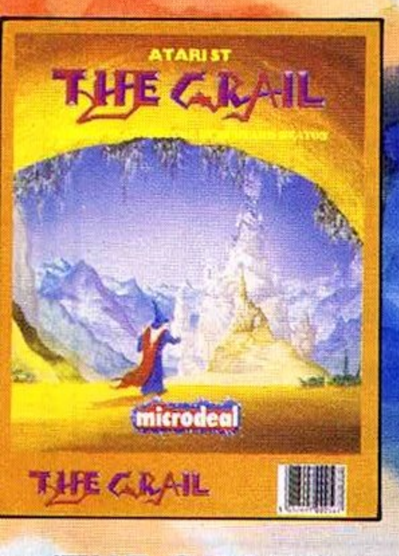

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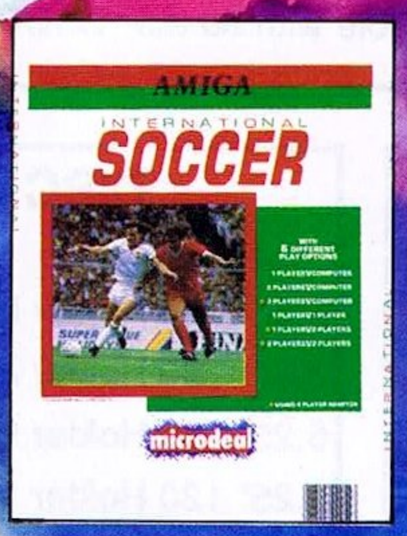

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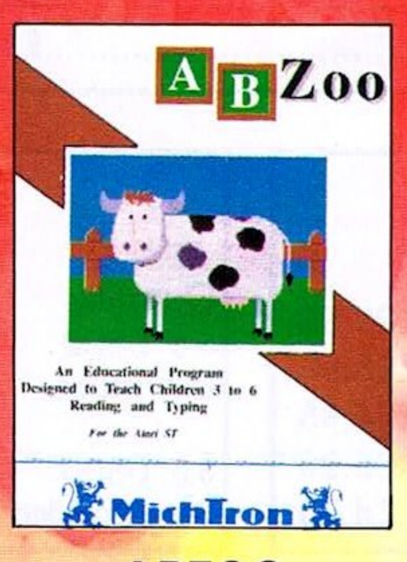

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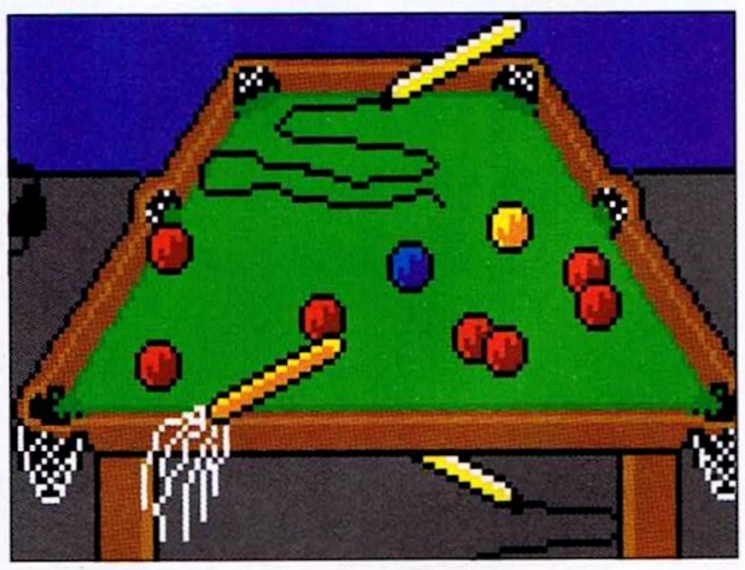
Rob Steel presents a hastily cobbled together alphabet of hints'n'tips for adventurers in an ongoing frustration situation scenario

adventure A-Z

A

A is for, um... an Adventure called ***ZORK I:*** put items into the basket and lower it to transport objects beyond the Tight Squeeze. The bat doesn't think much of garlic. Take the buoy from the river and open it. Take the canary to the tree where you found the egg and wind it up. Pray at the altar to remove the coffin. Feed sarnies to the cyclops then give him a drink. Only the thief can open the egg. Inflate the pile of plastic with the pump to traverse the river.



B

BEYOND ZORK: if you're stuck in the cellar a teleport scroll might help. Brush away the minx's tracks to baffle the hunter. Squeeze the moss for increased dexterity. Kiss the unicorn's horn for luck. Levitate the baby hungus from the mud to increase your compassion.

C

CORRUPTION: use your card to get into Bill's office. Break open the drawer with your screwdriver.

■ **Now you can go all the way *(fnar fnar)* in *Dungeons, Dragons and All That Carry On***

D

DUNGEONS, ALCHEMISTS, AMETHYSTS 'N' EVERYTHIN': wear the loincloth to swim the lake. Drop the vase to reveal a key.

E

Even more tips for ***ZORK I:*** tie the rope to the railing in the Dome Room and drop it over the parapet.

F

FISH: find a dry route while the cast is cooling.

G

GUILD OF THIEVES: get on the bed and use your cue to press the button. Use succulents on your feet to cross hot areas.

H

HITCHHIKER'S GUIDE: press the pad on the Nutrimat to get the tea substitute. Insert the small plug on the drive into the small receptacle on the plotter. Put the dangly bit into the cup and press the switch. When the Bugblatter Beast asks your name say "Arthur" and go east. Put the towel over your head and confuse it into thinking it can't see you. Carve "Arthur" on the stone. The beast reads this and falls asleep thinking it's already made a meal of you.

I

I can't find any tips for Infidel so here are some more for ***BEYOND ZORK:*** sell Mischief and Fireworks, they're both useless. Sell the tusk, crown, jewel and doubloon. Rub the rabbit's foot for luck. Compassion is the secret of living.

J

JINXTER: to catch the train read the notice, go east and buy a ticket (you only have one ferg and the Station Master tells you the ticket costs two). Drop your hat and put a ferg in it. Cast Doofer on your shoes (to make you dance) and play your harmonica. Someone eventually drops a coin in your hat but it's foreign so you should continue busking until the Station Master lets you to travel half price. Pick everything up and buy a ticket for a ferg. The ticket blows away when you try to get it: follow the ticket and keep trying to pick it up. Take the saddle you come across while chasing the ticket. When you eventually grab the ticket the train starts to depart; run after the train (twice) to catch it.

K

KING'S QUEST IV: avoid the Ogre's house and the nasty trees. Play the lute to Pan and swap your lute for his flute. Play the flute to hypnotise the snake on fruit island.

L

LEISURE SUIT LARRY III: give Tawny, the girl on the beach, your credit card (found in your mail box). Give land to the dancer Cheri Tart. Remain in your dance costume when you re-visit the solicitor.

M

MANIAC MANSION: to get past the green tentacle give it the bowl of wax fruit and the fruit drinks. To open the garage door use the exercise machine first. Give the man-eating plant water from the swimming pool, then give it the Pepsi. You can now climb the plant to reach the hatch.

N

Now some tips for ***LEATHER GODDESSES OF PHOBOS:*** use the stool to reach the basket. Use the basket to carry objects. Show the painting to the mouse.

O

OK here are more tips for ***LEATHER GODDESSES OF PHOBOS:*** put the rabbit in the machine (Tee Remover) to make it more religious. Before kissing the frog wear the peg and lip salve, close your eyes and hold your ears.

P

PERSONAL NIGHTMARE: pray next to the statue in the church to gain some holy water (make sure you're carrying a clean container). To out-run the car go S,E,E,E,E,E,N – the vehicle should crash into the tree outside Honeysuckle Cottage.

Q

QUEST (POLICE II): to get Marie to leave, dial 0 on the telephone and ask for a taxi.

R

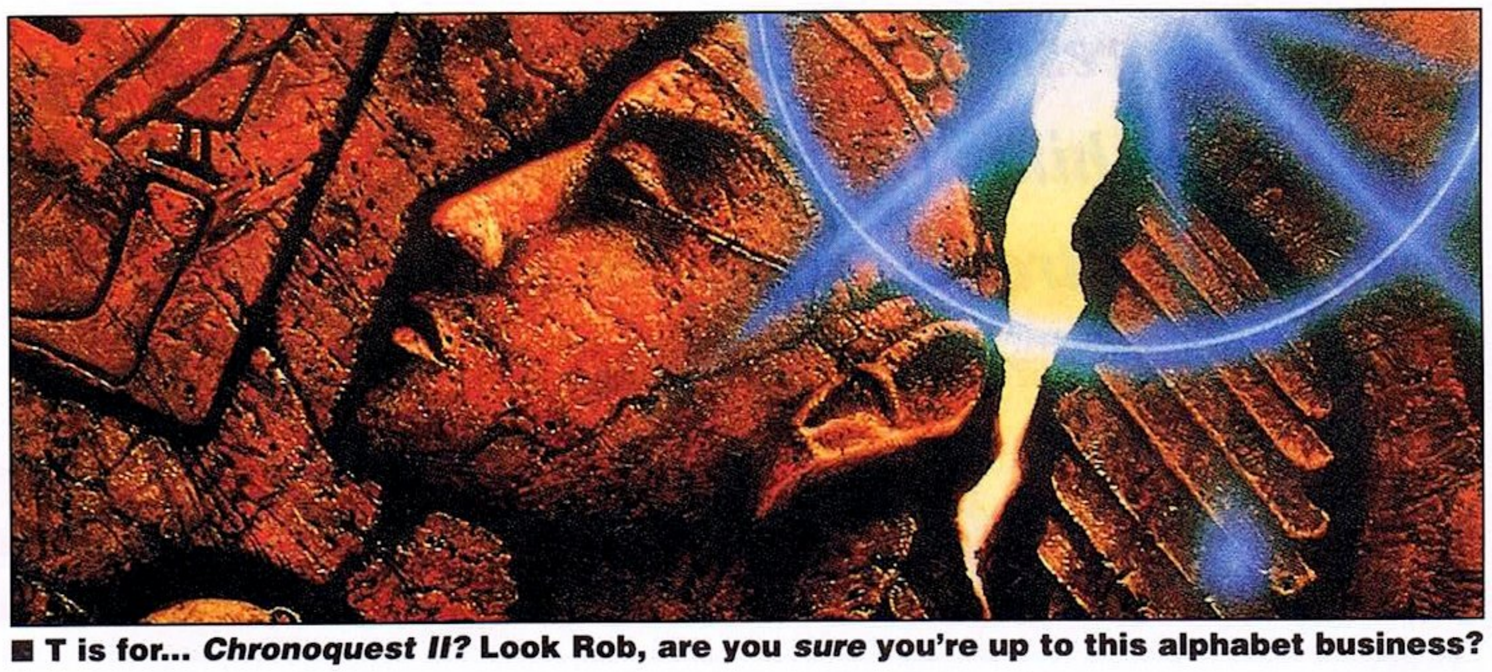
Right then *(desperate or what?!)*, here's some more tips for ***BEYOND ZORK:*** look at the amulet in the cellar through the wine bottle. It reveals a spell that temporarily gives you 99% strength, enabling you to smash down the door. Give the chest to the monkey grinder (after he's retrieved the sprite from the Guild Hall door) to get rid of him.

S

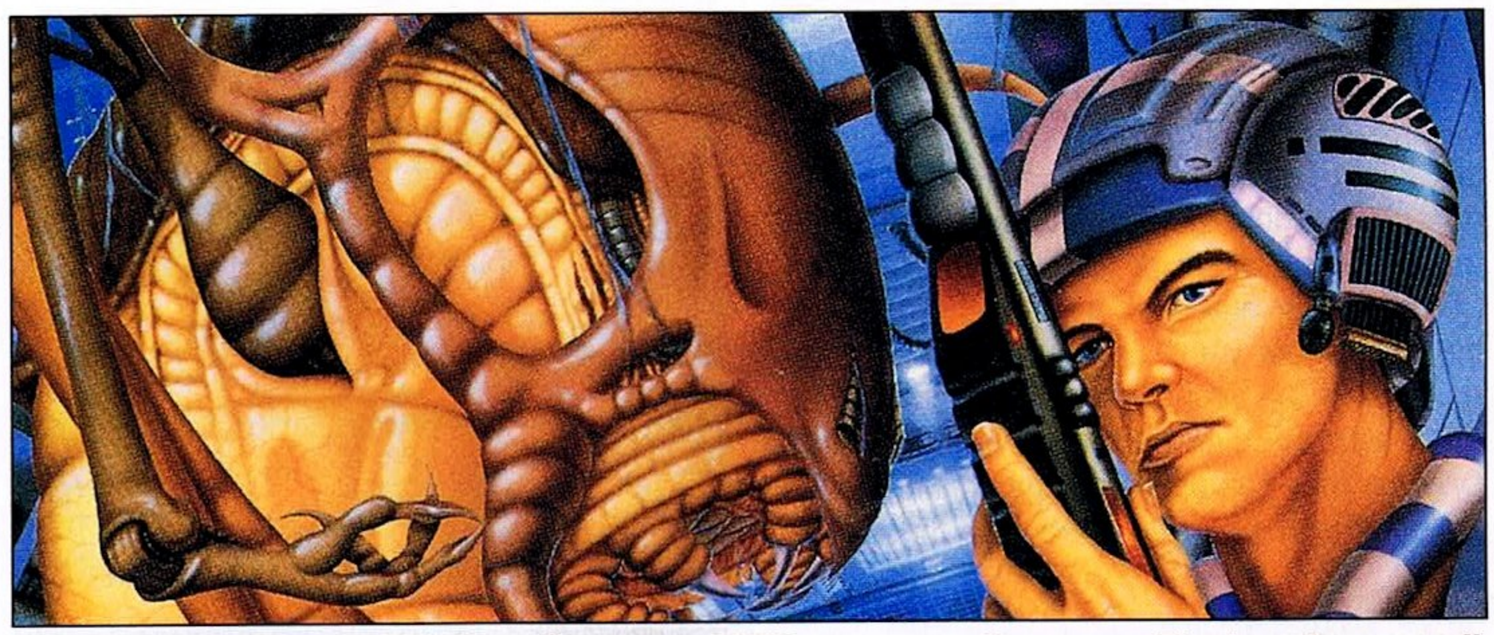
SPELLBREAKER: to reach the trapdoor, learn Tinsot (a few times), Tinsot outflow pipe, Tinsot outflow pipe again – when the spell works twice the pipe freezes, blocks and the room floods. When you're four feet from the trapdoor Tinsot water, climb on to the ice flow, Rezrov door and go up.

T

Try these tips for ***CHRONOQUEST II:*** don't fiddle with the fruit in the village. Take the scabbard as well as the sword. Use the sword on the snake, but remember to take the sword fragments and the branch with you. Take the horseshoe from the French village. Use your glove on the Musketeers. Fill the jug with wine.



■ **T is for... *Chronoquest II?* Look Rob, are you *sure* you're up to this alphabet business?**



■ **Go on, surprise me. X is for – *Xenomorph!* Blimey, a result my son. The boy done good!**

U

UNINVITED: get the knife from the pantry, go to the entrance hall, operate knife on the left chair and take the key.

V

Various tips for ***LURKING HORROR:*** cut the power cable to the floor polisher with the fire axe. Pour wax on floor to stop the zombie. Force the lift doors with the crowbar and wedge them open. Use the forklift to move the crates, revealing a passage east. Wear the gloves to climb the slimy tentacle.

W

WISHBRINGER: use the branch to help the platypus. Does the baby Grue look cold to you? Maybe you could worm your way into the piranha's affections.

X

XENOMORPH: don't remove all the chips from maintenance panels or electrically powered items (such as doors) won't work.

Y

You might find these ***SCAPEGHOST*** tips useful (part 1): follow Joe to find out more about the cemetery. Increase your strength slowly by picking up light objects such as the thistledown then the petal. The dog helps with the new wreath and the shed's rope handle once you remove the fishbone stuck in its throat.

Z

ZAK MCKRACKEN: watch the tribal dance carefully to reveal the combination to the door on Mars. ***stf***

GET YOUR TIPS OUT FOR THE LADS

We'll be supplying *more* adventure tips every month – and from now on we're offering up to £50 for high quality cheats, tips, maps or hints! So send any helpful info you have to: Adventure Tips, *ST FORMAT*, Beauford Court, 30 Monmouth Street, Bath BA1 2AP.

Thanks to the very wonderful Sylvia Parry from London for this month's tips on *Maniac Mansion*, *Personal Nightmare* and *Zak Mckracken*.

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All you have to do to enter the great *ST FORMAT* "Night of 1,000 Tips" draw is to send in a tip, a game cheat, an infinite lives poke, a short cut, an undocumented feature, a bug, a password – in short, anything at all you've found helps you get more from your ST. And if you're stuck at a particular point in a game, or you find a problem with a piece of software, that'll do as well.

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We shall be doing all this again, so don't worry if you miss out on September's draw.

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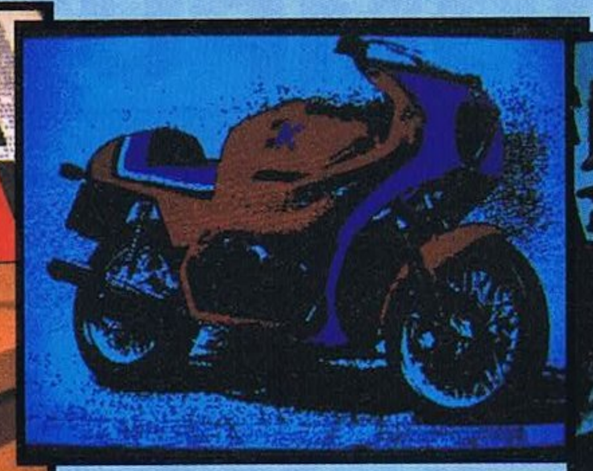

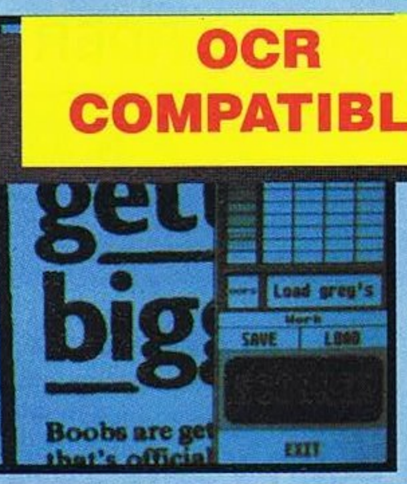

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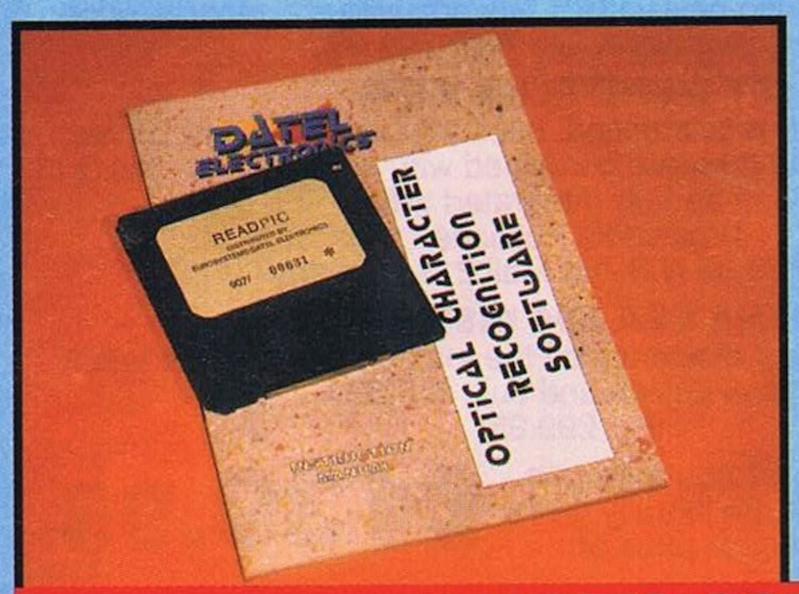

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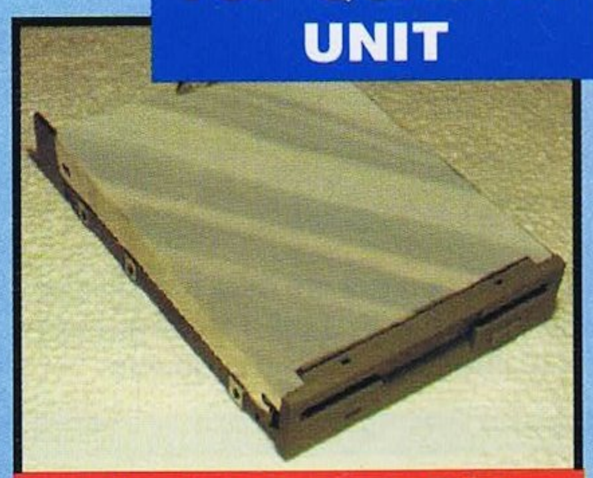

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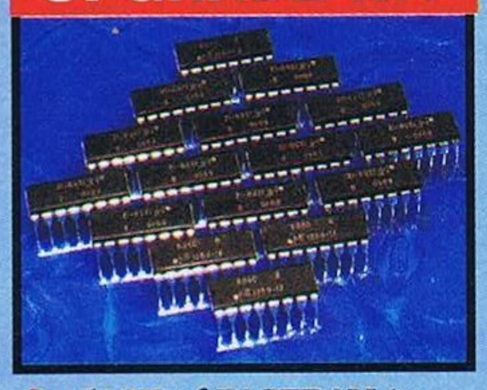

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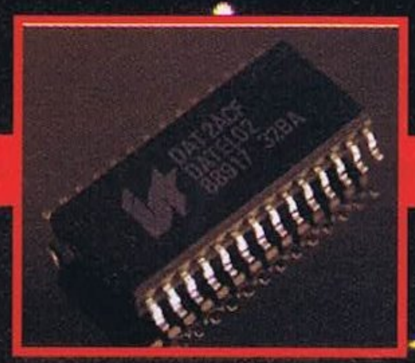

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A BRIEF HISTORY OF THE BULLFROGS

Now eight men strong, Bullfrog began modestly back in 1985 as Taurus, a two man partnership of Peter Molyneux and Les Edgar producing professional software for the Amiga (that's a laugh for a start). Rather than go bankrupt trying to eke out a living producing productivity programs for a mere games machine they turned to games programming, starting Bullfrog in 1987 by converting Druid II: Enlightenment for Firebird. "None of us even knew how to put a sprite on the screen at that time!" admits Molyneux. Their first original project was Fusion in 1988. Then, from nowhere, Bullfrog became highly sought after and, presumably, somewhat better off with the release in March 1989 and the subsequent truly astonishing success of Populous, a game which has received 37,985 awards to date. "We had no idea at all it would be as successful as it was," Molyneux recalls: "it was terrifying."

■ **Six Bullfrogs and assorted *Populous* awards: Kevin Donkin, Sean "Probs in the trouser department" Cooper, Peter Molyneux, Glenn Corpes, Simon Hunter and Gary Carr. Missing: Andy Tidy (ill), Les Edgar (off visiting the French)**

bullfrog: back

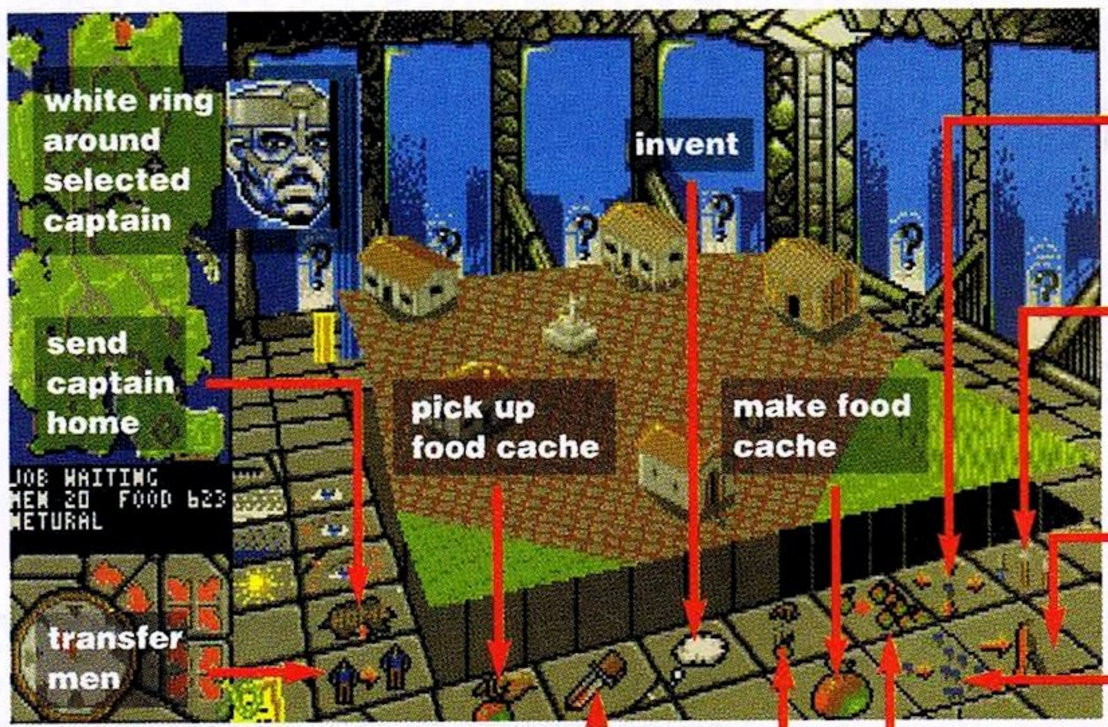
When your first big game is Populous, everyone's favourite from '89, what do you do for an encore? The next Bullfrog game, Powermonger, has much to live up to: head honcho Peter Molyneux gives Steve Carey a conducted tour

A year and a half ago no-one had heard of Bullfrog. Then, out of the blue, came a modest little game – you may have heard of it – called *Populous*. The scenario, in which you played God, was so startlingly well thought out, original and just plain bloody brilliant that the game picked up every award for which it was eligible and some it wasn't. Even Anita Sinclair of Magnetic Scrolls, a woman not generally known to go over the top with enthusiasm for other people's work, estimated she spent 800 hours playing it. Naturally the whole ST world is agog to discover what Bullfrog come up with next.

Who could have guessed, though, that what they would come up with was not one but two new games? First is *Flood*, a cutesy platform game executed with enormous panache and ingenuity (reviewed this month on page 40). But *Flood* is small beer compared with *Warmonger* – or *Powermonger*, as we must learn to call it – a game that Bullfrog themselves reckon puts *Populous* to shame.

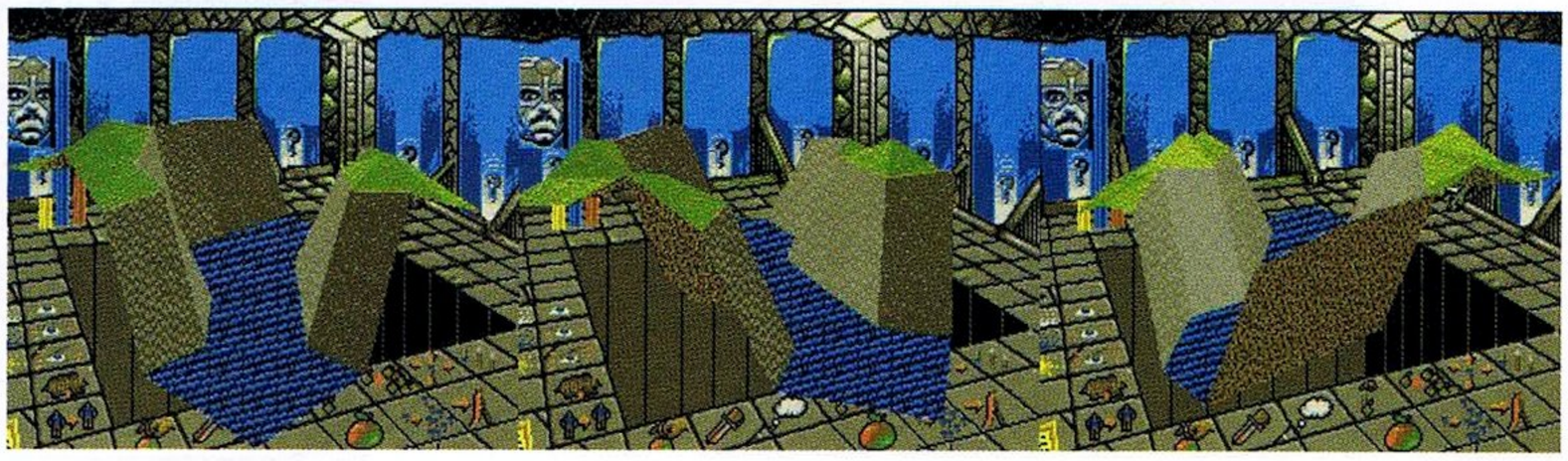
In *Powermonger*, a name chosen for the Bullfrogs by Electonic Arts USA, and one they seem, er, reluctant to adopt, you play a king, accompanied by 20 followers, deposed and expelled from your kingdom. Shipwrecked on an island, you're trying to become a king again, using persuasion, diplomacy, trade or sheer force to take over more and more people.

"When we were designing *Populous,"* Bullfrog boss Peter Molyneux recalls, "we decided that the view looking from a mountaintop down on a landscape would also be really effective in a totally different game." But because *Populous* was made out of graphical blocks glued together the variation in the landscape was very slight. "You could have a hill, a little beach or a



■ ***Powermonger's* icon system (still at the development stage) – like *Populous* only simpler, reckons Molyneux**

"I wanted the game to work in real time," says Peter, "all the time, no matter what you're doing. So while this landscape is turning round *(right)* it's still processing all the people and so on. You can also do wacky stuff like tilting, zooming in and out. The problem is, it starts getting a little slow. Zoomed right out as far as it allows, it's drawing almost 2,000 vectors on screen and about 200 bitmap sprites."



"Here your leader is sending in a rank of people *(below)*, marching over the terrain in rank. You candesign your own ranks, though there's no need to do so. The ranks you see here are all based on 16th century Spanish fighting ranks – the only book I could find!

"So the town sees the rank coming, and the people either build a fence or go out and fight. These villagers only have hand to hand weapons at the moment. And as someone gets killed you see a little angel floating up to heaven.

"All that took just two clicks: the attack icon, and a click on the village – it's not like those complicated wargames. But success depends on how you attack. If you come over the brow of a hill or come out of a forest you can't be seen – the game actually understands planes and distance."

"This is a small village of farmers farming fields *(above)*, going back home, taking food home and coming out again. Each person – and there are about 1,000 of them – has their own name, address, family history and their own individual history. In other words each one of these people will react differently to different situations. You have farmers, fishermen, cattle ranchers, shepherds, traders and even thieves. We're trying to make a world of individual people, rather than icons that all do the same things. Everyone remembers their original profession, and even whether they're the son or daughter of someone you've already killed.

"Everyone's personality is based on where they are on the map. We reckon someone near the sea will behave differently from someone who lives on a mountain."

with a splash

flat and that was it." The alternative was to create the landscape out of vectors, enabling the creation of roads, undulating land, coastal blocks and special features such as cliffs and even waterfalls.

Use of vectors enables the player to rotate the whole terrain in real time. There are two types of landscape, in fact: bitmapped, which are drawn for you, and fractal generated. Between them, Peter estimates, there are more than four billion different worlds up for grabs!

"You're the destabilising influence in the world," he explains. "Without you it would be fine. It's like when the English went to Australia and wrecked the native way of life. But you must be responsible, not just an utter bastard, or you can get everyone going against you."

Food is the key element. When villagers are working for you they're not producing food, so you need another village nearby to be ➢

POWERMONGER versus POPULOUS

"There's an awful lot more in this game than there was in *Populous,*" says Peter. "*Populous* was written in C and this is written in pure assembler, so there's a hell of a lot more code in it. It's a lot faster too: we're not claiming the vector routine is the fastest in the world – it probably wouldn't touch anything Argonaut and Jez San have done, like *Starglider* – but it's very respectable.

"The real world element wasn't in *Populous,* giving everyone individual personalities, which we believe is new and hasn't been done before."

■ ***Populous.* Not a bad little game, in its own way**

Bullfrog also claim that *Powermonger* has much more depth to it, and numerous little touches that enhance the illusion of a "real world." Where there are two farming villages close together, for example, you can see them in the autumn, when there's nothing much to do, go out, meet and play a game of baseball. You'll see them lay out the bases, you'll see the bowler throw the ball and so on. "That's the kind of real world thing we really, really wanted to do." And yes, it will be fully STE compatible, taking advantage of the better sound and enhanced colour palette.

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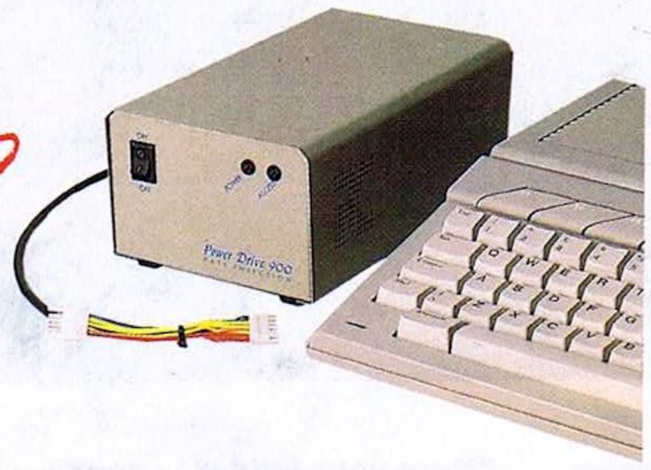

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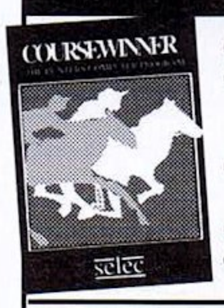

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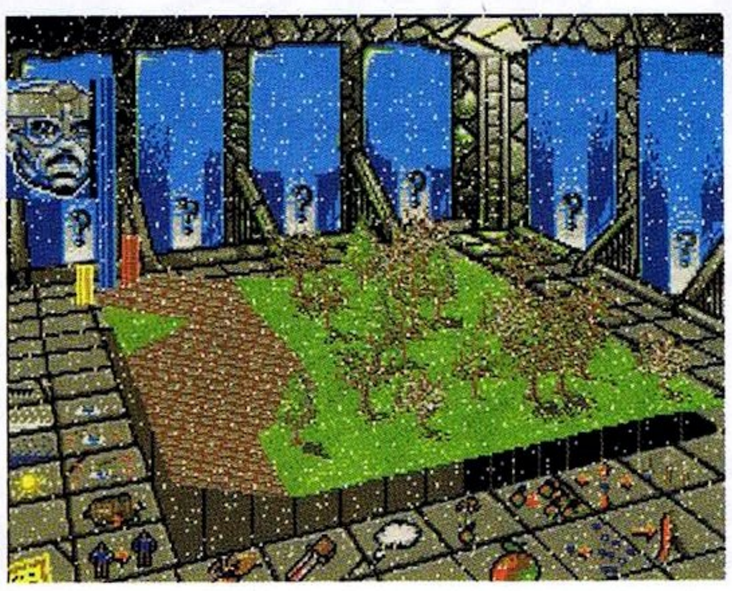
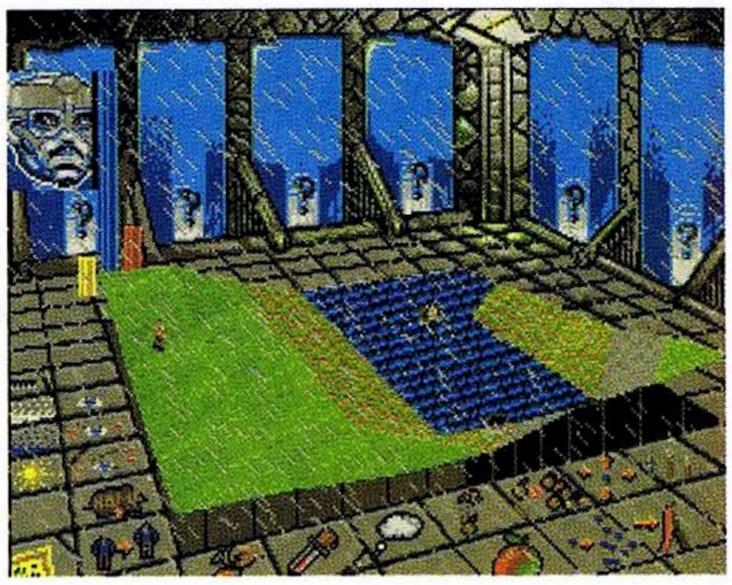
HOW TO CONQUER

The Bullfrogs' own advice for playing *Powermonger:*

1. Be responsible.
2. Try and get weapons invented for you early on, while making sure you have enough food to feed your people.
3. Then make a quick grab for all the other captains.
4. Another strategy is to go straight down the middle of the map getting those essential central territories.
5. Er...
6. That's it.





"There's weather going on here: this is the snow building up. Or you can have rain or fog. We had a problem making the weather regional, but how do you show it on the map? As the game goes on the information builds up and there's a lot going on there.

"If the weather gets bad the farmers won't farm, or perhaps some will farm because they're very hungry. If it gets very bad the fishermen won't go out, and so on."

➢ producing food on their behalf.

As you play there are up to four others also attempting to take over the land. These players are either generated by the ST, or alternatively played by humans across the MIDI port or over multiple serial ports.

What about the sound, which played such an important part in the success of *Populous?* Is Dave Hanlon also doing the sound for *Powermonger?* "Dave doesn't seem so interested in it any more. We asked him to do the sound for *Flood*, but it took him about nine months and even then it wasn't very good. So we used someone from outside, Charles Callét, for the first time. He did the sound for *Flood*, and before that he did *North and South*, *Drakkhen* and *Fred* for Infogrames.

"The sounds are going to be really difficult, too. You want them context sensitive, but it depends on what you're looking at at the time."

One idea originally mooted but finally discarded was to have the game record the real time when you finish, so that when you returned to it a week later, a week would have elapsed in the game!

"But we eventually decided against that, because so few ST owners have a real-time clock, and anyway people would try altering it and run the clock forward to 2029 or something and expect to see the villagers developing space rockets and so on!" ***stf***

■ **Don't miss the full and definitive ST review of *Powermonger* – coming to these pages very soon!**

WHAT'S IN A NAME?

From conception and for a long time *Powermonger* – a name Bullfrog themselves seem less than keen on – was called *Warmonger.* Electronic Arts in the States rejected it as too belligerent, and came up with a list of some 50 alternatives, including *Captain's Feast, Captain O My Captain* (bit of Dead Poetry going on there), *In A Faraway World, Megalomania* and *All-out Superpower Confrontation* (and *Warmonger* was too aggressive?).

EA in the States apparently go in a lot for "focus groups," in which a pack of brats get together and give their considered opinion on a new game's title or how it plays.

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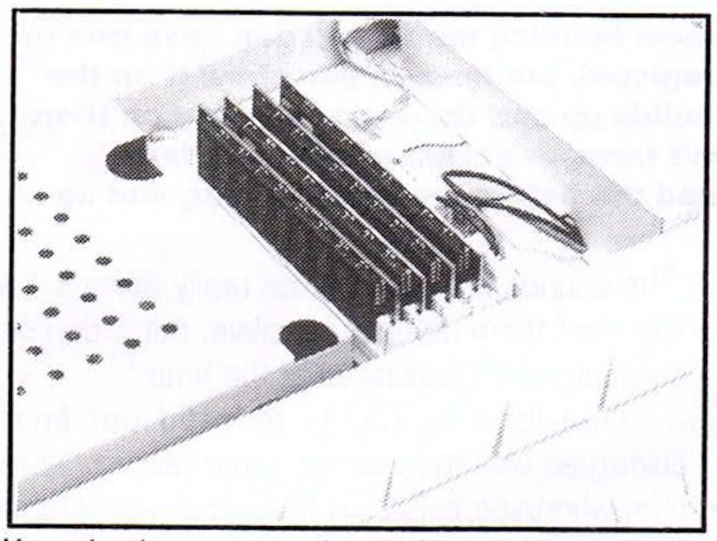

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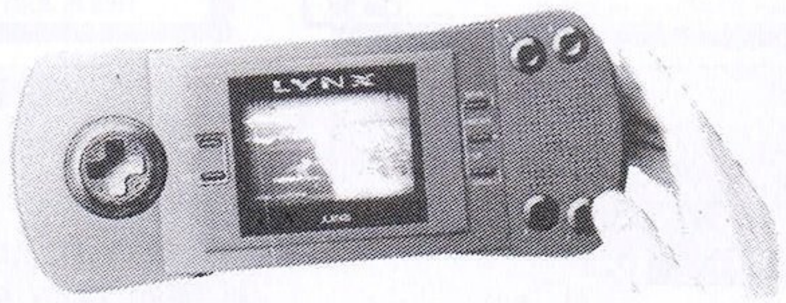

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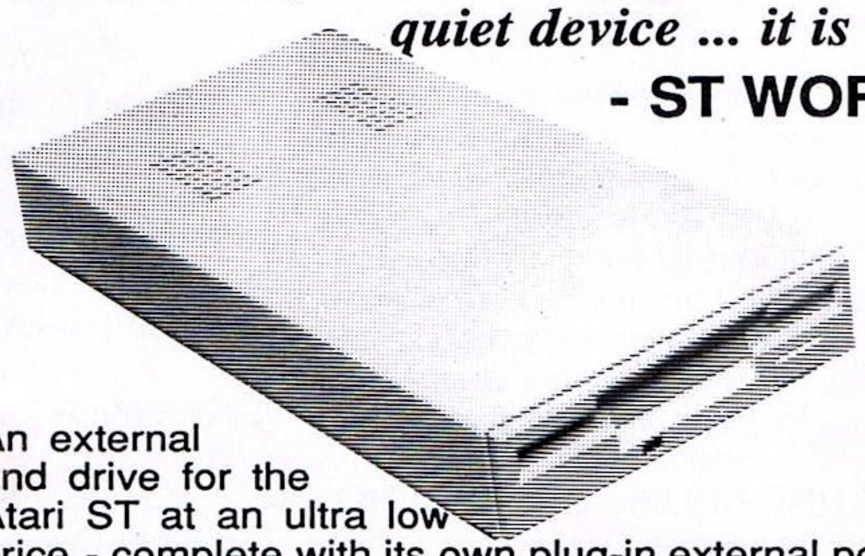

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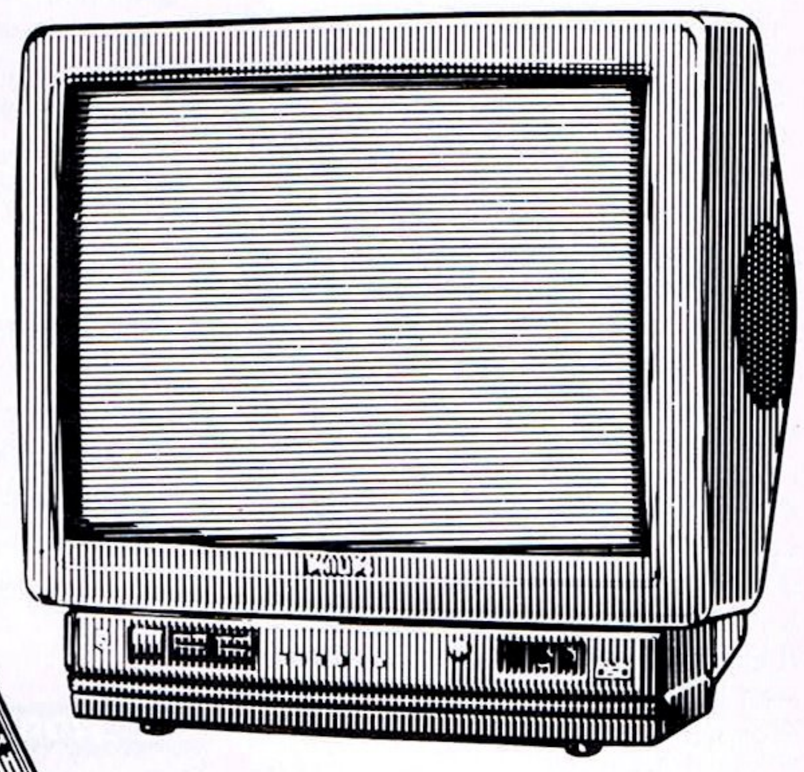

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Access

VISA

Having trouble waking up your hard disk? Can't get your telly to work as a monitor? This month we devote over four stonking pages to DESKTOP as Neil Jackson makes your problems disappear

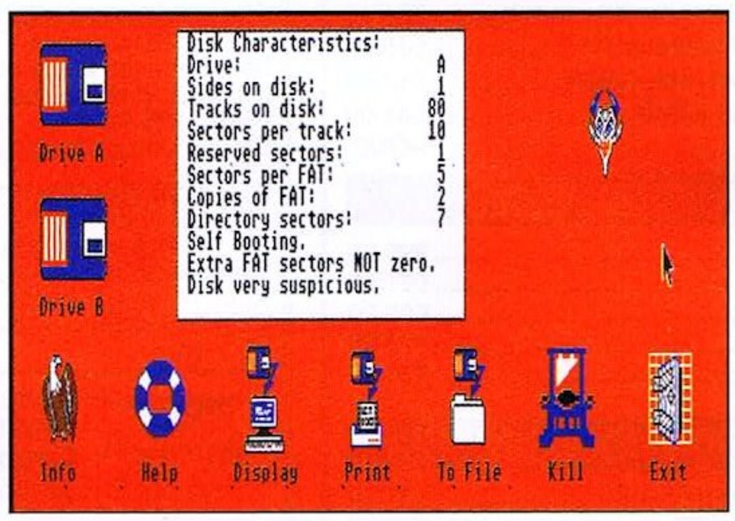
desktop

UPSIDE DOWN MOUSE

Many readers have asked why their mouse has suddenly become confused in the up/down direction. What went up now goes down, and vice versa. Beware, this means trouble. There's a nasty little ST virus going round called The Ghost which causes this. Many of you know of it already and take steps to prevent it spreading, but for the benefit of poor souls who've been unwittingly infected, The Ghost works like this...

On the first space on any disk there's a two byte code which tells GEM if the disk is auto-bootable. Not to be confused with the Auto folder method of booting, this code doesn't appear on the Desktop. When the ST is booted from disk, this code is read. If it indicates the disk is auto-bootable, then an executable program is loaded in from the bootsector of the disk. This is normally a way of automatically loading and running a program without needing to show the GEM Desktop.

But the loonies struck. Instead of a boot program, they created a program which immediately copies itself to a secret location, deep in the bowels of the ST, where it's not affected by a reset. Once installed the program intercepts every disk used and surreptitiously copies itself to the bootsector of the disk in the drive. Each time it does this successfully it makes a note of the fact.



■ ***Super Virus Killer* on *STF* Cover Disk 8 can help your mouse sort itself out**

Most of the time it re-writes itself to the disk it came in from, but the fun really starts when you reset the computer and boot from another disk. The Ghost is still in the machine and spots the new disk and its uninfected boot block. If it isn't write-protected, then zap! It copies itself there, destroying any legitimate bootblock which was already there.

Once The Ghost has successfully copied itself to disk ten times, it lets you know by fiddling with the ST's system variable for the mouse up/down axis. So the first you know of its presence is when the mouse flips. By then, ten disks may be damaged, each one being a potential source of another attack, another ten carriers, and so on. Pretty soon everything's covered in viruses.

So how can you stop it? CRL distribute a *Virus Killer* program which identifies The Ghost and many others viruses, and is updated as new ones are found. There are also virus killers in the public domain, but that's a bit like getting medical health from the man in the street. *STF* Cover Disk 8 featured a virus killer called *Super Virus Killer* which spots a large number of nasties, but because it's American, updates are rare. ➤

DEGAS TIPS

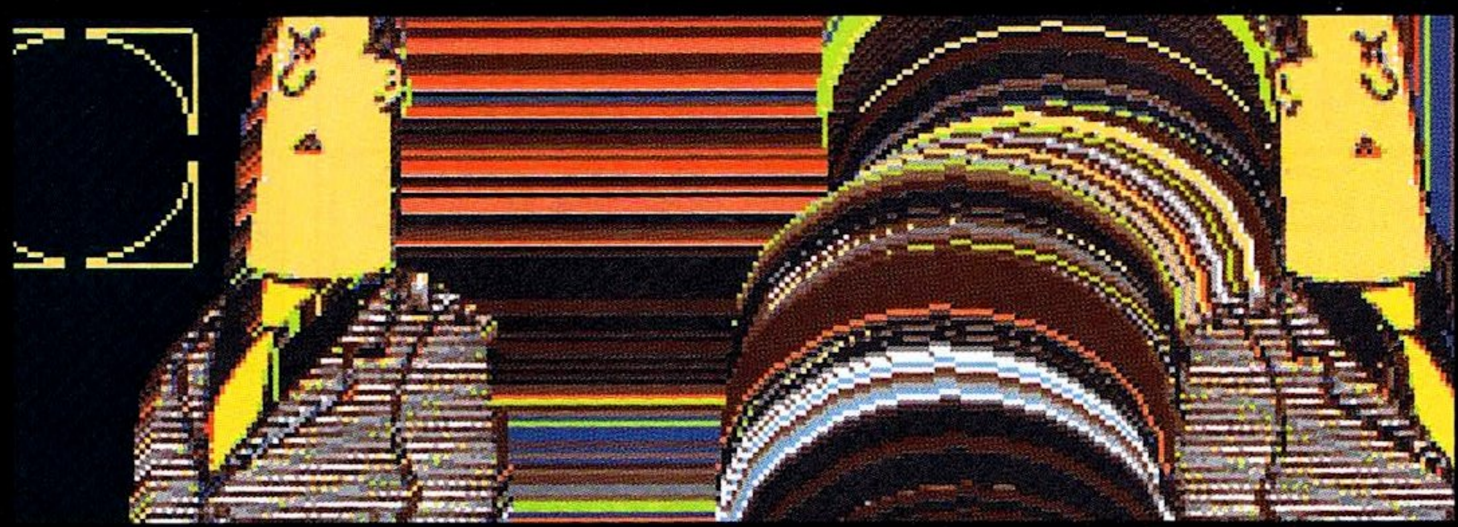
The ever-popular *Degas Elite* from Electronic Arts is full of little-known tricks which aren't shown on the control screen. Many of the best time-saving tricks lie in the geometric shape-drawing section.

■ **Circles can be dragged out as circles, rather than ellipses which you have to align, if you press ALTERNATE before clicking the left button on the centre-point.**

■ **Disks can be automatically outlined as you draw them if you hold down SHIFT before left-clicking the centre-point. CONTROL makes them fill with solid colour rather than the current pattern fill.**

■ **Boxes and frames have rounded corners if you hold ALTERNATE before clicking on the first corner – SHIFT and CONTROL features work with these too.**

■ **Block mode (ESC) can be enhanced if you hold SHIFT while pressing ESC. You can then draw a polygon around your chosen object and use RETURN to link the last two points together. In X-ray mode you can then move oddly-shaped blocks around the screen at will. RETURN makes copies directly below the current cursor position leaving the block attached to the cursor.**



■ ***STF's* favourite TV personality, Roger Mellie, gets the *Degas* irregular block treatment**

■ **Holding ALTERNATE before defining a block causes the original block to be removed from screen, leaving a hole in its place.**

■ **Lastly and most usefully, the cursor can be moved by holding SHIFT and pressing the keyboard arrows to move in steps of eight pixels. Holding SHIFT and ALTERNATE and the arrow key moves in single pixel steps, which is really handy for precise positioning. This is a GEM technique which also works on the standard ST Desktop. You'll also find that the INSERT and CLR/HOME keys emulate the mouse buttons when SHIFT is held down.**

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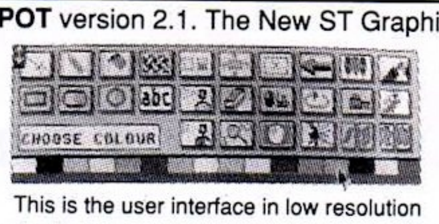

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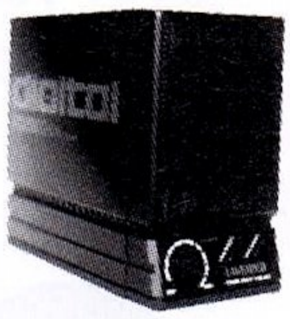

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THERE'S SO MUCH IN IT

Jonathan Horton of Corsham has noticed that with *FastCopy* version 2.1, it's possible to format a disk using up to 99 tracks, giving 1,012,736 bytes space on a disk. Does this make his disk drive superior, he wants to know. Well, no, not really. Most drives do this, but sadly, the disk itself can't be trusted to keep that much data safely. You could take a risk if you had to move a huge file from one ST to another, but don't remove the file from memory until it's done. 82 tracks at 10 sectors is the top limit *DESKTOP* recommends. Beyond that it's very risky.

TUNING TO THE BEEB

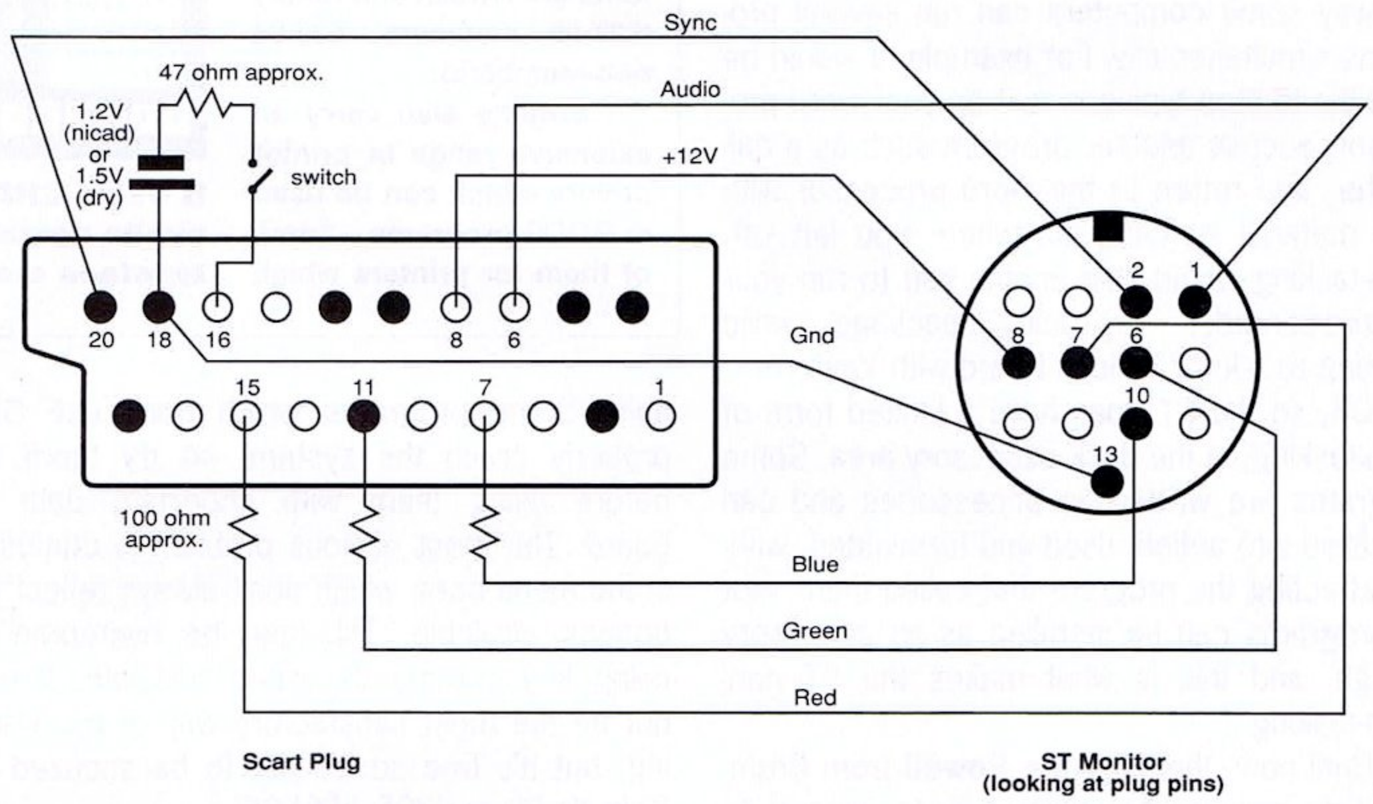
Back in *STF 11*, *DESKTOP* looked at how to transport BBC programs to the ST for use in emulators. The major problem lies with the total inability of the ST to cope with the BBC-formatted disk. However, there is a way to get programs from the old dinosaur to your hi-tech ST using an Archimedes number cruncher. Find a mate who's daft enough to own an A3000 Archie with a 5.25 inch disk drive and has a copy of *!PCDIR*. Use this to copy files from the BBC disk onto an IBM-formatted 3.5 inch disk. This can then be read by your ST with no problem, but don't forget, BBC programs don't run on STs without an emulator package. A big thank you to **Geof Hillier** from Southsea for this neat little sidestep.

RED, GREEN AND BLUE

If you own a Grundig TV set and you've tried to use the SCART sockets to squirt ST colour signals into it, you were probably disappointed. Why? Because it doesn't work.

For some reason, the makers of Grundig sets include a connection in their version of the SCART socket which switches the TV into RGB (red, green, blue) video mode. This pin, number 16, needs to have a voltage greater than 0.75 volts applied to it before the RGB input works. Theoretically this shouldn't present a problem because the ST has a 12 volt output available on pin eight of the monitor socket, but unfortunately, this doesn't help. The switching pin 16 draws a current of around 15 mA (milliamps), and the STs 12V supply can't deliver this level of current. The easiest solution is to use an external battery, either a 1.2V nicad or a 1.5V dry battery and a 47 ohm resistor as shown below. If you so desire, you can include a switch to control this input, enabling you to disconnect the battery (to prevent it discharging while the TV and ST are off) or watch normal TV programmes without having to dig around the back and remove the SCART lead.

Thanks to Peter Holland and his son from Poole for sorting this out. As Grundig owners around the country reach for their soldering irons, I pose one question: does anyone know if this works with Sonys too?



■ **This SCART lead modification enables you to use a Grundig TV as a monitor**

HARD DISK HASSLES

Hard disk owners know that in order to boot from their hard disk, a program similar to ICDBOOT.SYS must be present on the Drive C partition. If this gets corrupted, then the hard disk won't boot up and the system usually won't boot from the floppy drive(s) either.

You can try turning off the hard disk and booting from drive A, but any attempt to run a hard disk boot program (such as ICDBOOT.PRG) from here won't work because it can't find the hard disk. Obvious really, because you've just turned it off. If you turn it back on, then drive A won't run the booter properly because the hard disk interferes with drive A's DMA channel.

The trick is to get the hard drive booter into memory before you turn on the hard drive itself and then delay running it until the hard drive is up to speed. But how?

Copy the boot program and any hard disk utilities (like HDUTIL.PRG) from drive A into a RAM disk before turning on the hard disk. Once they're safely in memory, turn on the hard drive and wait for it to get up to speed. Run the boot program from the RAM disk and the hard disk should be under control again. All that remains is to create a new boot sys file on the hard disk using the utilities program in the RAM disk. Once re-installed, the boot sys file enables you to switch off and re-start the whole system from cold. The hard disk should be awake and operating normally.

Thanks go to **Roland Givan** from Brentwood, who's obviously suffered long and hard to bring *DESKTOP* this information.

COLOUR MONITORS

Graham Yarrow from Coventry is sick and tired of watching his ST through his colour TV and wants to know what's available on the colour monitor front. The list of possible monitors is endless, but *DESKTOP* comes down in favour of a select few. For starters there's the Atari SC 1224 which is pretty bog standard for around £270. This 12 inch monitor plugs straight into the ST, has brightness and contrast controls, as well as the all-important volume knob.

Next up is the Philips CM8833 which retails for around £250, but features a 14 inch screen, twin speakers (useful for STE owners) and a tilting stand. The usual array of colour controls are enhanced by a green screen button which turn it into a monochrome (but not high resolution) black on green display. Not a great deal of use, but nice if you're into gadgets. The Philips also needs a SCART lead to plug into the ST, but these are usually supplied by the dealer. On the whole, a better monitor than Atari's.

Another choice which requires a real ego-swallowing exercise is the Amiga 1084S stereo colour monitor. Yes, you did read that right. It's popular amongst the games machine's owners due to its stereo inputs, but this makes it all the more useful for STE owners. It's very similar to the Philips with a few repositioned knobs and switches. For some reason it's about £20 cheaper than the Philips which is surprising considering a large proportion of the guts are the same. If you can stand the shame, buy it.

The best all-rounder without doubt is the £4-500 NEC Multisync 2, which features an in-line switch to swap between colour (low and medium res) and high res. This makes it very attractive if you use both games and serious software. The only drawback is the lack of audio output. To hear anything with an NEC Multisync, you have to get an add-on like the *Soundblaster*.

Prices vary from dealer to dealer so shop around to get the best deal, especially where the 1084 is concerned. Once you've tried a monitor, you'll never look back (except, perhaps, to watch BBC1 while working on the ST). ➢

GEM QUICKIES

Hidden within GEM are a number of undocumented features which might reduce the strain on the ol' mouse finger. When reading text files, use RETURN to scroll through the text a line at a time, or SPACE to scroll page by page. When you've had enough, exit the text view mode by pressing CONTROL C or Q, whichever you prefer.

And finally, if you change disks and still have the old disk's window active on the Desktop, just press ESC and it updates to show the new disk's directory.

That's it for the GEM gems, unless of course, you know different...

THE MULTI STORY

A complaint occasionally levelled at the ST is that it has no multi-tasking capability. Multi-tasking is a bit of techno-babble which describes the way some computers can run several programs simultaneously. For example, it would be possible to stop typing in text on your word processor, access another program such as a calculator, and return to the word processor with new material to carry on where you left off. Multi-tasking would also enable you to run your 6-hours-to-render raytracing package while chatting to a local bulletin board with *Vanterm*.

OK, so the ST does have a limited form of multi-tasking, in the desk accessory area. Some programs are written as accessories and can be called into action, used and terminated, without affecting the program that called them. Not all programs can be installed as an accessory though, and this is what makes the ST non-multi-tasking.

Until now, that is. **Alex Powell** from Bromley, Kent believes he knows how to expand its potential by using a Command Line Interpreter (CLI) installed as an accessory. One is available from Softville PD library on disk ACC67. With this installed you can interrupt any GEM program and jump to the CLI. Type in another program's name and it's up and running.

Be warned though, this is not 100% reliable. Some programs which don't use GEM properly crash the system, so try them out before using them with important data on board. The most obvious problem is confusion in the menu bars, which don't always reflect the options available. This can be overcome by using key commands where possible. It may not be the most satisfactory way of multi-tasking, but it's free so it's not to be sneezed at. Softville PD ☎ 0705 266509.

I AM NOT A NUMBER

Ever wondered just exactly which version of TOS you've got in your machine? Or whether you have the latest GEM inside your beloved ST? Disk 847 from the South West Software Library has the answer. A tiddly little program called *Version* which tells you the magic numbers. Not that this makes things crystal clear on its own, but if you find you have TOS 1.4 (or an STE), there's also a program called *Rainbow* on the same disk. This contains a number of fixes and patches for the aforementioned TOS versions.

In any event, *DESKTOP* would dearly love to know what machine you have and which TOS you're running, in any letters that you send in. Questions are more easily answered if an obvious TOS problem is evident from your version number and it's easier to check your tips if you tell us what you made it work on. Who knows, maybe we'll do a definitive survey of TOS in all its forms and the problems they all have. But we need to know... who is Number One? ***stf***

THE HUNT FOR GDOS

Kevin Voller from London is (like most of us) fed up with the four fonts supplied with *Microsoft Write* and wants to know where he can get some more.

Softline/GST Software Products have a GDOS compatible fontkit containing two new fonts which work with any of the Atari programs that use GDOS. These include *Hyperchart, Hyperpaint, Hyperdraw, Microsoft Write* and *LDW Power*. It should also work with *Degas Elite* and any other program which uses the GDOS program in its AUTO folder and an ASSIGN.SYS file on the root directory. The new fonts are HiTech and Rocky (£27.95 members, £39.95 non-members).

Softline also carry an extensive range of printer drivers which can be used in GDOS programs – some of them for printers which *DESKTOP* readers have been asking about for ages. Softline have drivers for, among others, Epson LQ24s, Toshiba 24 pins, Roland plotters, and Hewlett Packard Deskjets, Laserjets and plotters (ask Softline for their full catalogue or join their club to get discounts).

■ Using CHARDEF.PRG, the public domain font editor, typeface creation is easy

There are other ways to get hold of GDOS fonts, the easiest being to design them yourself. This can be done with any GEM font editor like the one on disk WP27 from Softville PD for example. *DESKTOP* wants to hear from you if you've designed a GDOS font that's good enough to go on the *STF* Cover Disk. Send a printout if possible (to keep our disk drives happy) and a .FNT file and who knows, your font could really hit the big time.

Softline/GST Software Products ☎ 0480 496600. Softville PD ☎ 0705 266509.

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All you have to do to enter the great *ST FORMAT* "Night of a Thousand Tips" draw is to send in a tip, a game cheat, an infinite lives poke, a short cut, an undocumented feature, a bug, a password – in short, anything at all you've found helps you get more from your ST. And if you're stuck at a particular point in a game, or you find a problem with a piece of software, that'll do as well.

At the end of September, we shall be putting all your entries into a great big sack and pulling out the name of a lucky winner – who receives a cheque for 500 big ones! So get going. You don't have to use our special form, but it helps us no end.

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Please complete this form and send it, with your tip, to: Night of 1,000 Tips, *ST FORMAT*, 30 Monmouth St, Bath BA2 2AP.

£££s FOR YOUR QUESTIONS!

If you're having trouble with your ST or if you think you have any hints or tips that ST owners will kiss your feet for, then fill in the form on this page and send it to: *DESKTOP, ST FORMAT,* Future Publishing, Beauford Court, 30 Monmouth Street, Bath BA1 2AP.

Your incentive? Fame, dosh and a guaranteed place in heaven for anyone with altruistic intentions! There's £50 up for grabs every month; £30 for the best tip and £20 for the best question. There's also a £500 special prize draw for anyone who sends in tips, so there's absolutely no excuse for not writing!

Please don't send SAEs. We spend too much time making *ST FORMAT* look great to reply to individual enquiries, and we can only respond in the pages of the magazine.

PETER HOLLAND from Poole wins the £30 prize for his Grundig tip, and KEVIN VOLLER from London wins the £20 prize.

THE 1990 ATARI ST PRODUCT GUIDE

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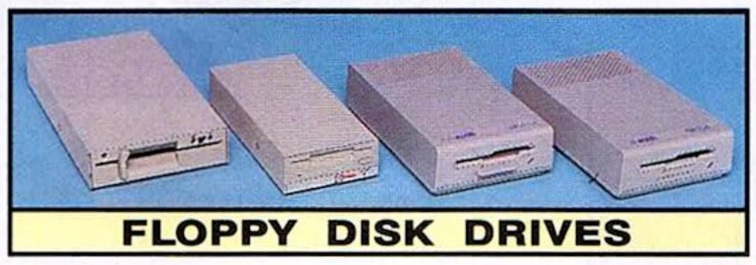
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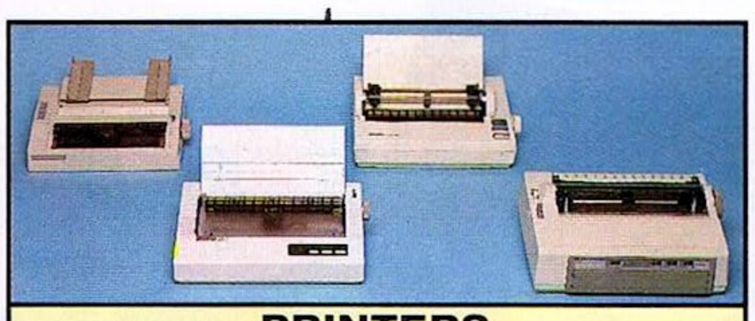
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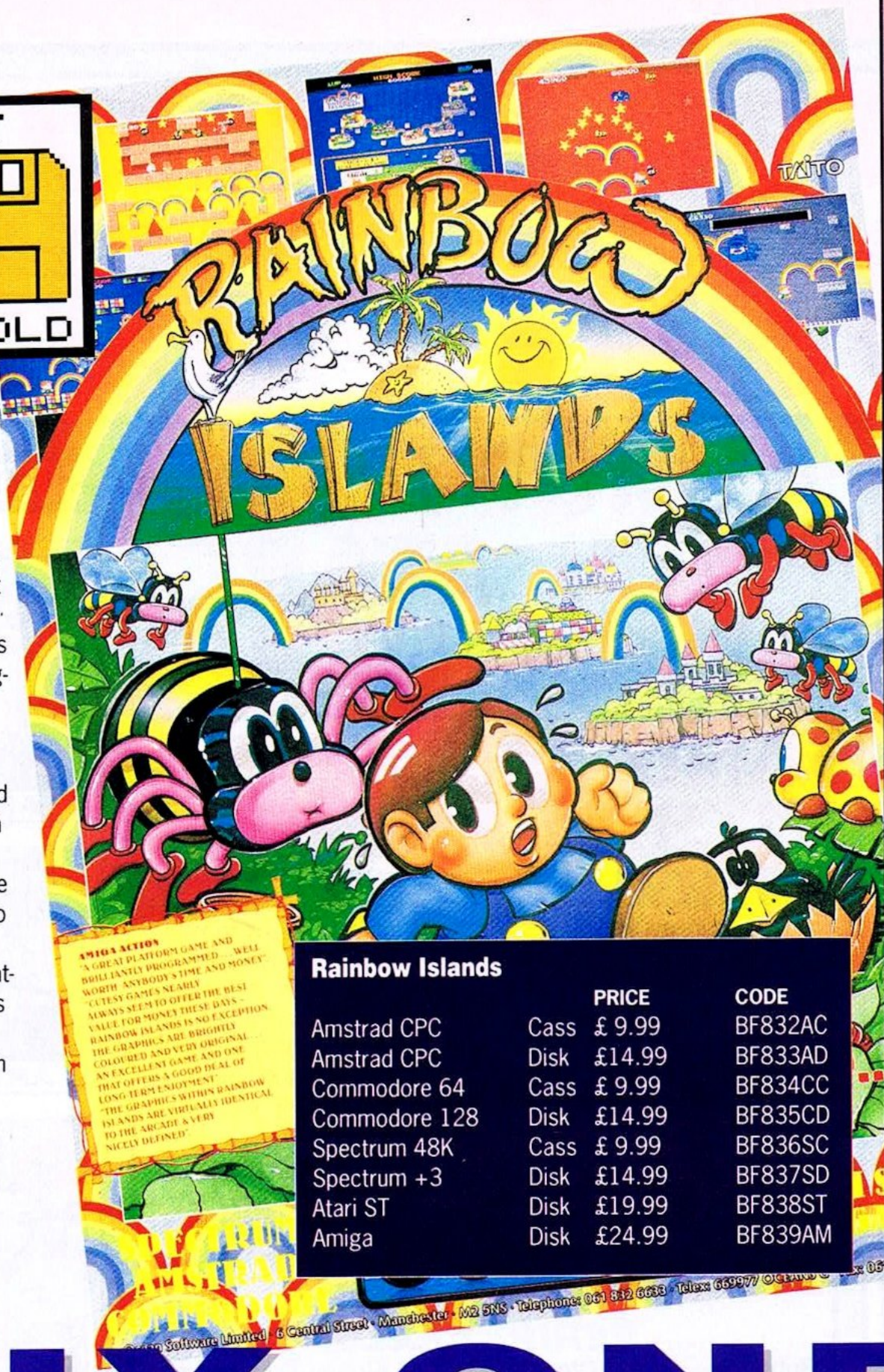

Rainbow Islands
from Ocean

This follow up to Bubble Bobbie looks set to be as much of a hit as Ocean's last cutesy game, New Zealand Story. It combines colourful visuals with frighteningly addictive gameplay, with the result that you end up with one hell of a game.
Graphics have been downloaded from the original arcade version and the moves are just the same. Lead Bub and Bob to the top levels by firing rainbows into the air and then climbing them. When you reach the top of a platform, you can collect thousands of bonus points. There are seven islands to complete, each one more challenging than the last.
"Graftgold's ST Version of Rainbow Islands is one of the best coin-op conversions to have appeared in along time" Maff Evans, ST Format

Rainbow Islands

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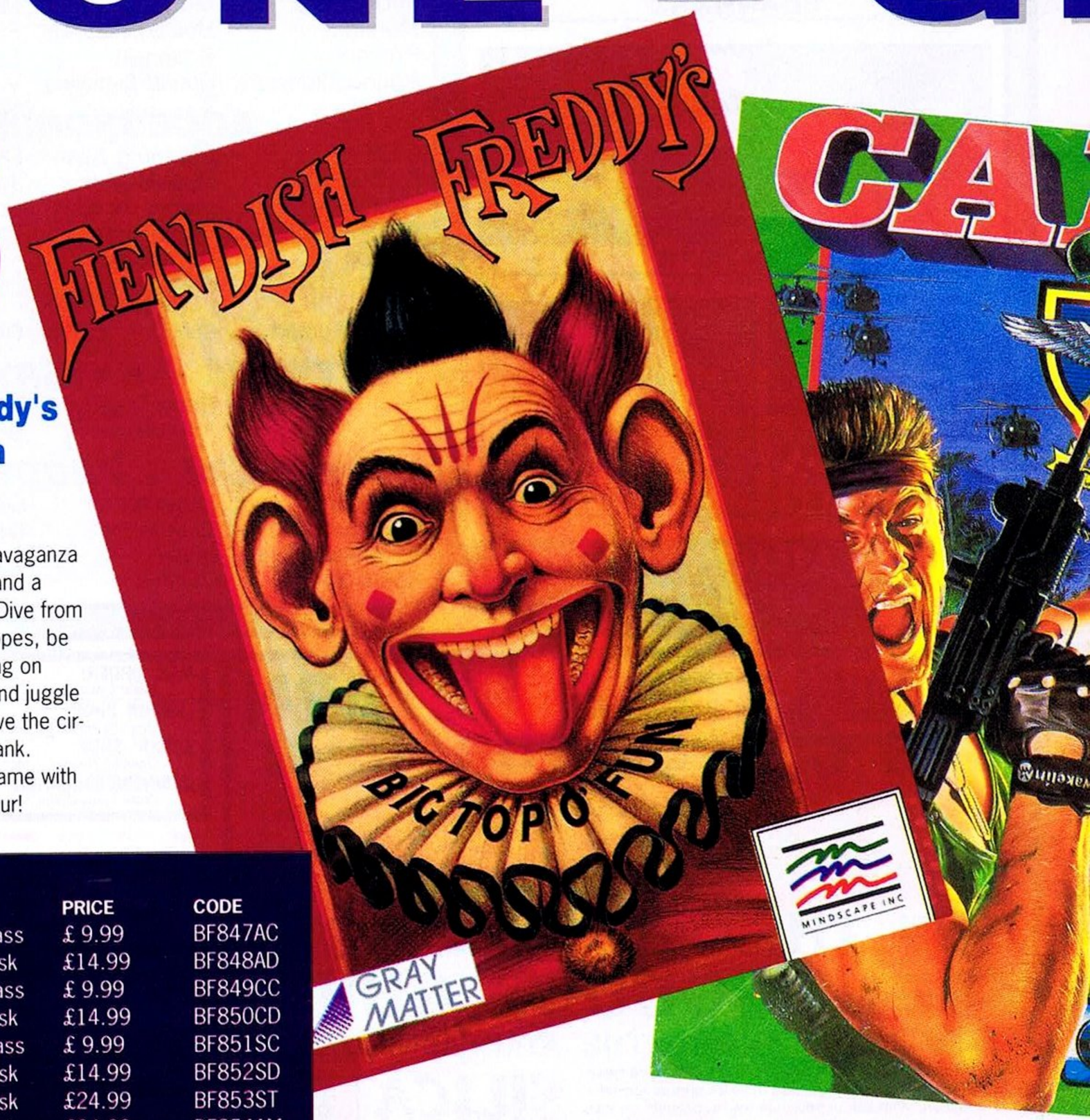

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Black Tiger
from U S Gold

US Gold have had major hits with Strider and Ghouls 'n' Ghosts. Now comes their latest horizontally-scrolling action game, Black Tiger.
In a similar fashion to Ghouls, the objective is to charge through horizontally-scrolling levels, climbing ladders and following red arrows to the end of the level. Along the way, fight ugly gargoyles, snakes and even deadly orchids using your powerful weaponry. When the going gets tough, disappear inside the shop, pick up some extra weapons, and go out for another merry blast.
If you're a fan of horizontally-scrolling action games, you'll love this one.

Black Tiger

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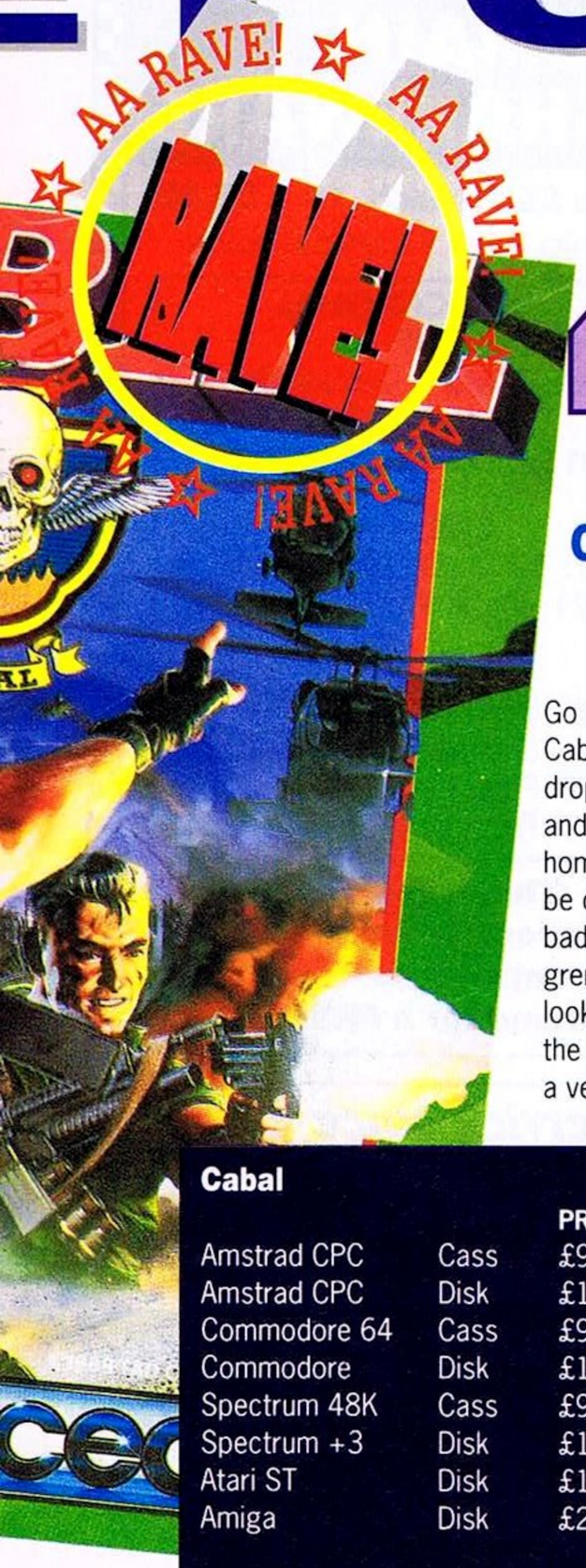

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Cabal from Ocean

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harlekin help

Harlekin is the new do-it-all desk accessory from HiSoft. It's a logical, thorough collection of all the desk accessories you'll ever need. See the full review in *STF 12* for the lowdown; buy it and return to this page to get the most out of it.

Mastering the macros

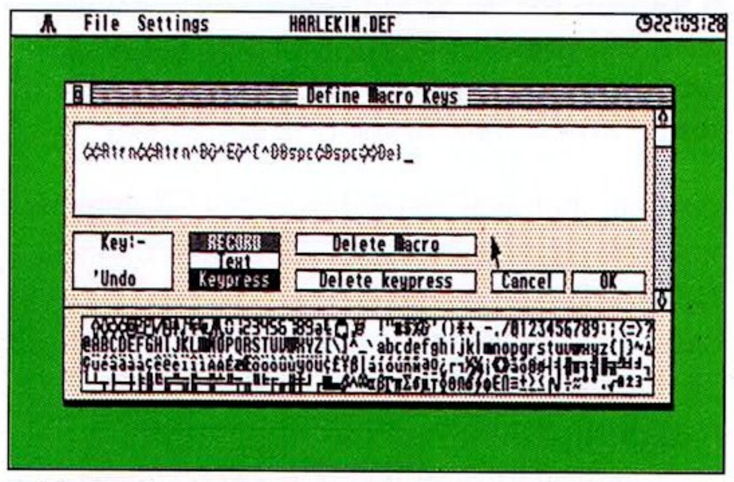
The Macro Processor is one of the most powerful parts of the program. It can be used in many other programs which run with *Harlekin* in the background, and provides single-press key commands to replace long sequences of mouse-moving and menus. Here's a few uses for macros which aren't obvious at first glance.

Cure keyboard dyslexia

It's possible to create a macro to automatically reverse the last two characters you typed into the text editor. For example, if you were in a hurry and mistakenly typed "cta" instead of "cat," this macro would reverse the "t" and "a" and turn it into "cat."

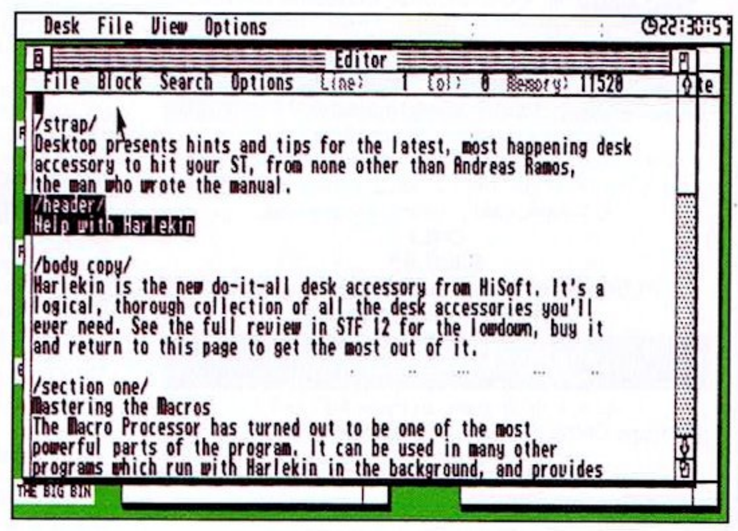
To create the macro, run the configuration program (CONFIG.PRG) and select the macro keys option from the Settings menu. Click on a free space in the list of macros to go into record mode, select keypress and enter the following selection of keypresses: Left arrow, Return, left arrow, left arrow, Return, Control B, Down arrow, Control E, Down arrow, Control C, Control D, Backspace, Left arrow, Backspace, Right arrow, Right arrow, Delete.

Click on the Key window and then hit the combination of keys you want the macro to be connected to. Shift Undo is a good logical choice. Save the configuration and the macro is active when you next load *Harlekin*. When you fluff your letter order in the text editor next time, just hit Shift Undo and the correct positions are restored.

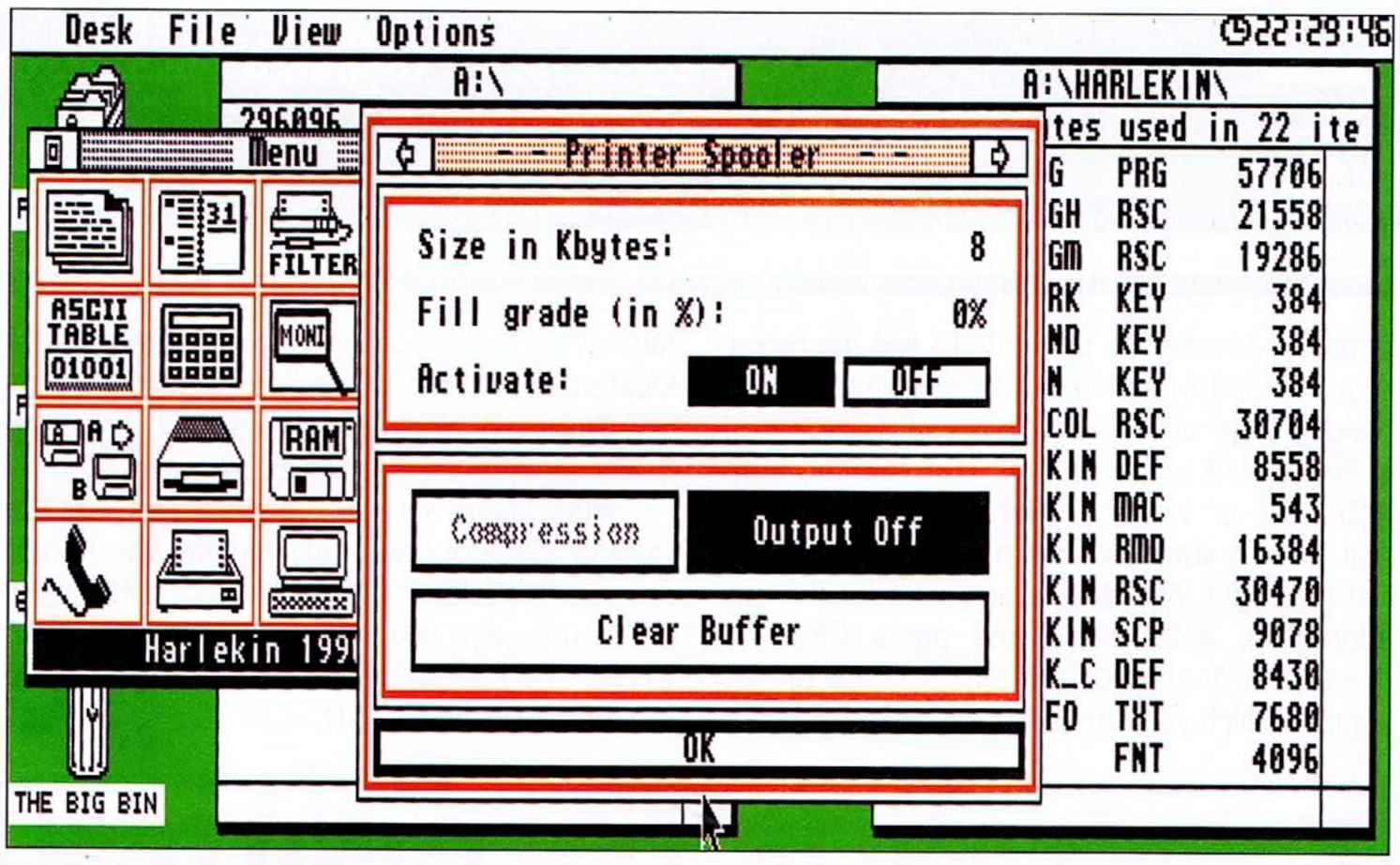


■ **Make long commands into a single keypress with the macro definer**

■ ***Harlekin's* enormous array of internal functions**



■ **Create a working block move function for the text editor**



■ **Use Output Off in the Print Spooler module to collect data stored in memory**

Shift those blocks about

The Move Block command, listed as Control M in the text editor is not operational in the released version of *Harlekin*. You can turn it on by using a macro sequence which does the same thing. Make a keypress macro, following the procedure above, but for the command sequence enter Control C, Control D. This equates to copy, followed by delete. Assign this to Control M using the key box, and save it. When in the text editor, you can now define a block using Control B and Control E, move the cursor to the target position and hit Control M. The block moves so fast that the copy and deletion appear invisible.

Docs in the dustbin

Harlekin lets you do things which are impossible with other sets of programs. For example, you're writing a document and accidentally delete it from memory, or your "reset-proof" RAM disk turns out not to be: *Harlekin* lets you find the file in the ST's memory and reconstruct it.

The material hasn't been deleted; it's still in the ST's memory. The space it used has been marked as available for re-use, so don't load any other programs or this may overwrite the old material. Even if you reset the machine the material should still be there. If you're lucky, you'll find the text more or less in one piece. What you'll find are parts of the text which haven't been re-used.

First go to the *Harlekin* printer spooler and click "Output Off." Now open the *Harlekin* Monitor and leave it set to "Memory." Click on "Search" and enter at least one unique word which you can remember was in the text you lost. Then click "Word Aligned" and "Enter" to start the search. If *Harlekin* finds it, you can check to see if it really is part of the lost file. ➢

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➢ Scan backwards and forwards to find the beginning and end of that part of the document and make a note of the address which is indicated in the top left of the display. This is in the form A:3F22F0 or similar. When you've memorized that block's start and end address, press Control P to print. A message box asks for the two addresses, enter them and press OK. The material isn't printed, just saved in the printer spooler which you turned off earlier.

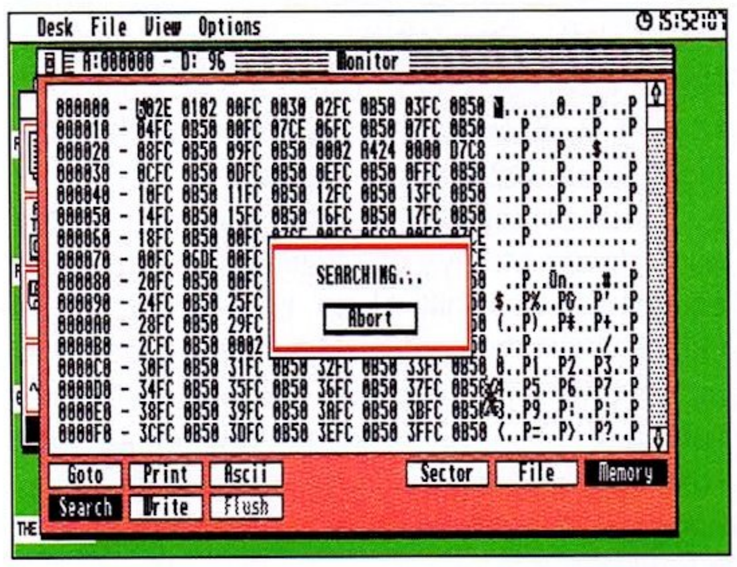
Repeat the search using Alternate F until you've located all the bits of your document in memory. Note the block addresses each time and "print" them to the spooler as before.

When you're sure you've got the lot, exit the monitor (Control Undo) and re-enter the Printer Spooler module. Click on "Output Off" again and a message box opens up. Click on "Send to File" and enter a new name for the document (for example SAVED.TXT).

You can then load this file back into the text editor module and reconstruct the original document using the block copy/delete functions (or even design macros to shorten the workload). Soon you're in a position to save the document to disk with no more worries.

This method only works with text files, because programs and graphics are uneditable in the text editor. It's also possible to do this with disks, if text files have been accidentally deleted, but you must take care. Sometimes the disk controller doesn't allocate sectors to a file in a logical sequential 1,2,3 order and this can make file-hunting a longer process. It might be easier in the long run to re-type the document from memory.

Harlekin (reviewed in *STF 12*) costs £49.95 from HiSoft ☎ 0525 718181. ***stf***



■ **Search for an accidentally deleted file with the monitor using Search; enter one unique word you remember was in the text – and *bingo*, instant restoration!**

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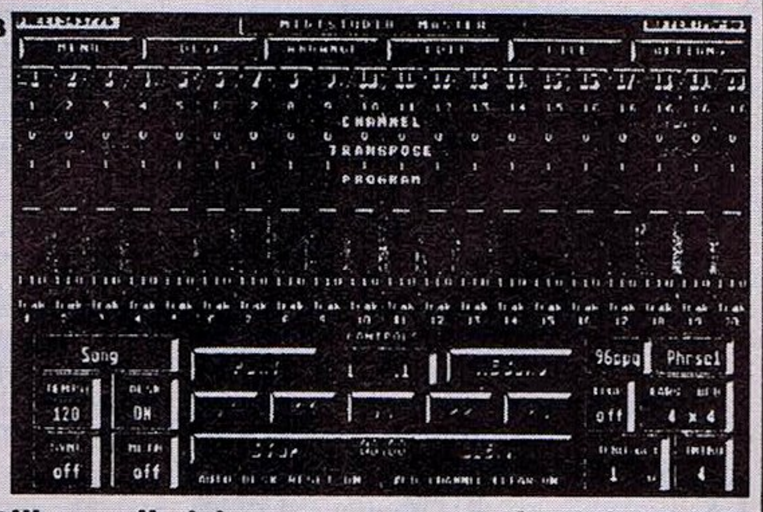

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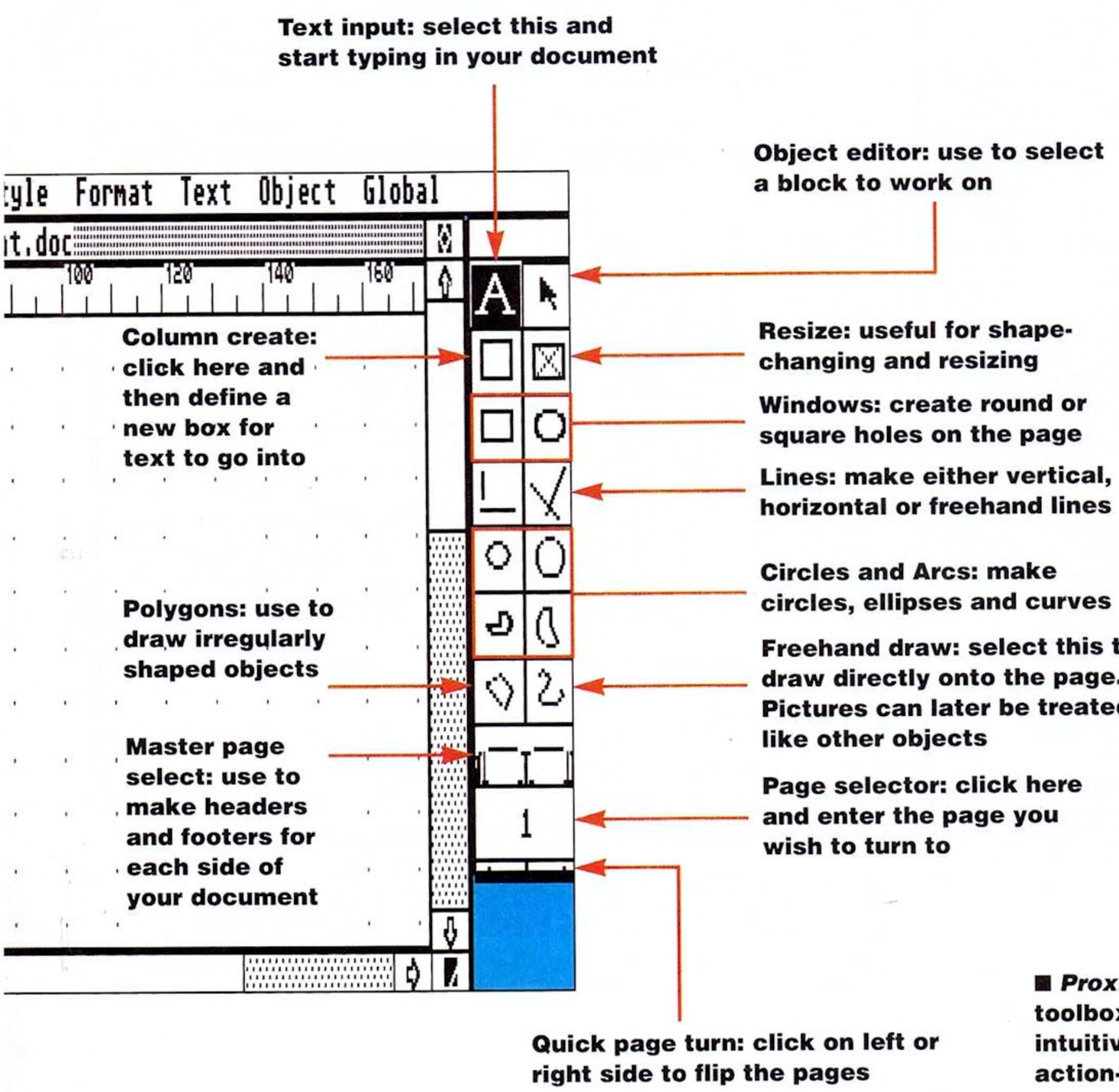
war of the words

The Desktop Publishing battle escalates with the re-emergence of an old warhorse. Neil Jackson examines Proxima, the latest challenger to the Calamus crown



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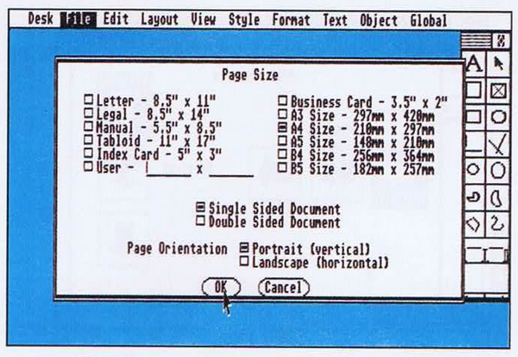
Check out the expanding DTP market for the ST and you'll find software ranging from cheap 'n' cheerful PD programs like *Easy Text* right up to high-powered, high-priced publishers like *Calamus* (reviewed *STF 6*). But price is not always proportional to quality and *Proxima*, a rewritten version of *Pagestream* costing just a third the price of *Calamus*, is a perfect example.

Running under GEM in medium or high resolution, *Proxima* offers an immediately recognisable display. Across the top of the screen are familiar menu titles, and along the right edge is a toolbox containing icons for the most frequently used functions (see left).

With these commands you can quickly lay out a basic draft. Individual bits of text, such as headings or captions, can be tapped in,



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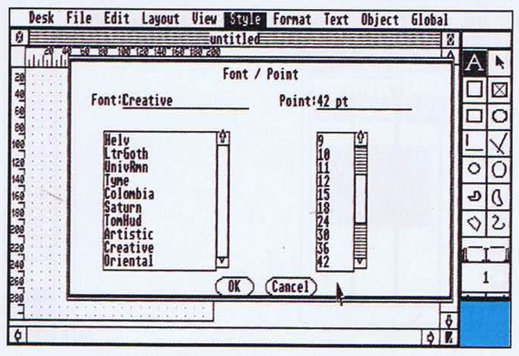
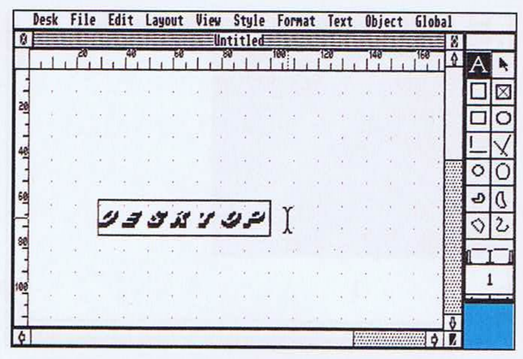
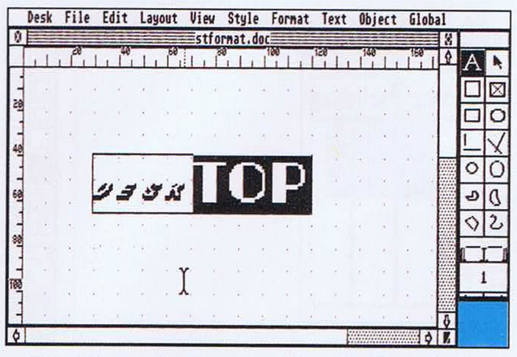


2 **Change to text input mode, choose a font and its size from the Style menu, and just type away on the page**

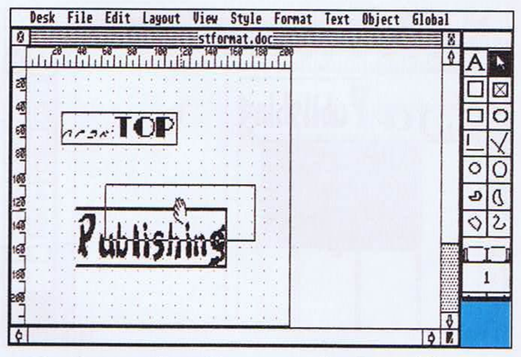


3 **To alter a headline, highlight half of it using the cursor and drag it over the letters you want to change**

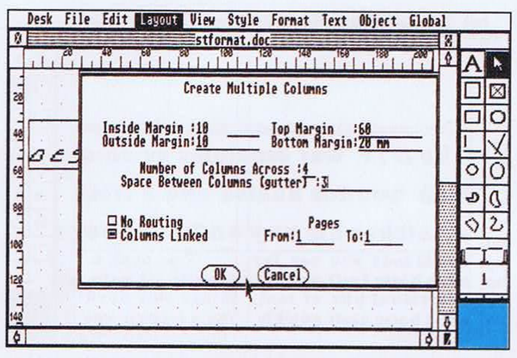


4 **Then choose another font and size from the Style menu and the highlighted portion changes**

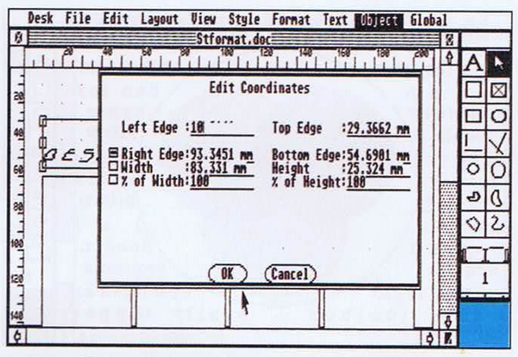
THE *ST FORMAT* STEP-BY-STEP GUIDE TO PERFECT PAGE PRODUCTION



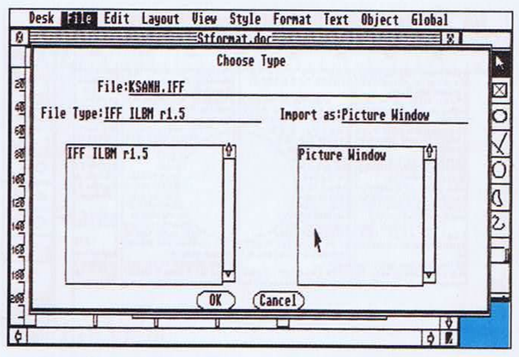
5 **Larger headings can be typed in, resized, and repositioned to the correct location as an object**



6 **Make columns by entering margin sizes and space between columns. Routing flows text from column to column**



7 **Reposition objects using the Edit Coordinates menu. Here we align the left edge of the headline with the column**



8 **Graphics can be imported from a variety of formats including *DEGAS, Neochrome,* GEM metafile, and IFF**

(Sequence continues overleaf)

grabbed, moved, resized and shaped to fit using just the A icon. Columns are click-dragged into shape with normal GEM mouse "holds," and can be outlined using the draw icons. Diagrams can be drawn directly onto the page and repositioned just like a Desktop icon. Use pull-down menus to make precise adjustments to positioning, typeface or the view of the document itself. Each main heading introduces a logical group of sub-functions.

File contains all the creating, opening, saving and printing options, as well as filing utilities like formatting and directory checking. Your first step here is to create a new document which brings up a window with preset document sizes (from business card, index card, standard 8.5 inch printer paper to A4, A5 and legal letter sizes). If these don't satisfy your requirements, type in a user-selectable size. Single or double-sided pages can be chosen, as well as the orientation of the page itself; either vertical (portrait), or horizontal (landscape). Six documents can be worked on simultaneously, each holding up to 254 pages, providing generous space for your work.

Edit handles all cutting, pasting and deleting functions, and searching and replacing words in blocks or whole documents is easy.

Layout enables you to define overall presentation such as page style, columns and text flow. You can determine the layout of columns for the whole document and define margin sizes and the gap (the gutter) between the columns. A master page facility enables you to create any headings or footnotes which should appear on every page, such as the *ST FORMAT* footer which appears in the bottom corner of the page you're reading now.

View controls how much of the document you actually see on-screen and shows pictures, columns and characters in full or simplified to speed updates.

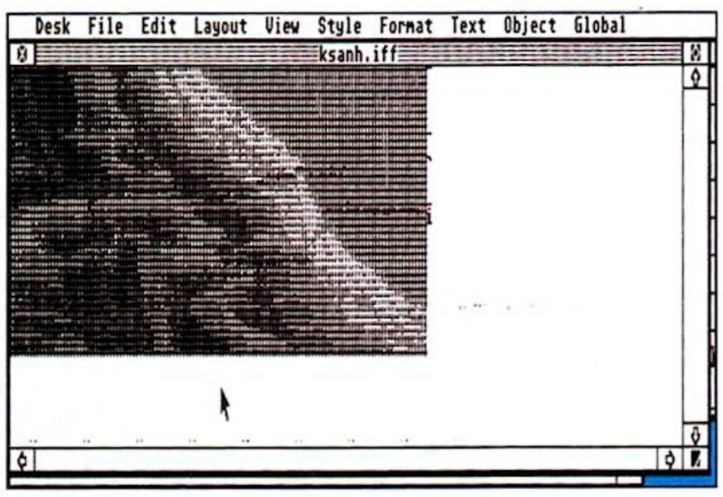
Typefaces, character sizes and text effects are altered using **Style.** *Proxima* is supplied with ten typefaces as standard, including the ➢

A SAD STORY: PAGESTREAM REVISITED

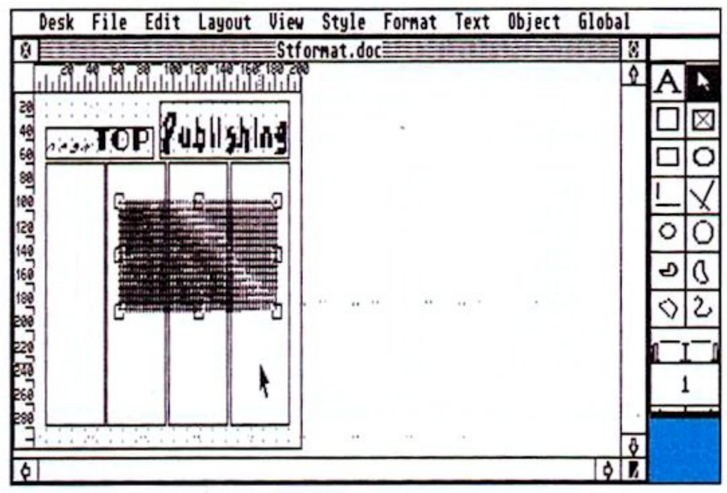
Proxima bears a distinct resemblance to *PageStream* and *Publishing Partner Professional,* two much older DTP systems both written by Deron Kazmaier, founder of the SoftLogik Corporation in the USA. *PageStream,* an upgrade of *Publishing Partner,* flopped on launch because early versions suffered from fatal bugs: files disappeared, mouse controls wandered and bombs appeared all too regularly.

A launch as bad as that inevitably deterred potential buyers from taking a program seriously. This had disastrous financial repercussions for SoftLogik, delaying enhancements and repairs. The effect snowballed with the result that *PageStream* still hasn't been fully completed.

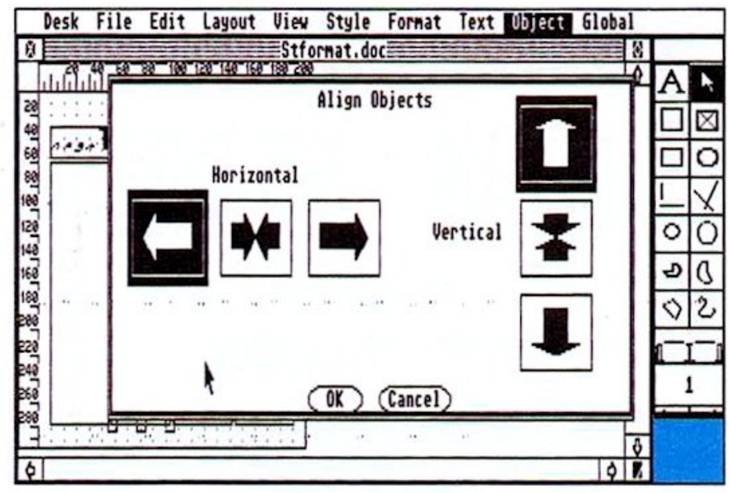
Version 1.82 is currently making its way around the United States and Kazmaier is still working on the program. UK distributors SDL (☎ 081 308 0888) are quietly offering version 1.8 as an intermediate solution, while awaiting a final, bug-free version.



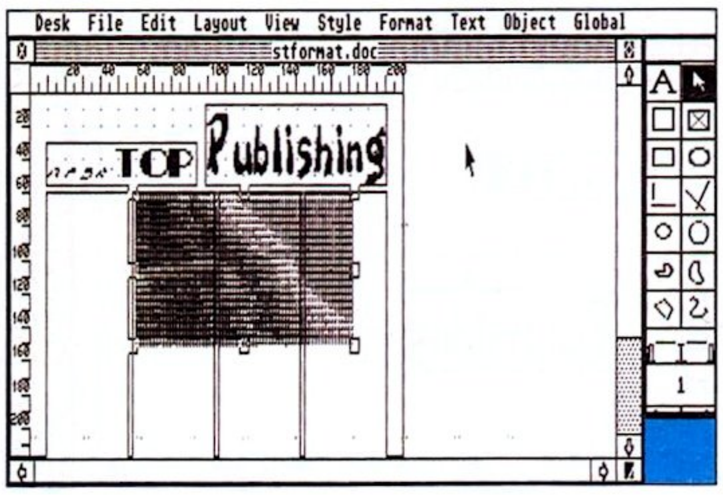
9 **Once imported as a Picture Window, graphics can be cropped and placed in the document**



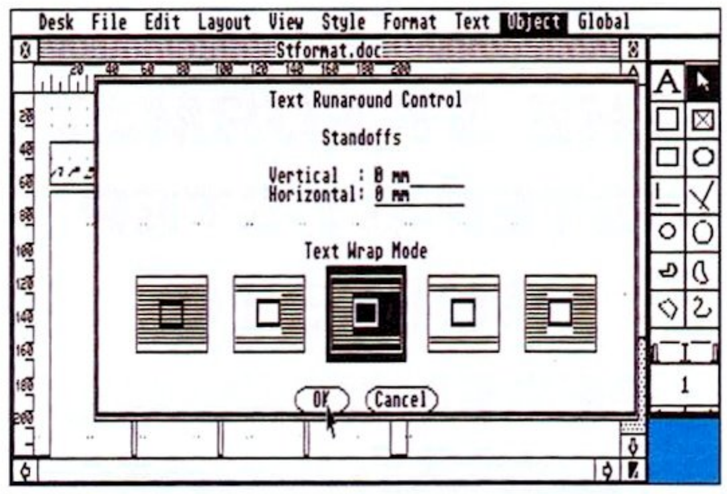
10 **The document takes shape, but has a few rough edges. The picture, for instance, is not in a tidy position**



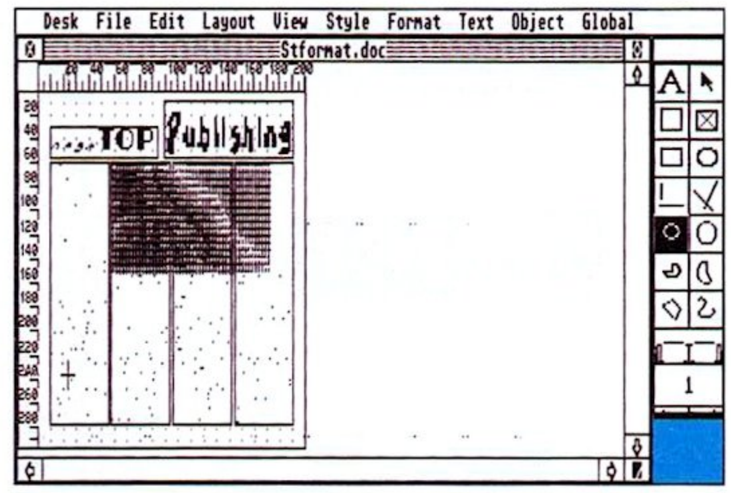
11 **Use Align from the Object menu to reposition the picture to the top corner of the second column**



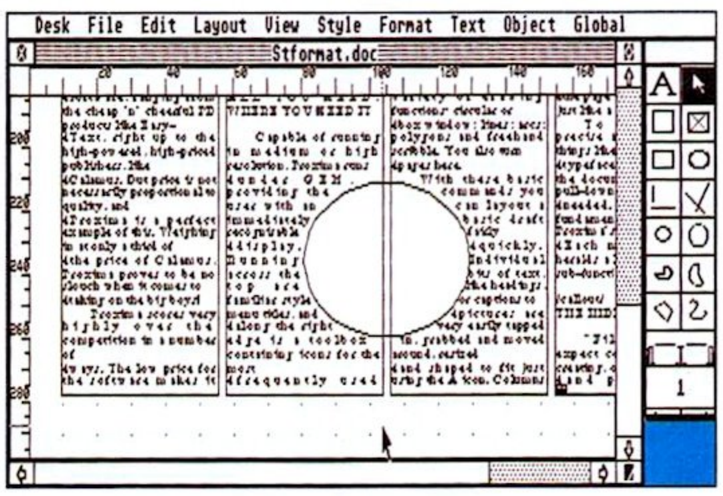
12 **With the picture where you want it, now start thinking about the written portion of the document**



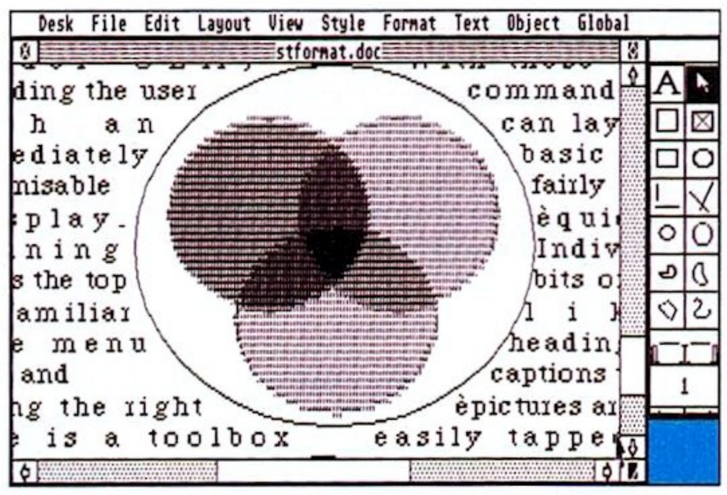
13 **Text Runaround affects word flow round an object. The highlighted icon prevents text on the right and middle**



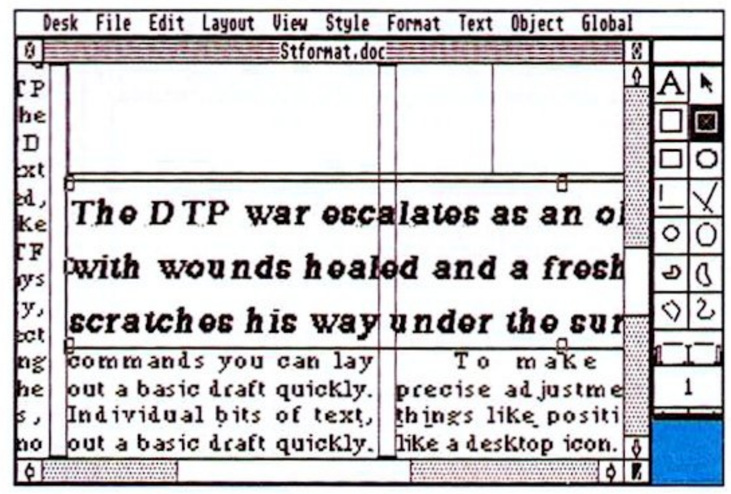
14 **After importing text you can add more objects to break up its flow. The icon selected is the round window**



15 **With the Text Runaround facility circular holes can be put into the text to create unusual designs**



16 **Another picture can be imported into the space left by the window to make the document look different**



17 **Sub-headings are cut from the main text, put into a new text box and then repositioned, restyled and resized**

(Sequence continues overleaf)

➢ common (but indispensable) Helvetica, Times and University Roman, as well as unusual designs such as Artistic, Oriental and Creative. There are 16 fonts currently available and another 30 due to be released soon (£12 for three font families per disk). If you simply can't wait, you can design your own fonts using *Proxima's* own font designer.

Fonts are measured in points (one point is 1/72nd of an inch), and can be resized from 1/50th of a point right up to 1,310 points! Commonly used point sizes can be selected by using a standard GEM window. There's a host of possible styles, including bold, underlined and light, as well as the more unusual shadowed, strike-thru, and upside-down.

Format offers justification and paragraphing while regularly used styles, such as headings or caption text, can be tagged using the **Text** menu. The latter also includes global text controls, such as spell-checking and hypehenation of whole blocks or documents.

Use the **Object** menu to lock groups of text, drawings and pre-scanned images so they can be moved as one. Apart from changing line styles, fill patterns and colours, you can also flow text around objects of any shape. This is a massive boon: draw invisible polygons around complex imported pictures and you can make the text butt up alongside the irregular shape. *Calamus* and *Timeworks* have both overlooked this effect which gives *Proxima* a few thousand extra page design options.

Rotation of objects enables spinning, twisting and slanting of images. Distorted text and graphics give your page designs an innovative, ultra-modern look.

The final menu heading and the one which hints at the technical applications possible with *Proxima* is **Global.** A zillion different printers can be interfaced here – with no glaring omissions – from the humblest of Epson 9-pins to the £50,000 Linotronic 300 (the kit we use to prepare these pages for the printer). Print output can be tailored for variable density (depth of shading), orientation and paper size, or shrunk right down to print tiny thumbnail "sketches" for checking quickly. It can even put the output into a disk file so it can be printed later by squirting it directly to a printer. This is ➢

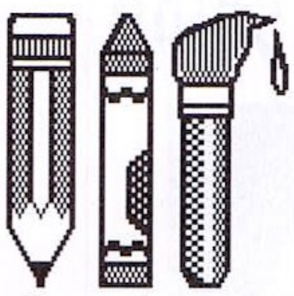
GOING NETWORK

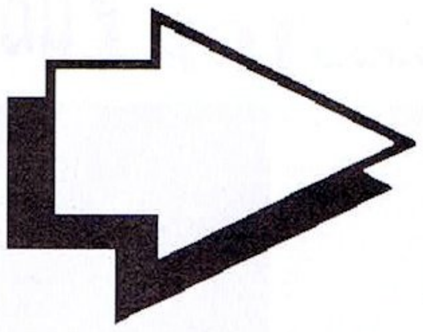
One man who saw *PageStream's* potential was Frank Shean, editor, publisher and driving force behind Network News Services (NNS).

Looking at DTP as a means of producing professional publications, Shean was less than ecstatic at what was available for the ST. Claims of fully in-house publication are unjustified, he argues, because low-cost printers are unable to print documents of sufficiently high quality. DTP can only be used effectively as *part* of the publication process, relying on traditional printing methods to handle duplication in large volumes.

Shean decided a re-written version of *PageStream* could form the basis of a complete publication preparation system. An agreement was reached with SoftLogik and a team of English programmers took on the task of bug-hunting. Three months later *Proxima* emerged, still bearing SoftLogik's credits but with NNS added to the list. NNS pay the equivalent US dealer price for every copy sold in England, though duplication is done this side of the Atlantic.

Pdom PD Atari Software Pdom PD Atari Software





Graphics

GR3 – MASTER Painter – excellent fully featured graphics program works in ALL resolutions.

GR17 – Picture convertors. To and from Degas, NEO, Tiny, IMG, Spectrum, AIM etc. Excellent value!

GR20 – .IMG utilities. Convert2 IMG converts Degas Tiny, NEO, Spectrum to a .IMG format. Also a viewer and slideshow.

GR21 – ANI ST formerly Aegis Animator, now PD as ANI ST! The fully featured fully working animation graphics package!

A87 – Electronic Bank Statement the excellent home accounts package from Budgie UK.

A163 – Gemini Desktop replacement similar to NEO Desk, Excellent!

W13 – STWriter Elite V3.0, Includes document files etc. Double sided disk.

A96 – Sheet v2.0. powerful all features spreadsheet, includes documentation and tutorial. This is a double sided disk.

Mega Pack 23 – Home Business Pack : Databases, Spreadsheets, Wordprocessing and Accounts : Datahandler, STWriter, Opus, Sheet, Personal Finance, Double Sentry. 5 DS disks only £12.50!

Mega Pack 21 – TEX the document typesetter, 6 DS disks £15.00!

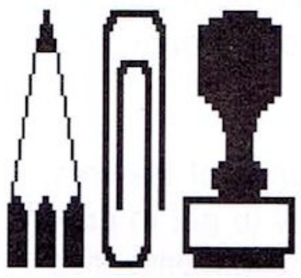
A121 – POOLS – Expert Results Predictor v2.3.

W5 – Micro–Emacs editor V3.925 full screen editor.

Games

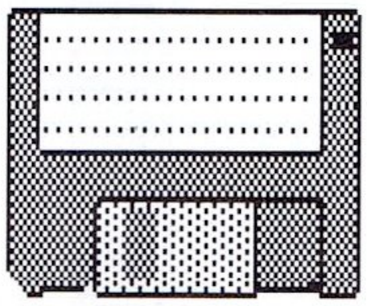
A138 – Double Sentry V0.00 the fully working home accounting program by Graham R Hutcheon.

Pdom ClipIt! 14Mbytes of clip art! Vol.1– 5 DS disks of DEGAS images £15!, Vol.2– 5 DS disks of .IMG images £15! & Vol.3– 10 DS disks of .IMG files £27.50!



Application

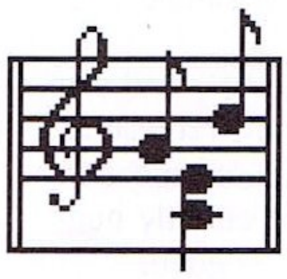
A157 – Custom Formattor allows you to enter capacity required. Boot Sector Storage store many boot sectors 1 disk. Both excellent.



Utility

A134 – Boot Drive Select allows you to select a drive to boot from when you reset your ST. GrafTool and Chart Maker are 2 chart makers.

Mega Pack 22 Games Compendium: Fruit Machine, Monopoly, World of Eamon, Galaxtic Empire, Draughts, Battle Ships, Card Games, Tunnel vision, Azarians, Farm Yard, Space Invaders, Bridge It!, Give Us A Break, Spectral Sorcery, Monkeys and Baloons and Race Cars!
5 double sided disks for £12.50!
All require a colour screen.



Music

A41 – Monochrome emulator version 5. Run monochrome programs on a colour monitor.

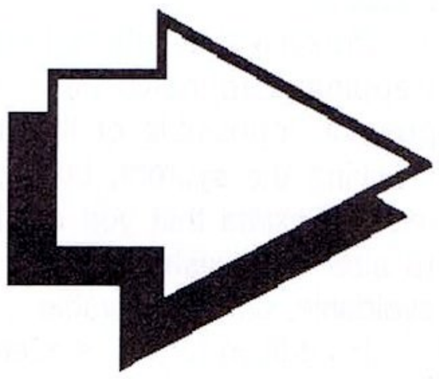
A52 – Hard Disk 2: FolderXXX allows upto 999 folders, an excellent directory lister, Hard Disk Install, Hard Disk Auto boot, and other HD utilities.

A88 – Double Click Format v3.03 THE ST disk formatter and copier. Can format Spectre 128 disks and place MSDOS boot sector.

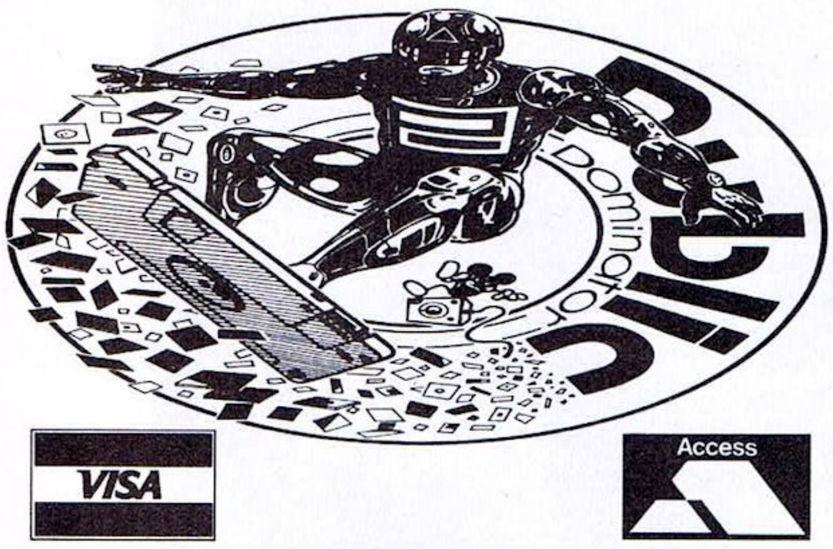
A90 – Superboot v5.5 THE ST Boot program. Specify programs to run, password, GDOS, pictures and loads more. Excellent!

M15 – The Accompanist 16 Voice MIDI Sequencer. A fully working MIDI sequencer by Henry Cosh. Fully featured.

STW41 – FSelect v3.89 The best replacement file selector, ICone.Acc excellent Icon utility and ACache.



D149 & **D150** – The Delerious mega mega demo from France. Excellent 2 disk demo. Requires 1MB RAM. Brilliant graphics and sound!!



Demos

D144 – The Atari STE demo! Only works on an STE.

D157 – Mind Bomb demo by Budgie UK Outstanding demo!

D122 – NOT STE. The Union demo! It requires a colour screen, joystick and a double sided drive. One of the best demos available.

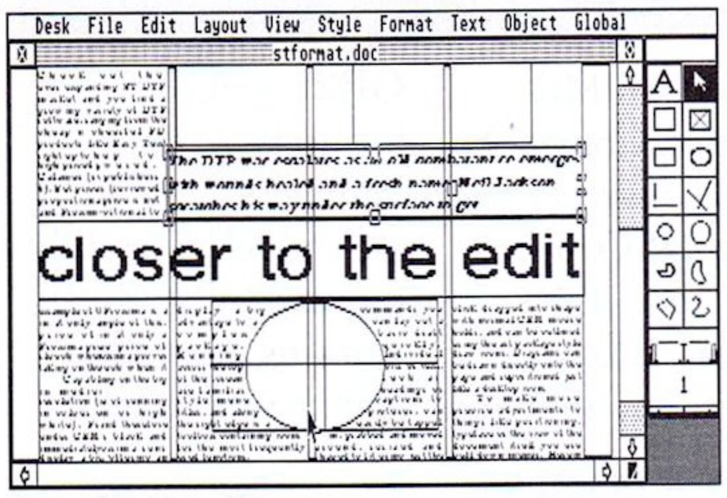
D125 – NOT STE. The CareBears Cuddly demos. The best demo on the ST to date! Requires colour screen and a double sided drive .

Budgie UK Games. We also have the full catalogue of the worlds biggest ST Games software house. Send for our disk based catalogue for full details, now! only 70p!

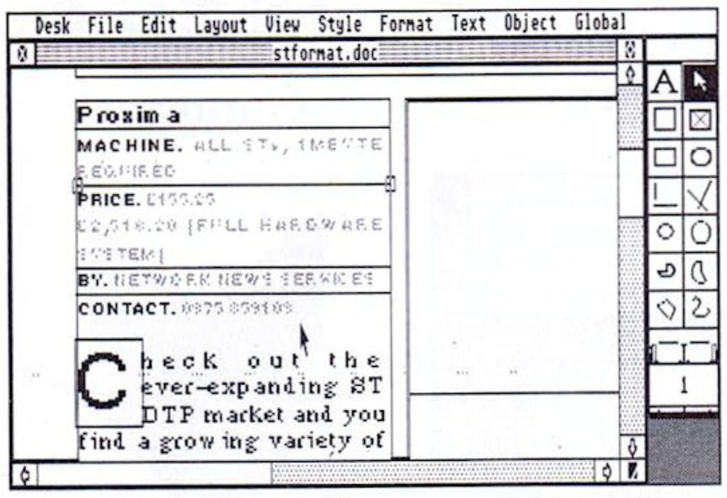
Most of the disks in this advert actually contain more than is listed, for full details of all the disks, send for our disk based catalogue, which allows fast & easy searching for items! Cost only 70p fully inclusive.

PD Disk Prices: 1 to 5 disks are £3.00 each, 6 to 10 disks are £2.75 each and 11 or more disks are £2.50 each! Blank disks : 10–£7.00, 50–£33.00. Disk cleaning kits – £2.50.

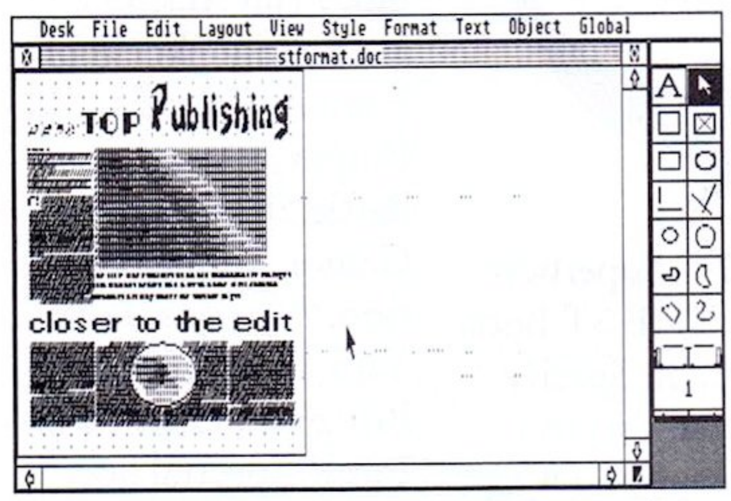
All prices are fully inclusive. To order please send a cheque or postal order payable to Pdom PD Atari or Access & Visa credit card details to: Pdom PD Atari Dept STF, P O Box 801, Bishop's Stortford, Hertfordshire, CM23 3TZ. Telephone 0279 757692.



18 A headline introduced with text runaround implemented. Turning pictures off speeds up screen updates



19 You can add lines and lightened text, as well as "drop caps" like the big C to start the article with a punch



20 The finished layout, ready to print. Designing took less than two hours (and it shows). Never mind, experiment!

➢ useful when a "human spooler" feeds work into a Linotronic 24 hours a day, because approved pages can be passed on to print overnight.

Editable pathnames which the system uses to find files, and macro command facilites which cut down on disk swaps, loading times and mousework are both found in the **Global** menu. Measuring systems can also be changed here from inches, centimetres and millimetres to professionally-used points, picas and ciceros.

Keys access all functions in *Proxima*, and from the Global menu they can be linked together and bound to function keys to save time on complex repeated actions.

Hyphenation rules can be set up to prevent certain words breaking at the end of lines, and whole dictionaries can be saved to check hyphenation and spelling. Another excellent dictionary is used for kerning pairs. (Kerning: the technique of making top-heavy letters like "F" and "T" overlap lower case letters like "o" and "e.") This presents text more attractively and is used all the time in professional printing.

Up to four screen colours can be chosen to represent 512 printable colours, and you can name and store each. They are set up in a way that printers and casual users can understand in terms of hue or subtractive colour mix using the ST's intensity level notation.

Full colour separation is possible, so four sheets are printed out; one showing all the cyan, one yellow, one magenta and one black. These are used by professional printers and opens up a whole new area for *Proxima* which other DTP packages fail to provide. It's still dead easy to print out in colour on a Star LC-10, so if you don't need professional gear you're still well catered for.

Despite its enormous range of features, beginners will find *Proxima* easy to get to grips with because of its logical layout of menus, sub-menus and functions. If you don't touch what you don't understand, you can still make top quality documents, saving the high-end trickery for when you're fluent with the basics.

Proxima's biggest problem is its manual. It's a good job the program is so intuitive, because the printed documentation is inaccurate and misleading. The tutorials should be ignored, and the body of the publication used for reference only. NNS plan to redesign the manual and should do so as soon as possible.

Proxima also suffers from insufficient error-trapping. Expensive packages like *Calamus* prevent impossible or illogical requests from crashing the system, but you must take care using *Proxima* that you don't ask the program to alter non-existent text or it bombs. This is avoidable, but unforgivable.

In addition to this, screen redrawing is slow and sometimes inaccurate, requiring you to re-select the view to update the whole screen properly. This is tedious, but intelligent use of the macro commands make it a simple one-button operation.

■ High quality hard-copy from a Postscript LaserWriter. Dot matrix printers are less crisp, but fine for general work

These problems notwithstanding – and you soon learn to avoid them – *Proxima* represents excellent value for money. Even more expensive packages like *Calamus* are not entirely bug-free, and *Proxima's* output is just as good.

Proxima makes a lot of sense if you bear in mind that, as far as professional publishing is concerned, you'll only ever be able to produce camera-ready artwork from any DTP package. Why spend vast sums of money, when for a fraction of the price you can buy a package that gives access to a wide range of cheap and attractive fonts and PostScript output too? At this price, and with this power, *Proxima* is just too good to write off. ***stf***

THE AFFORDABLE DTP SOLUTION

Proxima **is also offered as a complete £2,500 system, consisting of a 1040STE, external Cumana disk drive, SLM124 mono monitor, Sharp JX9500 laser printer with 2 MByte memory upgrade and *Proxima* itself. The system, intended for businesses entering the field of low-cost, high-quality DTP, can produce camera-ready artwork either on disk as PostScript files, or hard-copy colour separations. These can then be passed to a print bureau who create bromides (transparent sheets with the design printed on) which can be combined and filmed to produce full-colour chromalins. NNS even provide tutorial help in the form of a series of (surprisingly badly presented) publications all about printing and DTP, as well as a telephone helpline operated by a number of experts around the country.**

Proxima **on its own, coupled with a 1MByte ST and a reasonable 24-pin dot matrix printer such as the Star LC24-10, can produce amazingly high quality output. Laser Printers give crisper results, but aren't necessary if all you want is to create a small brochure or a flyer for your local fete. It may take a little longer to print documents using Epson-compatibles, but even the humble 9-pin is capable of producing excellent CVs, leaflets and the like.**

FORMAT RATINGS

PROXIMA/£155.25/Network News Services/0375 859 103

Features **97%**
Superb object manipulation with complex text runaround, colour separation, tiling, and a vast number of printer drivers

Speed **75%**
Slow but still workable on complex operations

Ease of Use **89%**
Generally intuitive, occasionally irrational. GEM makes operations very familiar

Results **94%**
Professional quality possible using PostScript and expensive printers. Low-cost printers produce crisp, good-looking work

FORMAT VALUE **96%**
Small price, big quality. Enables amateurs to enter the DTP arena with spectacular results. Miss it if you dare!

The Competition
Calamus £458 Signa ☎ 0252 874406 (see *STF 6*), *Fleet Street Publisher 1.1* £125 Mirrorsoft ☎ 071 928 1454 (see *STF 6*); and *Timeworks DTP* £99.95 Electric/GST ☎ 0954 61258 (used as the basis for our DTP series, *STF 7-11*)

ASTROLOGY FOR BEGINNERS ONLY £12.50

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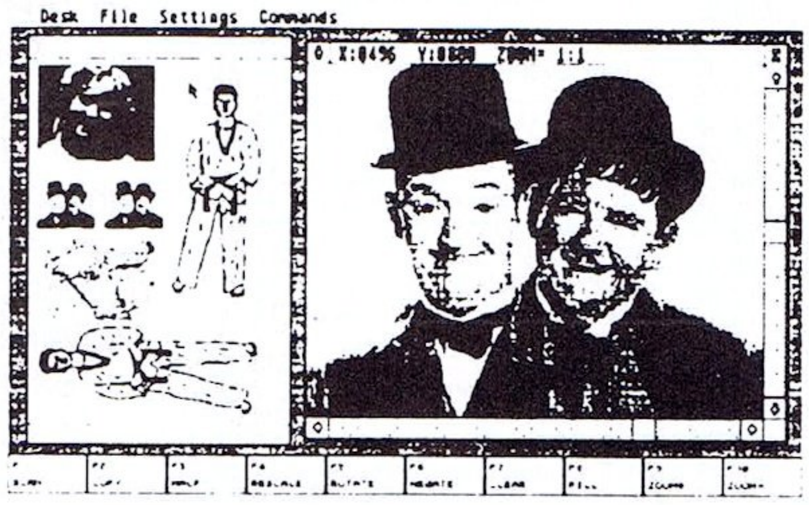

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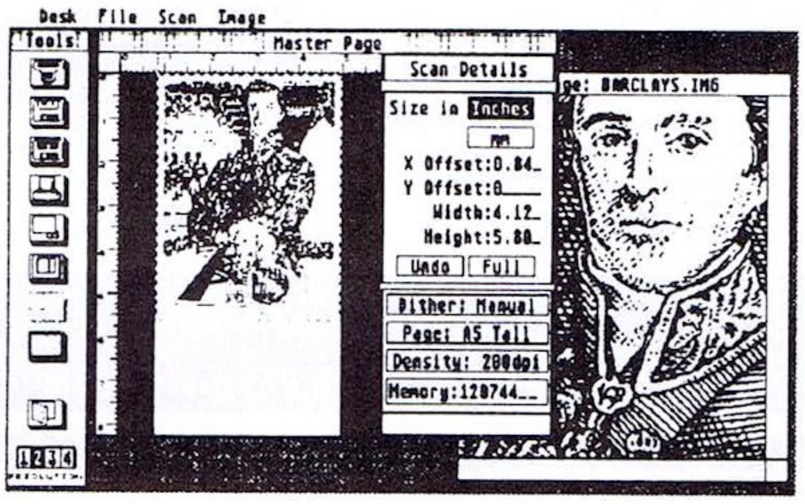

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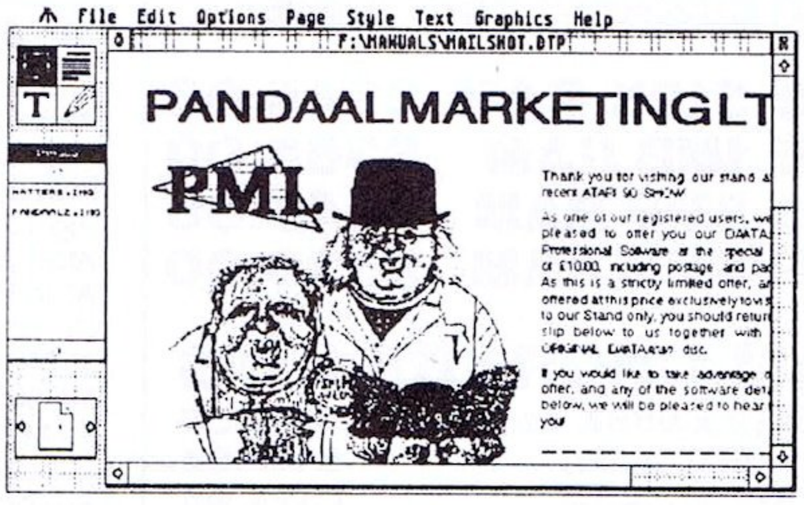

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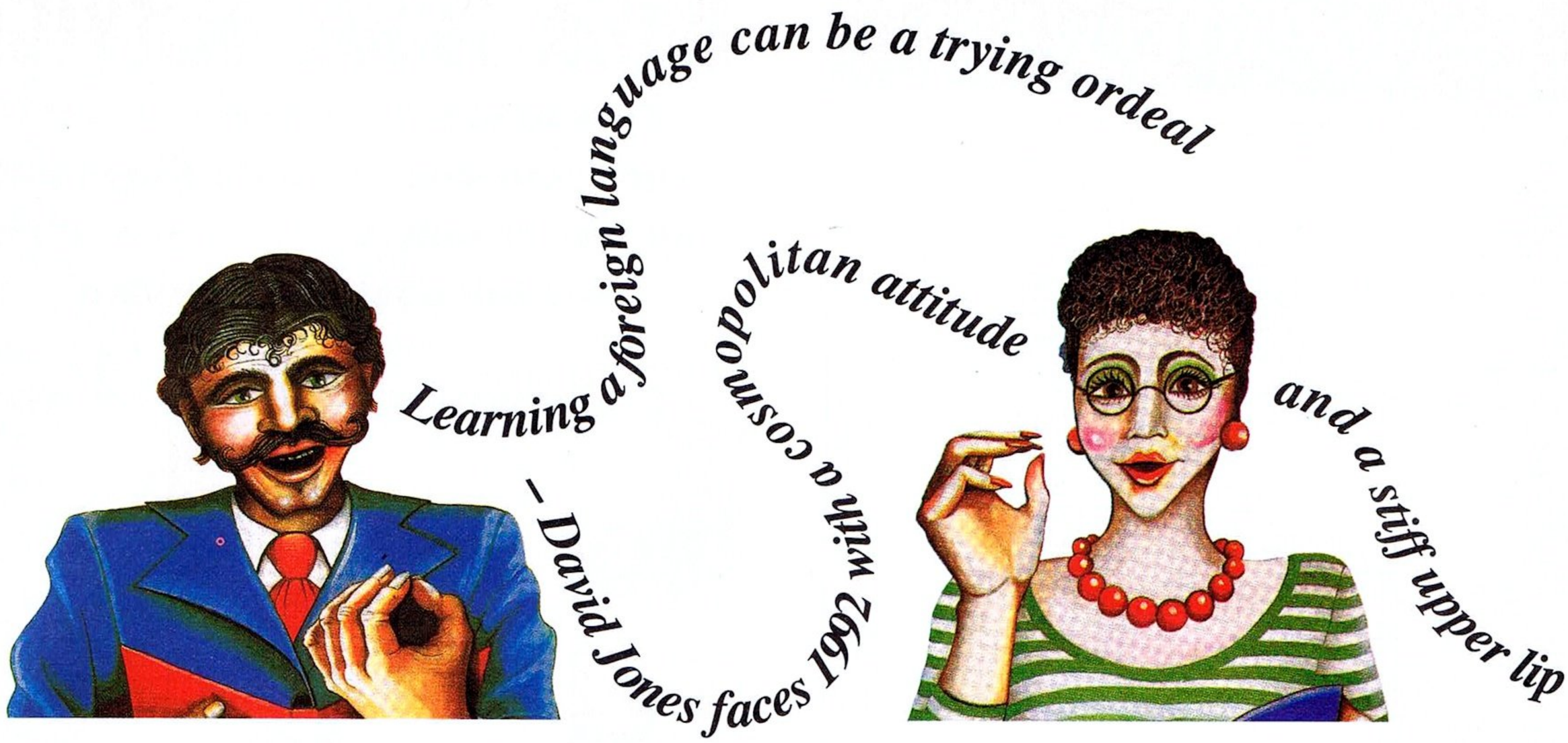

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The series consists of *The French Mistress, The German Master, The Spanish Tutor* and *The Italian Tutor*. Topics are as diverse as family, food, clothes and weather, and are discussed using a vocabularly of over 2,500 words. Each of the 32 pre-defined files covers nouns, verbs, adverbs, adjectives, prepositions, conjunctions, and useful phrases conjugated in six tenses.

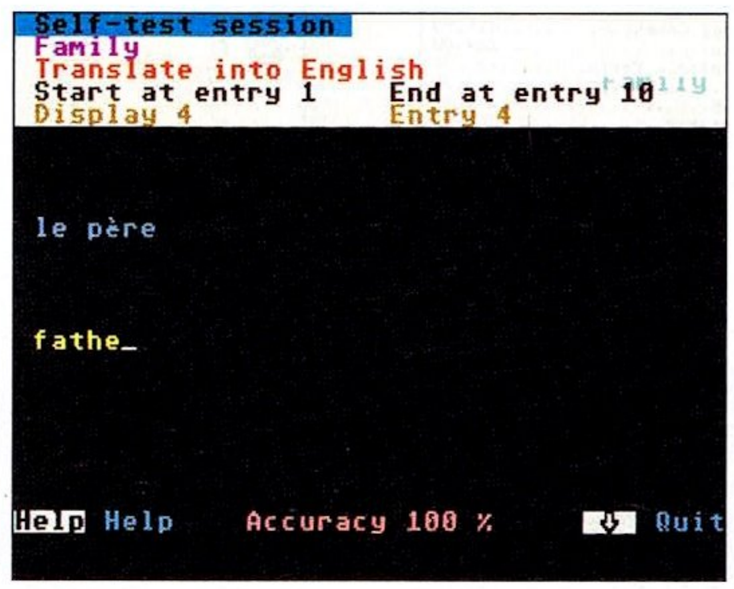
All programs can be used in three modes: Self Teach, Self Test and Edit. In Self Teach mode there are four display options. In the first two, foreign words are displayed in a pointless list of untranslated words. The next two options translate foreign words to English and English to foreign. New words appear at the touch of the Space bar or automatically after an appropriate delay.

The Self Test mode either presents learners with a foreign word and prompts for the English translation or vice versa. If you do press the incorrect key, the letter simply doesn't appear and the cursor remains in place waiting for the correct one to be entered. Press Help and the next letter is placed on the screen for you. Your accuracy is recorded at the bottom of the screen and there's an option to repeat questions you found difficult.

The editor is easy to use; just key in English words and their foreign counterparts. It accommodates all the relevant accents and special characters appropriate to each language and files can be saved and recalled at a later date.

On the negative side, the graphics are drab and uninspiring and some instructions in Self Teach mode are virtually impossible to read. Files are small – resulting in constant loading and reloading during revision – and file selection is clumsy using the arrow keys.

Despite these grumbles, the four packages benefit anyone learning or revising a foreign language. Until a high-quality speech synthesiser is developed that can aid pronunciation, however, we'll no doubt continue to murder the subtle cadences of foreign languages. ***stf***



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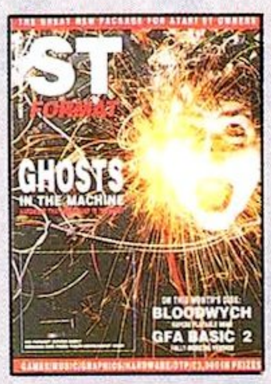

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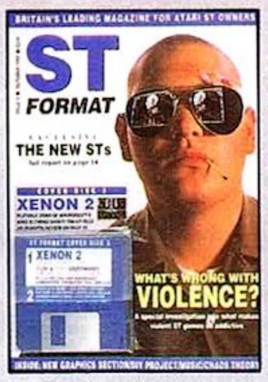

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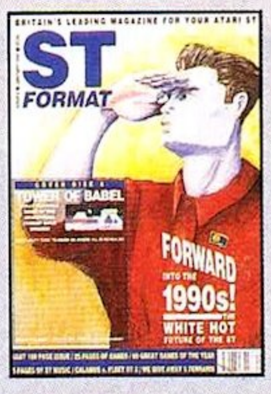

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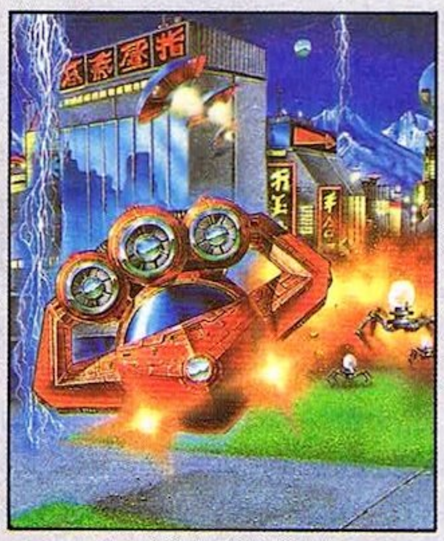

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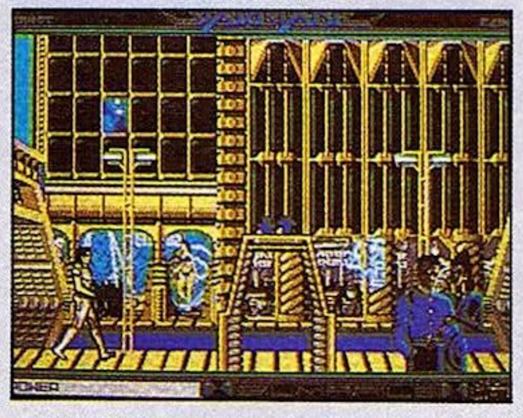

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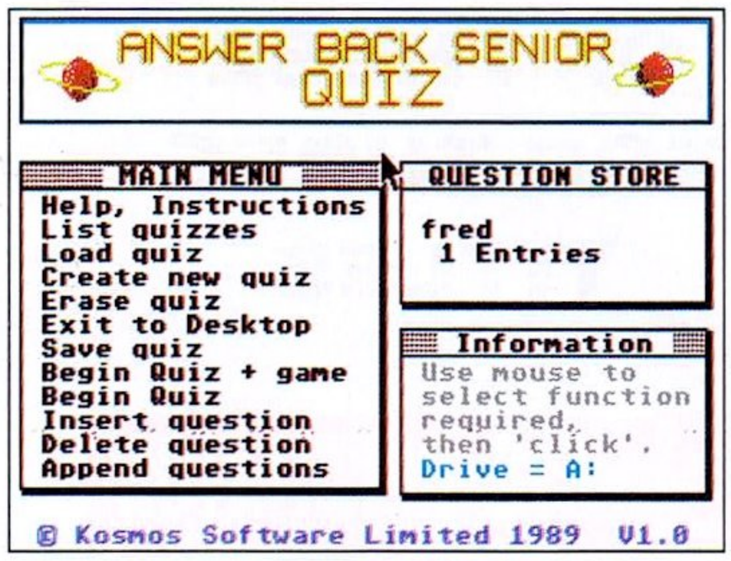
learning to answer back

As educational software broadens its vision: David Jones faces rigorous questions and shoots down a few flying saucers



■ **The menu looks daunting at first, but soon becomes familiar. If you think this looks confusing, wait until you tackle some of the questions!**

Answer back quiz

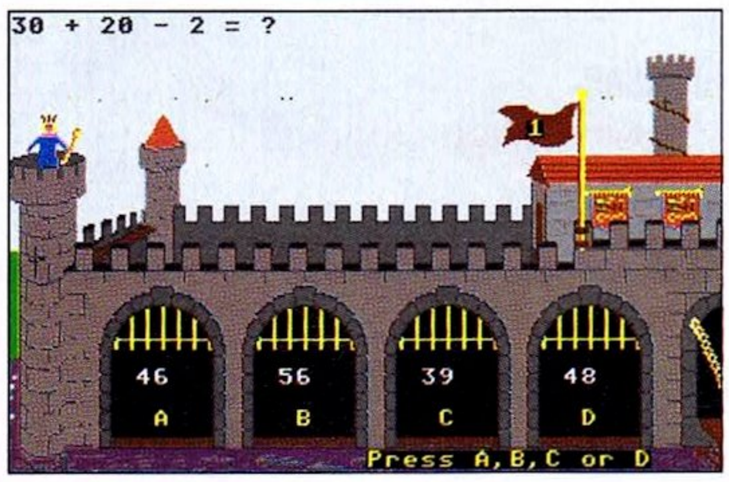
MACHINE: ALL COLOUR STs
PRICE: £19.95
FROM: KOSMOS SOFTWARE
CONTACT: 0525 3942/5406

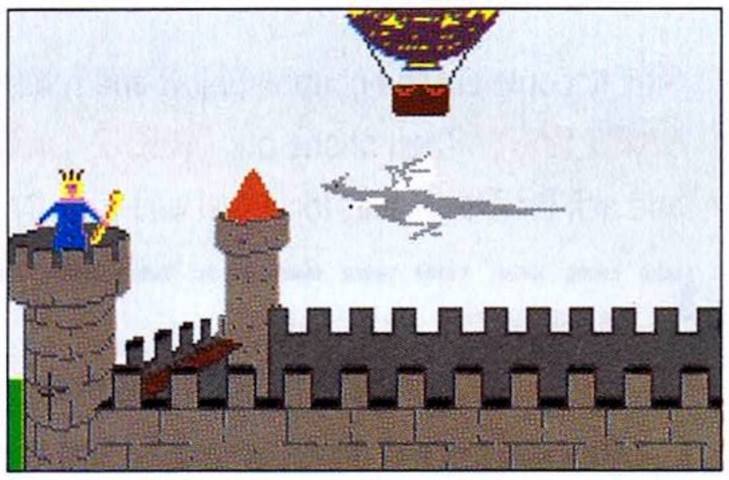
Most educational software concentrates on improving a specific skill. Programs are carefully targetted and focus on a narrowly defined field. It's difficult to imagine a program that teaches keyboard skills, aids computer literacy, tests knowledge, includes animated games and has extension disks to broaden its scope – in other words, a single program that does everything you could wish educational software to perform. But that's exactly the breadth of vision that the improved, extended, ST versions of Kosmos' *Answer Back Quizzes* possess.

There are two versions of the package; *Answer Back Junior Quiz* aimed at children between 6-11, and the *Senior* version aimed at teenagers and adults. The *Junior Quiz* comes on a crammed single-sided disk. To load a quiz, select the appropriate instruction, answer the simple questions, and enter a file name when prompted. For convenience, files are listed on a sheet enclosed with the packaging so you don't have to keep invoking the List Files option.

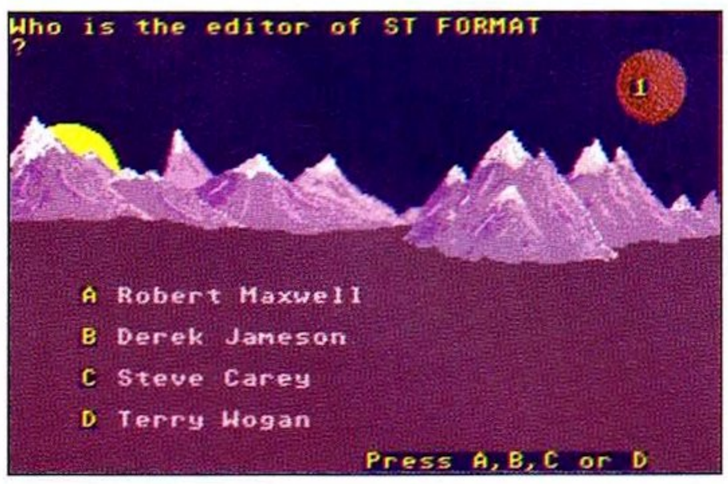
After the file loads you're asked how many questions you wish to answer; which questions you wish to answer; what order you wish to answer them in; and how you would like them to be presented. You can choose from multiple-choice, true or false responses, fill-in-the-gaps, or a random combination of all three.

The main screen shows a medieval castle. The question appears at the top of the screen and you enter the answer via the keyboard. You can use the program in two modes. The first contains a game option. Every time a correct answer is given you're rewarded with a simple arcade game. In the *Junior Quiz* you control a balloon and shoot a dragon before it does something nasty to the princess in the tower. The second mode, presumably aimed at self-motivated older children bored by princesses in towers, has no game option and therefore runs much faster.





■ **Answer the question correctly and you get to save the princess from the dragon**



■ **The *Senior Quiz* dispenses with dragons and after a tricky question on your favourite magazine, the correct answer generates a shoot out with a flying saucer**

The Senior version differs in only two ways: the game option is set in an alien landscape and provides you with the much more adult opportunity of shooting a flying saucer, and the quaint medieval castle no longer provides the backdrop to the questions.

Both programs contain 15 files each, with 50 questions in each file. The Junior package covers subjects as diverse as nature, sums and spelling, and each of the questions is designed to tax the general knowledge of an "average" 9–10 year old. They include eternally perplexing questions such as, "What colour is indigo?", "What would you be if you were a doctor especially good at performing operations?" and "What is the currency of Italy?"

The *Senior Quiz* contains a similar variety of questions, but they're substantially more difficult. The science file, for example, contains such headscratchers as: "What is the name of a substance that will not conduct electricity?", "How many Km does light travel in a second?" and "Name the gas in fizzy drinks."

Both packages enable teachers or parents to create their own files. This can be used to provide simple tests or, if the questions are answered in sequence, they could form a story to maintain the child's interest.

To extend the main packages there are 14 data disks called *Factfile 500* (£9.95 each). Each contains 500 additional questions, can be used with either program disk, and provides a welcome extension to the 750 questions provided with each package. The *Factfiles* contains 20 files of 25 questions and concentrate on specific subjects for particular age groups. The majority are aimed at older children and include GCSE subjects such as history, geography and science – only three *Factfiles* are aimed at under 11s.

Answer Back is an extremely versatile series. It introduces keyboard and computer skills, has enormous scope for expansion, and is undoubtedly an invaluable teaching aid. ***stf***

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Kosmos Software/0525 3942/5406

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Speed **61%**
Loading and accessing menus is slow

Ease of Use **93%**
Simple to use with a great deal of on-screen help

Results **85%**
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FORMAT VALUE **87%**
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The CM-32 LA Sound Module provides all the LA capabilities of the CM-64 , is 32 voice polyphonic and 9-part multi-timbral and likewise has built-in digital reverb. The CM-32 PCM Sound Module contains the CM-64's PCM section with its 64 presets, is 31-voice polyphonic and 6-part multi-timbral , has the same digital reverb, and is U-110 sound-card compatible.

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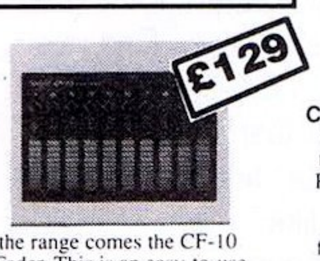
CN-20
The CN-20 Music Entry Pad facilititates the programming of basic song data on a PC. It offers, for instance, easy editing of data pre-recorded from an external keyboard in real time. Its multi-purpose fader can be assigned to control a variety of MIDI information such as Control Change Bender and Aftertouch over any of the 16 MIDI channels



CF-10
Next in the range comes the CF-10 Digital Fader. This is an easy-to-use mixing controller with the feel of an analogue audio mixer and featuring 10 multiple MIDI channels, designed to mix song data for sequences created on PC or MIDI sequencer, it also enables control change messages of volume and panning to be transmitted to external MIDI devices

CA-30
Last of the modules is the CA-30 Intelligent Arranger. Designed to be linked with the CM-64 or CM-32-L, the CA-30 is a sophisticated auto arranger with similar intelligent arranging functions as found on Roland's best-selling E-20 Intelligent Synthesizer. With the CA-30, even complete beginners can create interesting and convincing song data

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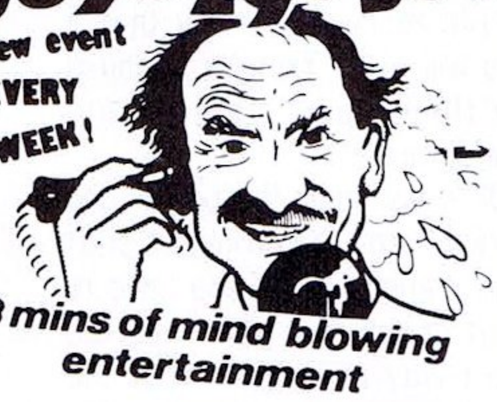

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PHILOSOPHY — **TO AIM TOWARD NEW HORIZIONS FOR MIDI MUSICIANS**

Educational by design. Covering every aspect of the MIDI and MUSIC data available for the ST computer. Each issue has files with Synth Editors, New Voices, News, Reviews, MIDI & MUSIC tutorials, **Complete WORKING sequencers**. (1&7). Along with these extensive files each issue includes **MFS SEQUENCES.** YOU become the **ARRANGER/PRODUCER** of the music. E.g. Eroica Passage (Issue 5). **ALGORITHMIC MUSIC GENERATORS - MIDI Demos, MIDI Software written in Basic**. Series starting from scratch WITH EXAMPLE MIDI PROGRAMS in ST, FAST, GFA, POWER, HISOFT and STOS Basics also **TEACHING MIDI in 68000 Assembler.** (Issue 5) **Issue 7 NEW 16-TRAK SEQUENCER** which supports MIDI THRU and EDITING, a **KAWAI K1 Editor with new voice banks and KORG M1 DEFAULT VOICES. ISSUE 8** now has full working K1 Editor, 50 New Korg M1 Voices, and 32 New Kawai K1 Voices. **ISSUE 9** has **NEW ROLAND D10 EDITOR** With all functions enabled and Voice Databank software. Also 2 Banks of 64 Voices for the **ROLAND D5. ISSUE 10** has a **KAWAI K4 EDITOR** Demo and Samples for Replay 4 with editing software. New **MIDI DATABASE DISK RELEASE** - Our **PD MIDI** listing has been updated. - Send just £2 for our latest list plus Matrix extracts on disk.

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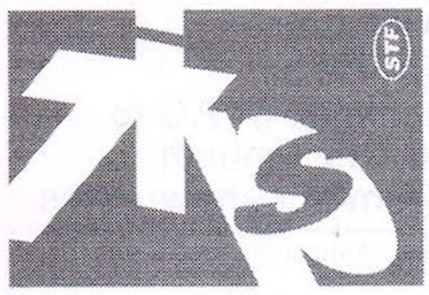

For all you budding musos playing bum notes and composing tuneless ditties, Jon Bates is on hand to tell you all the things the handbooks never explain

MIDI helpfile

EXCLUSIVE ADVICE

Want to build a library of sounds for your synth, but can't afford the voice programmers or a universal sounds programmer? Most sequencers can store what's called systems exclusive data, that's the data that controls the internal sound chip of the synth and turns it from a kazoo to a triangle to a tuba with the flick of a button. If you create your own sounds on the synth, and want to store them, here's what you do...

Set the sequencer to record and start it running. Don't forget to disable any routines that filter out systems exclusive data. As soon as the sequencer's recording, press the buttons that "dump" the sounds from the edit buffer of your synth – the manual tells you exactly which ones to press – and the sequencer records it as systems exclusive data. Stop recording and save it as a separate file under the name of the sound.

SOUND SEARCH

It's useful to put the program change numbers at the beginning of each track. A program change number is a small piece of data that tells the instrument to find a certain sound programmed into it. You can nearly always record this sound in the same manner described for recording systems exclusive data.

Set the sequencer to record and then change a few sound buttons on the instrument. The sound changes as you play the track back, indicated by the lights and central display on your instrument. The reason for recording this at the beginning of each track is that when you come back to the piece after a week or two you don't have to fiddle around trying to find the right sounds, the sequence file does it all for you.

AMPLIFY YOURSELF

If you expand your music system with a small single keyboard you might think about improving its sound quality. Equipped with small under-powered speakers that buzz miserably, they don't do the sound chips any justice at all. If the same instrument is amplified through a half decent hi-fi system you'll be amazed at the difference. You can do this with some proprietary adaptor plugs and sockets – most keyboards have sockets for external amplification, failing that use the headphone socket with the volume on the instrument turned down.

MORE THAN MEETS THE EYE

Lots of single keyboards have more sounds on them than first appears. You may have only 20 sounds available from the front panel of the instrument, but when encouraged by a program change number put in the sequencer there may well be more. The reason is that the main sound chip is also used in a larger model, but since panel space is restricted most users can only get some of the sounds. To check if yours can do this you need to look at the MIDI implementation chart for the instrument. Find the section that refers to program change numbers and then compare the number of program changes it transmits to the number it can receive. If it says something like:

Function Transmitted Recognised Remarks
| | |
Prog | O 0-20 | O 0-30 |
Change | | |
| | |
| | |

then the instrument probably has more sounds in it than it would first seem. "O" signifies "yes, this function is possible." One small word of warning: some instruments recognise all program change numbers from 0 to 127, but still only have a limited number of sounds on board.

KEY POWER

The last word on single keyboards. Nearly all of them require an external power supply or a not inconsiderable investment in batteries. The power supply units and the requirements of the instruments differ from one manufacturer to another; for example there is no way that a Casio power supply will run a Yamaha because both the polarity (the + and – signs) and connector sizes are different.

Everything is OK if you have the power unit designed for your keyboard. The problems start with universal power transformers. You have to be very careful and check that you have the polarity the correct way round and that the voltage is set in accordance with what the keyboard demands. It's a good idea to attach a tag to either the power unit or keyboard to remind you which way round the connectors are to go and what voltage is needed. Failure to do this can, at best, result in the instrument having a protracted sulk or at worst suffering a terminal illness caused by too much power stuffed into it the wrong way round. You have been warned! ***stf***

■ Next month we call in the *real* experts, as the United Kingdom MIDI Association begins a series of regular pages to help you get the musical most out of your ST.

So send your tips – and problems! – to *MIDI helpfile, ST FORMAT,* Beauford Court, 30 Monmouth Street, Bath BA1 2AP. Act fast and you could even win £500 in our astonishingly generous prize draw (see the form on the left for more details).

EARN £500 IN TEN MINUTES!

All you have to do to enter the great *ST FORMAT* "Night of 1,000 Tips" draw is to send in a MIDI tip, a game cheat, an infinite lives poke, an undocumented feature, a bug, a password – in short, anything at all you've found that helps you get more from your ST. And if you're stuck at a particular point in a game, or you find a problem with a piece of music software, that'll do as well.

At the end of September, we shall be putting all your entries into a great big sack and pulling out the name of a lucky winner who receives a cheque for 500 big ones! So get going. You don't have to use our special form, but it helps us no end.

We shall be doing all this again, so don't worry if you miss out on September's draw.

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making it on the cheap

The first Jive Bunny record was done in a bed-sit with a rented sampler – just think what you could with talent, too! Jon Bates goes shopping

Yamaha SHS10: pathetically inadequate

Casio MT 600: not bad, if you like waltzes

Yamaha PSS 480: well worth searching out

Envy is a horrid vice, and I suffer from it every time I read an interview with successful musicians who casually mention the amount of equipment they have. Envy turns to jealous rage when I encounter untalented so-called musicians who have just about every modern widget going: "Well, er like, I was kinda disappointed with the Synclavier, man, 'cos it wouldn't work with either of my Mega 4 STs so I tend to stick with Akai S1000 samplers for my main work..." Fine if you've got a couple of hundred thousand to spend, but this sort of dosh is beyond the means of most of us.

Some very successful records are made with nothing more than low-cost equipment and a lot of nerve. So if you *do* have limited finances, what do you spend your money on?

Last month's *ST FORMAT* Cover Disk contained several PD music programs to help introduce you to the world of music on your ST. For a low cost entry into music, PD programs are hard to beat. They only cost the price of a disk so you can hardly go astray. As for the actual hardware, this takes a little more thought and financial planning. Now, as they say, read on...

The best value for money is a second-hand single keyboard kitted out with MIDI. Their price has been tumbling dramatically from a lower limit of £350 a few years ago to about £150 now. There's little that can go wrong with them unless you count immersion in water and plugging directly into the national grid as justifiable consumer tests.

A single keyboard is a self-accompanying unit that plays drums and adds automatic bass and chord patterns according to the notes you hit with your left hand while your right hand produces a tune. They're multi-timbral internally, so they can create several different sounds simultaneously. At the very least you should get an instrument capable of creating three sounds at the same time, including drums. At best you can have as many as 12 MIDI channels and the ability to program and save your own sounds.

Your first task is to sort the good from the bad and the ugly: here's a basic guide to the keyboards you're most likely to see advertised, marked out of ten.

YAMAHA SHS-10

A dinky little number that slings over your shoulder. It was recently discounted from £150 to a mere £30 and flogged in the national tabloid press. Beware. The ads boasted MIDI features, but it only has MIDI out so you can't drive it from other equipment. Pay no more than £25. (2)

YAMAHA SHS-200

A larger version of the SHS-10 with similar problems. Best avoided unless you already have tone modules or synths. Off-the-shoulder keyboards are only a real boon to the style con- ➢

WHY THE ST HAS THE EDGE

Atari's decision to put MIDI ports on the whole ST range as standard was a fabulous move. Other computer owners are forced to shell out for MIDI interfaces, but ST owners can adopt smug grins because STs have the interface already there.

The consequence is that no music software developer can afford to ignore the ST; the inclusion of MIDI ports steers professional musicians towards it and brings others in their wake.

As a result there are more MIDI programs for the ST now than any other single computer. The most up-to-date software designs appear on the ST and because it isn't an expensive computer, the price of the software reflects what users are prepared to pay. Although there are expensive programs available, the majority of software is affordable despite being state-of-the-art.

Yamaha DSR 1000: have it sent round now!

Casio CT 460: don't pay more than £60

Farfisa FK 58: cost £200 – worth £50, tops

scious who can play music while staring in the bedroom mirror. Pay no more than £25. (2)

YAMAHA PSS 480

A real gem and worth a long search for. MIDI is excellently thought out and has 15 pages devoted to its enormous capabilities in the manual. It comes with 49 mini keys that are not touch-sensitive, but the sounds themselves are responsive to velocity via MIDI so you could alter this in the sequencer after recording. You can play up to twelve notes at any one time and, wait for it, can select up to twelve MIDI channels and have a separate voice for each channel which makes many far more expensive tone modules look pretty silly. There are 100 sounds on board and a full complement of drums, drum patterns and playing styles, plus sequencers all coming out in glorious stereo.

If this isn't enough, you can also create your own sounds from the front panel and, thanks to it's advanced MIDI capabilities, you can dump your customised sounds and sequences to an ST MIDI sequencer – although to do this you would need to understand a little about dumping sound via MIDI *(see hints and tips section, page 128)*. You could pay less than £100 for it second-hand and at this price it's definitely a winner! (10)

YAMAHA PSS 680

The big brother of the PSS 480 with extra percussion, extra keys and a handy pitch bender. It has MIDI in, out and thru and is worth paying at least £120 for. (10)

HOHNER PSK 10

At its new price of £165, it was the cheapest keyboard to have MIDI . Thanks to MIDI ports it can have three polyphonic MIDI sections including the drums. There are 49 sampled drum sounds and 30 other sounds to play with – the front panel only says there are 20 sounds but the MIDI specs are better! It has 49 mini keys plus a built-in sequencer and should cost about £50 to £70. Not touch-sensitive. (8)

HOHNER PSK 30

The CT 460 in a different coloured case: same comments apply. Many Hohner products now are re-cycled Casio keyboards, up to and including the top of the range FZ1 sampler. (7)

CASIO MT-600

Rather similar to the Hohner PSK 10 with 49 mini keys and 20 sounds. The MIDI implementation is limited but adequate. It's worth bearing in mind that all Casio keyboards output their internal patterns via MIDI: all those jolly drum patterns, bass lines and chords can be recorded by your ST and used in your own compositions. Although I don't see the waltz pattern as being high on your list of priorities some of the other rhythms are well worth nicking! It cost £179 orginally, but you should pick it up for around £80 second-hand. (7)

CASIO MT 540

This model has better sounds than the Casio MT 600, four fixed MIDI channels and 20 sounds on board – 30 via MIDI. The sounds are a little dull, however, and not touch sensitive. However it does have a copious bank of sound effects like running water, birds, car horns, robots, insects and so on, should that be your fetish. Its original price was just under £200, but pay no more than £80 second-hand. (7)

CASIO CT 460

Pretty similar to the MT450 with four MIDI channels, but with full size keys. The same applies: pay no more than about £80. There is a modular version known as the CSM-1. (7)

FARFISA FK 58

Sounds are not too bad, but an oversight on the MIDI specs relegate this to the reserve list because it only works on one MIDI channel. For some reason it has an RS232 port which is utterly useless because no music software uses the RS232 port on the ST. Its only redeeming feature is that it has 61 full size keys. It cost nearly £200 but don't pay more than about £50 nowadays. (4)

Above this range there are a few single keyboards worth shopping for: the Yamaha DSR range, the Kawai WK and PH range and the Casio CZ230S, the synth that thinks it is a single keyboard. These cost up to £150 second-hand but are all worth it.

These keyboards offer a very adequate starting point for making music with the ST and definitely work out cheaper than buying a succession of tone modules, synths and drum machines. The beauty of MIDI is that you can expand your system without condemning any part of it to the obsolete bin. The single keyboard can form the main part of your music set-up and you can add to it with other synths and tone modules as and when your budget allows. ***stf***

WHERE TO FIND THOSE BARGAINS

The best place to look for second-hand keyboards is in your local paper. The owner is likely to live close enough for you to check out the equipment and talk to him or her about its performance.

There are plenty of publications that have useful classified ads, including *Sound on Sound*, *Keyboard Player* and *Home Keyboard Review*. Bookrose, the publishers of *Keyboard Review*, also produce a yearly keyboard guide called *Every Single Keyboard* ☎ 071 609 5781.

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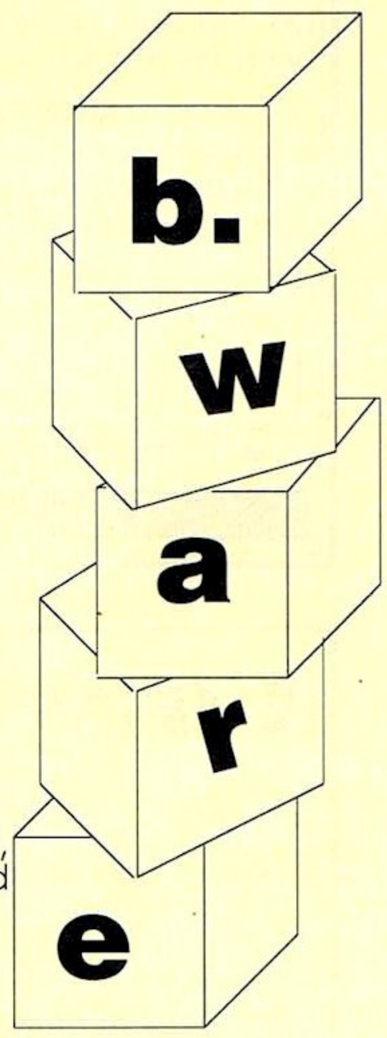

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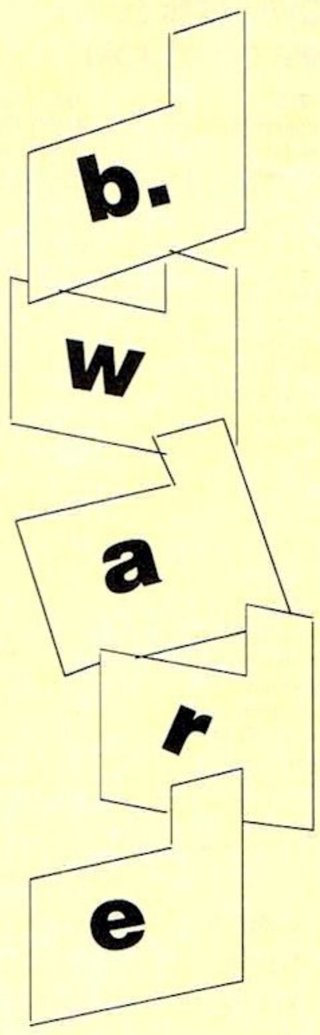

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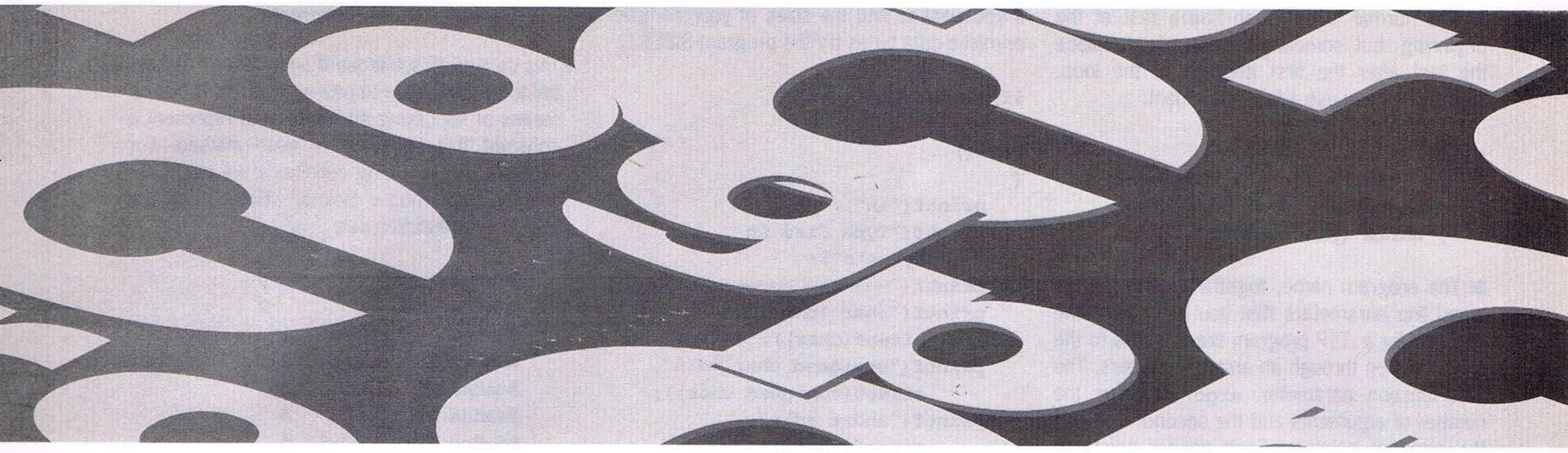


program in c #7

Warwick Grigg explains basic C statements, illustrated with programs on the Cover Disk

Many readers found recent tutorials too difficult to follow. So continuing our humanitarian educational policy we retrace our steps and cover some basic constructs. The example programs are short and simple and illustrate the fundamentals of ST programming. You'll find the source code, executable programs and compilation instructions on this month's Cover Disk.

■ A switch and case construct is the familiar multiple choice test. For example, RESTEST.C is a program to test for low, medium or high resolution. The switch statement's integer expression (in this case the value returned by the Getrez function) is evaluated once, checked against the integer constants in the case statements and then the processor jumps to the matching case statement. The default statement is obeyed when none of the case statements apply. Switch/case programming is a bit like assembler: the case statements are just labels; unless you end each case condition with a break statement, execution just "falls through" into the next case condition. Let's look at the RESTEST.C program:

```
#include <osbind.h>
#include <stdio.h>

main()
{
   switch (Getrez()) {

   case 0:
        printf("Low resolution\n");
   break;

   case 1:
        printf("Medium
        resolution\n");
   break;

   case 2:
        printf("High resolution\n");
   break;

   default:
        printf("What? Not low,
        medium nor high
        resolution!\n");

   }

   getchar();
}
```

■ "Break" is a useful statement for people who don't want to use a goto to "break out" of a loop. See how it's used in the program GETINT.C.

```
#include <stdio.h>

main()   /*reads digit string and
         returns value of it */
{
   int c, result, signed;

   signed = 0;
   result = 0;
   c = getchar();
{
   while (c=='-') {/* process
   leading minus signs */
   signed = !signed;
   c = getchar();

while (c != EOF) {
   if (c<'0' || c>'9')
   break;
   result = result*10 + c - '0';
   c = getchar()
}
if (signed)
exit(-result);
exit(result);
}
```

■ The "continue" statement is used to force restart of the next iteration of a loop at the point just before the condition test. The statement is very rarely used.

■ Most C programmers never use the "goto" statement, not through lip service to dogmatic structured programming rules, but because the break statement is so useful. Anyway this is how you use goto :

```
   while (a==b) {
   do {
   abc();
        if (fatal_error)
        goto errlab;
   }
   }
   def();
   exit(0);

errlab:
   cleanup();
   exit(1);
```

■ The "for" statement is just convenient shorthand. The following code:

```
   for (i=0; i<10; i++)
        printf("%d\n", i);

is equivalent to:
   i=0;
   while (i<10) {
   {
        printf("%d\n", i);
   }
   i++;
   }
```

A word of warning: if you accidentally append a semi-colon to the "for" statement it won't show up as a compilation error and you'll find it difficult to spot the error. ➢

➢ ■ The normal "while" loop has a test at the beginning, but sometimes it's useful to place the test after the first iteration of the loop. That's when you use a "do" statement:

```
do {
pr_item(); /* this statement
executed at least once */
} while (!lastitem);
```

■ The program name, together with the command line parameters that you enter from the Desktop for a .TTP program are available to the main function through an array of pointers. The first function parameter, **argc**, specifies the number of arguments and the second, **argv**, is the array of pointers. Each pointer points to one of the arguments. The first argument is the program name and the remaining arguments are the program's parameters. The program PRINTPS.C prints its command line arguments, so let's look at that example:

```
#include <stdio.h>

main(argc, argv)
int argc;
char *argv[];
{
   printf("There are %d
   arguments\n", argc);

   for (i=0; i<argc; i++) {
   printf("Argument %d
   is %s\n", i, argv[i]);
   }

   getchar();
}
```

Although sizeof is not a "real" function, it behaves like one; returning the size (in bytes) of its parameter. Sophisticated programs sometimes allocate memory dynamically, depending upon run time conditions, using the malloc function call. Because you must pass the number of bytes you need to malloc, you must determine the size of the data structure you want. Calculating this manually leads to problems if you try to port your program to a different machine, and you would have to recalculate it if you were to change your data structure. The sizeof function tells you how many bytes are used by a variable or a data type. The most common use of sizeof is :

```
p = malloc(sizeof(*p));
```

If you want to find the sizes of your compiler's primitive data types try the program SIZES.C.

```
#include <stdio.h>

main()
{
   printf("\n");
   printf("Type Size in
        bytes\n");
   printf("———— ————\n");
   printf("char %d\n",
        sizeof(char));
   printf("unsigned char %d\n",
        sizeof(unsigned char));
   printf("short %d\n",
        sizeof(short));
   printf("unsigned short %d\n",
        sizeof(unsigned short));
   printf("int %d\n",
        sizeof(int));
   printf("unsigned int %d\n",
        sizeof(unsigned int));
   printf("long %d\n",
        sizeof(long));
   printf("unsigned long %d\n",
        sizeof(unsigned long));
   printf("float %d\n",
        sizeof(float));
   printf("double %d\n",
        sizeof(double));
   printf("char * %d\n",
        sizeof(char *));

   return 0;
}
```

Preprocessor directives are processed by the first pass of the compiler before any real compilation into executable code. Indeed for the *UNIX C* compiler the preprocessor is a separate program and can be used for other languages, not just C.

Preprocessor directives are always easily recognisable because the first character in the line is a #.

```
#include "filename" or #include
<filename>
```

This includes the named file into the program and the resulting code is passed to the compiler. The first form looks for the file in the current folder to begin with, whereas the second only looks in the folders specified in the LIB environment variable.

```
#define symbol new-symbol
```

This causes all subsequent occurrences of symbol to be translated to new-symbol. As C has no means of specifying an identifier to represent a constant this construct is used instead. For example, the following definitions are useful for selecting the mouse pointer shape using the graf_mouse function call:

```
#define ARROW        0
#define BEE          2
#define TEXT_CRSR    1
#define HOURGLASS    2
#define POINT_HAND   3
#define FLAT_HAND    4
#define THIN_CROSS   5
#define THICK_CROSS  6
#define OUTLN_CROSS  7
#define USER_DEF     255
#define M_OFF        256
#define M_ON         257
```

These definitions are declared for you in an include file named GEMFAST.H. So at the beginning of the program you write:

```
#include <gemfast.h>
```

and at the point where you want to change the mouse shape to a pointing hand:

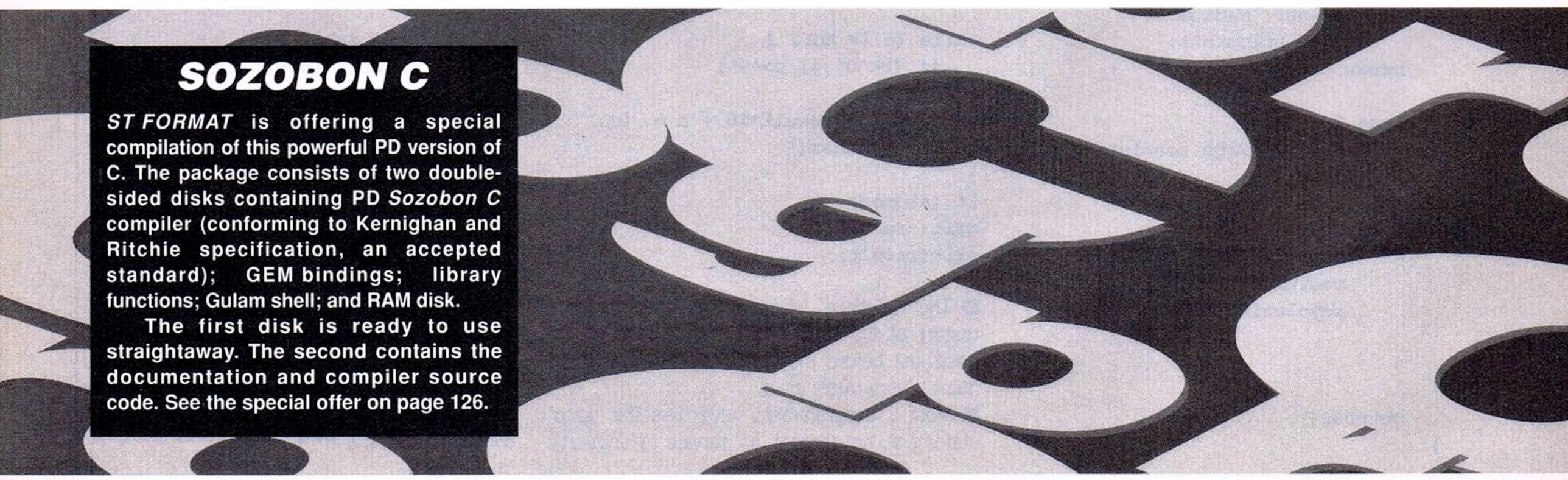
```
graf_mouse(POINT_HAND);

#define symbol(parameter1,
parameter2, ... ) expansion
```

This type of macro definition is best illustrated by an example:

```
#define cube(x)  ((x)*(x)*(x))
```

The cube macro is a bit like a function call, but because the source code is translated by a preprocessor, the code is compiled in line (ie. without a jump to subroutine). Macros result in faster code, but larger programs. Also note that there is an x placed in brackets: otherwise cube(1+2) would be be calculated as (1 + 2*1 + 2*1 + 2*1 + 2) ! ***stf***

■ On next month's Cover Disk you'll find updates for the *Sozobon C* compiler. We'll also be solving some of the trickier problems, such as creating desk accessories.



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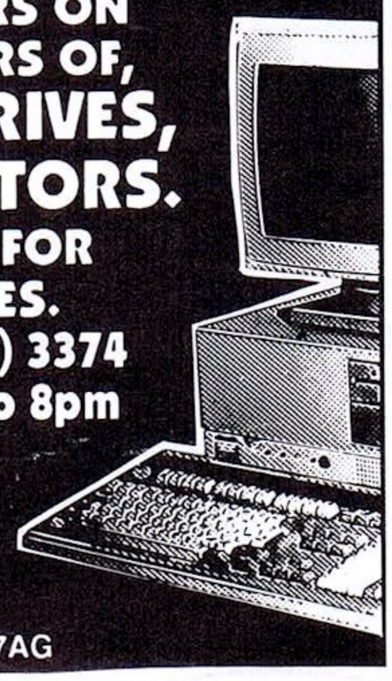

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feedback

Your letters on ST-related matters. FORMAT editor Steve Carey replies

Getting into the music

After being injured in a car accident, I've spent the last two years in music. Although 38 years old, I've had no direct contact with computers, but realise I can improve my musical output 1,000 fold just by using software sequencers, samplers, educational programs and so on.

The Atari STE computer seems to be tailor-made for my needs. But should I buy a 520 and see how I get on with it, upgrading when pocket and user-improvement allow; or should I plump straightaway for the 1040 STE and hunt around for PD music software that's compatible?

Needless to say, I'm slightly worried about what I'm getting into, but then I felt the same way when, because of my accident, I changed from bass guitar to keyboards.

Norman S Walter
Godebridge, Herts

stf *For anyone who already has a 520 the STE represents a good investment, providing more power and the potential for better colour and sound. Anyone looking to buy their first ST should aim as far up the ladder as possible, especially if they intend power-hungry uses like music. It's the second law of computing: What Seems A Vast Amount of Memory Very Rapidly Becomes Just That Bit Too Little. (The first law? If There's Going To Be A Powercut, It Will Happen When You're Just About To Save For The First Time In Hours.)*

Hope you enjoyed last month's music special issue, by the way.

Into the music, again

I plan to start a small amateur publication aimed at ST music users, with a disk and computer printout containing reviews, education, contact facilities, tips, demos and utilities available through mail order. Anyone wishing to contribute or to be included in the contact pages should write to me at the address below.

Paul Marsden
10 Harvey Street, Newtown Road,
Carlisle, Cumbria CA2 7NX

stf *Good luck, and we'd love to have a copy when it gets off the ground.*

Two for the price of one

How can I double the value of my copy of Britain's best selling ST mag? Easy, I buy myself a double-sided disk drive! A quick glance through the ads. Problem solved. Well, not quite, for there are countless numbers of different drives on the market. I can choose from the cheapest drive which draws its power from the mouse port (do I hear the sound of frying components?), there are "extended track" drives which offer up to 90 tracks per disk; and what about flashing, flashy track indicators? There are even drives which can switch between 1.5 and 1MByte. I could go on forever. Can you please review a range of external disk drives, and double my incentive to visit my local newsagents on the second Thursday of every month?

Andrew D Kennedy
Dunblane, Perthshire

stf *Absolutely. We have just such a round-up planned – when we can fit it in. If anyone has strong views on the subject we'd be delighted to hear from you: It's An External Disk Drive And I'm Not Afraid to Use It, ST FORMAT, 30 Monmouth St, Bath BA2 2AP.*

Space for ST artists

An idea: why doesn't your magazine have a half-page art gallery? ST users draw a picture and send it in, the art editor picks four or more drawings, and these are displayed in the magazine or on the disk. The best picture could win £25 or free software.

Ellen Thomas
Hythe, Hampshire

stf *Nice idea. All we need now are some contributions. Get manipulating your pixels, and send your finished pictures on disk to: ST Art Gallery, ST FORMAT, 30 Monmouth St, Bath BA2 2AP. We'll only use your pic if you tell us what ST art package you used, and we can only return disks if you enclose a suitably sized stamped addressed envelope.*

Packing up troubles

Having recently upgraded to the Atari STE I'm aghast to discover the waste of packaging which accompanies most software. Take for instance *Hard Drivin'* from Tengen/Domark, a very large plastic box housing only a disk and a sheet of instructions. The commercial presentation is very impressive, but in my opinion totally unnecessary: surely without these large boxes the cost of software could be considerably reduced. Come on manufacturers, cut out these additional costs: we really don't need them. Software is expensive as it is.

Steve Ellwood
Seaton Sluice, Tyne & Wear

The cost of software packaging is relatively modest, certainly in comparison with the development of what's in the box, if it's any good. With the release in the crucial autumn period in particular of hundreds and hundreds of ST games, you can't really blame software houses for doing their very best to make sure their biggest games stand out from the crowd.

Why ads are good for you

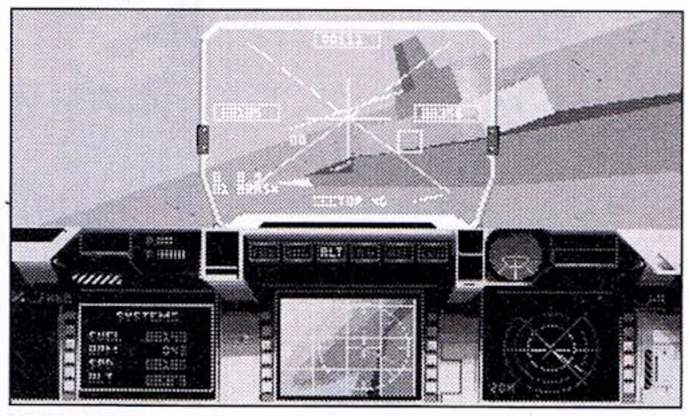
David Thomas *(STF 9)* suggested that *ST FORMAT* should have fewer adverts. This subject crops up time and again, but I think you have the balance just about right. The adverts are a very important part of your magazine. I would suggest when buying a new printer, disk ➢

THOSE MAGNIFICENT FLYING MACHINES

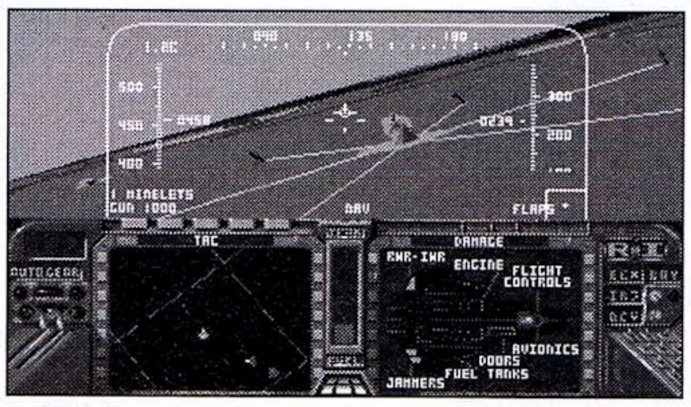
I recently decided to buy a flight simulator for my STE. I was wondering if you could advise me which is the best in terms of realism, amount of scenery to explore and quality of graphics. Price does not really matter.

Tom Black
Norwich, Norfolk

stf *Funny you should ask that, since last month we had* F-19 *from Microprose, and this month we've seen* F-29 *from Ocean. In terms of technical quality, accuracy and sheer authenticity there's no contest: Microprose win hands down. Neil Jackson, who's spent more time playing flight sims than anyone I know gave the* FORMAT *Gold-rated* F-19 *an extraordinary 96%, and* F-29 *a more modest 76%. But if you're a newcomer to the flight sim world,* F-29 *might actually be a better choice, because it's so easy to fly. The ST is so well-suited to programming flight sims that either of these would suit you down to the ground, if that's the phrase I'm looking for.*



■ ***F-29:*** **a great choice for beginners**



■ ***F-19:*** **a brilliant 96%** ***FORMAT*** **Gold**

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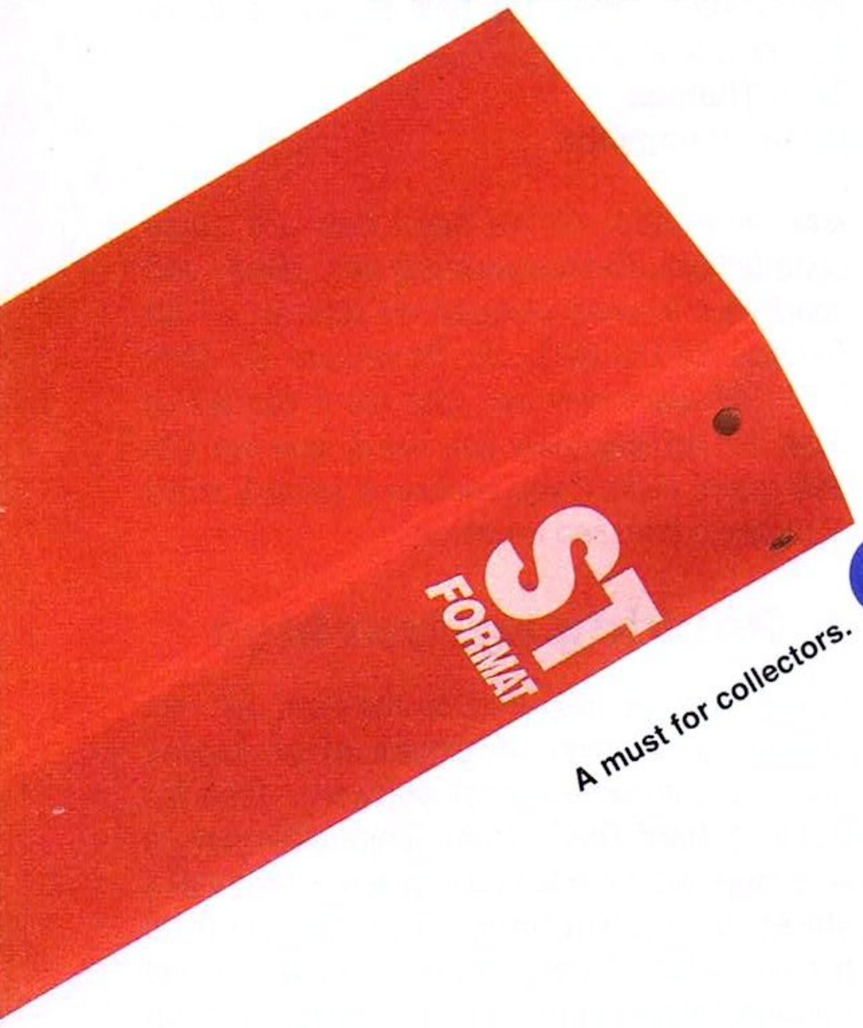

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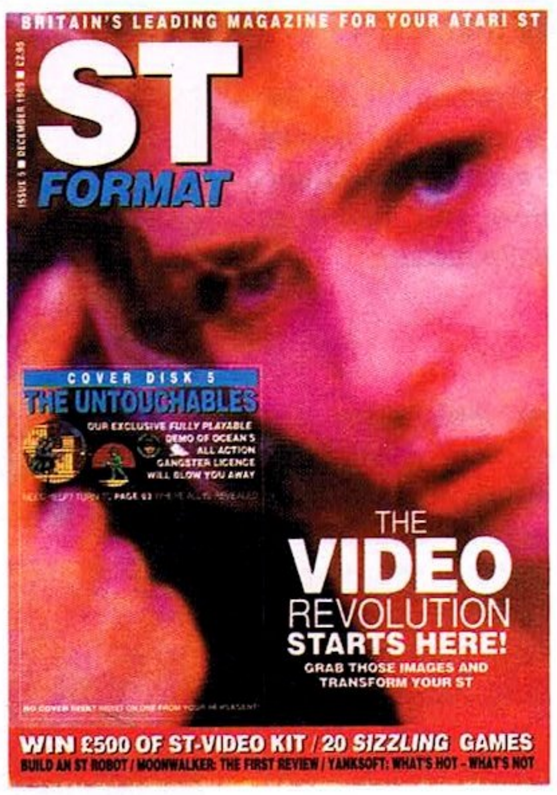

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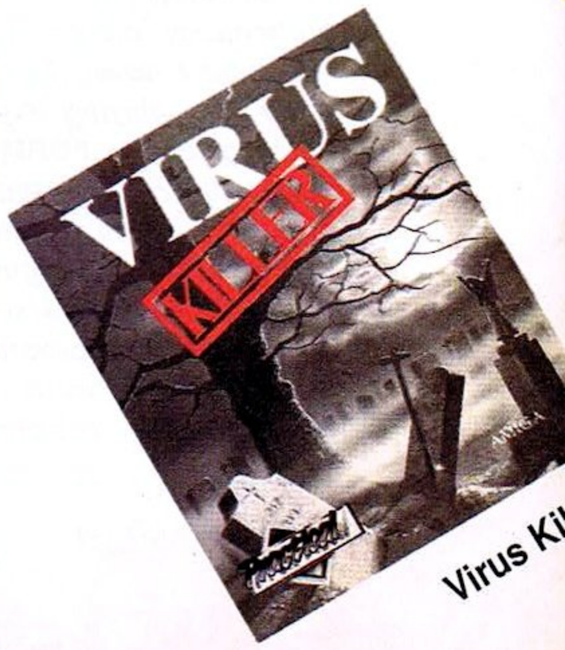

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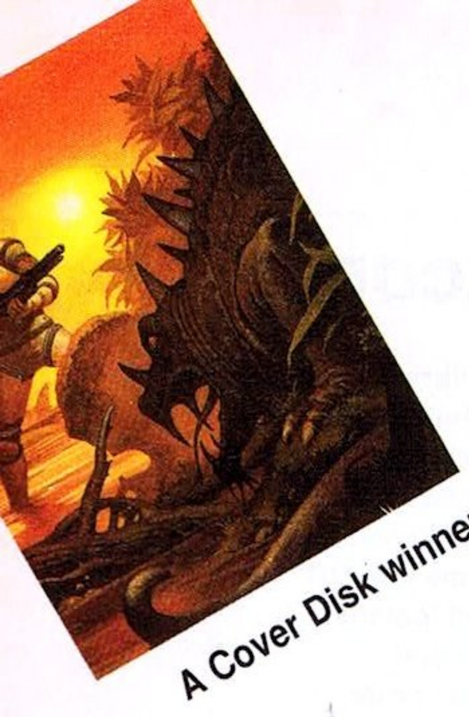
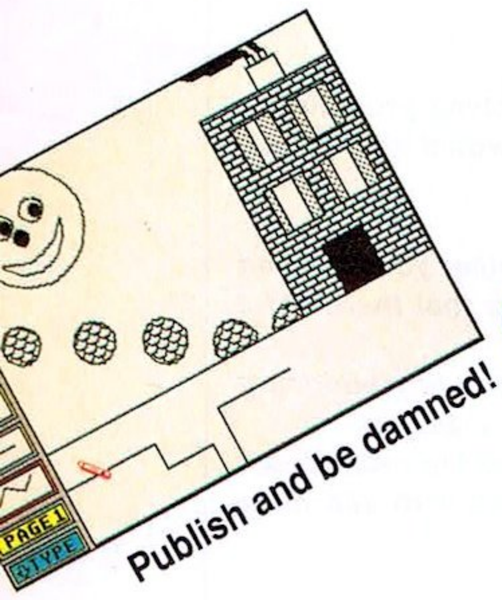


A Cover Disk winner! 6



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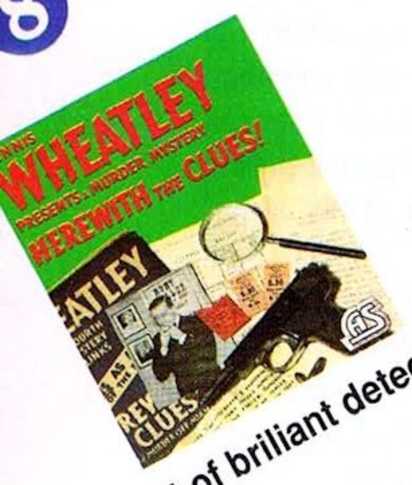

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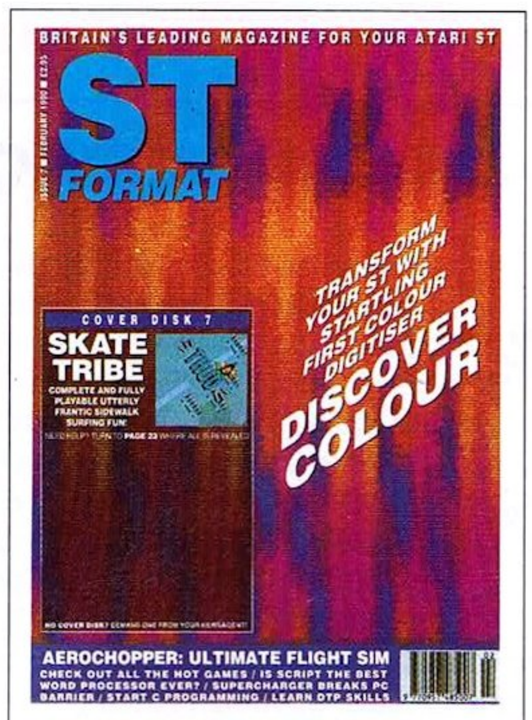

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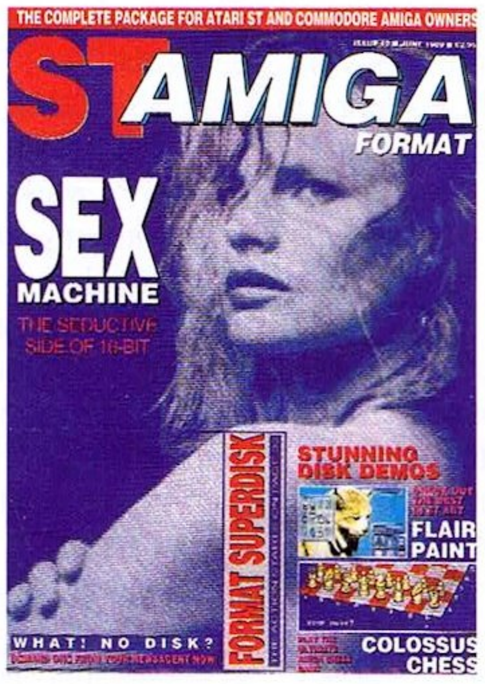

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See Cover Disk issue 11. Excellent DTP package for young computer users.

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drive or software that a careful study of the various adverts would pay any reader dividends. The difference in prices for the same item can be quite considerable, although the cheapest is not always the best. A good service combined with a competitive price seems to me an appropriate balance.

So, I would ask you not to cut down on your adverts. Looking for special offers and new products your magazine hasn't reviewed for a while, and studying the price differentials of the various companies is just as much a part of owning an ST as any other.

Jonathon Barrington
Littleover, Derby

stf *A good point, well made. Anyone disagree?*

Make your voices heard

We're two young ST enthusiasts who believe that ST owners want more from their machines than just playing games: the *ST FORMAT* questionnaire results seem to support this theory. So we're working on a series of hardware packages, consisting of hardware peripherals, driving software and tutorial literature and ranging from understanding binary to building a complex automated probe.

That's where *FORMAT's* readers come in. If anyone has any suggestions on the type of hardware peripherals they'd like to see, or preferences for either a DIY kit or a more expensive, completed kit, please write to us, enclosing an SAE if you'd like a reply.

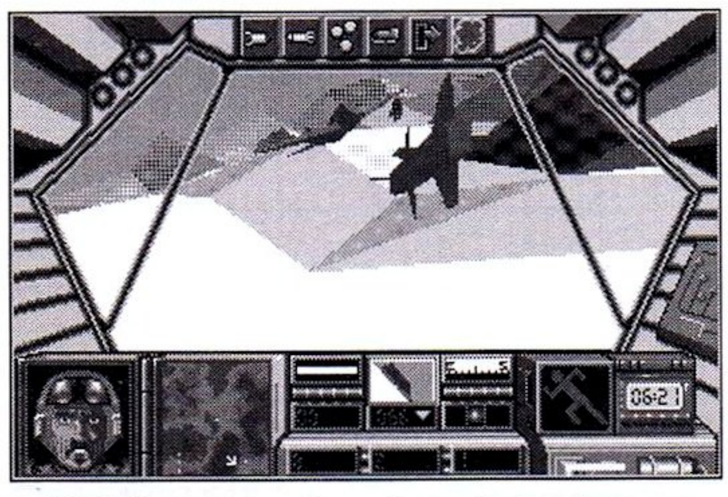
Chris Johnson and Kingsley White
KCE Electronic Designs
19 Rousham Rd
Eastville, Bristol BS5 6XW.

stf *Chris and Kingsley are aiming to make a business out of their hardware series. We've seen early prototypes and they look pretty good, but they're certainly going to need all the help they can get. Give them some!*

High price strategy

I'm responding to your article on "Killer Games" *(STF 10)* or, more specifically, on the quoted comments by Microprose that they had employed "independent consultants" to gauge their pricing strategy for *MidWinter*.

Aside from the suspicion that their brief was probably to justify the maintenance of Microprose's high prices (in keeping with their own perception of their "image"), market research is notoriously unreliable because people rarely do as they say, and even when they do, it depends on who you ask and how you phrase the question. Remember the Edsel!



■ ***MidWinter*** **may be pricey, but what value for money – a 96%** ***FORMAT*** **gold!**

PD LIBRARIES: A GOOD SERVICE RECORD?

I thought I'd test out some of the PD libraries to see how reliable they really are. I wrote an initial letter and sent it to 23 PD libraries (addresses courtesy of *ST FORMAT),* and then waited. This is what happened:
B-SOFT (3 days): reasonable, easy-to-read catalogue
MPH (4 days): catalogue on disk and some free PD
PAGE 6 (7 days): excellent catalogue and leaflets
FLOPPYSHOP ST (7 days): catalogue on disk
GOODMAN (7 days): excellent glossy catalogue
ENTERPRISES ENTERTAINMENT (12 days): catalogue
Now, four weeks later, none of the others have replied. As you can see, some are very good, a couple sent a free disk as an example and the Goodman catalogue is amazing. Some even have an ST helpline. On the whole an average response and an excellent service and I highly recommend the above mentioned libraries which I now use.

I have read your magazine from the old days of *ST/Amiga FORMAT* and it gets better every month. Thank you for an excellent magazine.

Kurt Frary
Norwich, Norfolk

PS Why not include a page solely for programming problems, such as a solved program for Basic, Assembler and C each month? I know you do this elsewhere, but it would give people the chance to learn different techniques.

stf Even though your test wasn't perhaps 100% fair, Kurt (you don't say whether you included SAEs, which some PD libraries specifically request), I think it does indicate that there are a good number of excellent PD services around.

Incidentally, I think it's worth remembering that most PD libraries run on a tiny budget. If you can afford to do so, enclose a generously sized SAE when you request a catalogue.

Your suggestion of a programming page is a good one, and if we can find the room in our densely packed pages we'll certainly give it a whirl. Do other readers want to see more programming in* ST FORMAT*? We are, after all, here to serve you!

Incidentally, our regular PD column will be back as usual next month.

The market researchers can take it from me that £10, let alone £20, still represents a fair amount of pocket money in most families and that Entertainment International's *Pipemania* will remain on the wanted list here until the price comes down (especially now we know it wasn't even difficult to do!)

F James Pickett
Newport, Isle of Wight

stf *I really do think you're a little off-beam on this one. Why on earth should Microprose spend a good deal of money "proving" what they already know? And, as imperfect as market research may be, it's still an important part of finding out what the customers want – or at least what, according to you, they say they want.*

I'm certain Microprose would agree entirely with you that £20 is a lot of cash, but surely they more than almost anyone try to give value for that money.

Unsolicited testimonial

I wish to put on public record the fast, efficient and courteous service that I received from Frontier Software when I sent my 1040STFM to them for an upgrade to 2.5MBytes.

After finding out that my 1040 had a surface mounted MMU chip and that the board I had already purchased from another supplier could not be fitted, nor an alternative fitting supplied, I rang Frontier at 5pm on a Wednesday (not really expecting anyone to be there).

Much to my surprise an extremely helpful man answered the phone and told me that because of my surface mounted MMU Frontier would have to undertake the fitting of the upgrade board and that it would take a couple of working days. I agreed to their charges and sadly packed up my 1040 ready for its trip to Harrogate the next day.

The courier called at 2pm the following day and took it away, leaving me to to cope without my beloved ST. I now looked desperately forwards to maybe the following Wednesday when my 1040 would wing its way back. A long weekend came and passed. Monday arrived and I set out forlornly to work. But hark, who was this pulling up outside my door, a large box in his arms? The courier!

Allowing a day either way for the delivery, Frontier must have opened up and fitted the upgrade immediately my computer arrived with them and sent it straight back. Well done and thanks once again to Frontier Software.

Chris Phelps
Brockworth, Gloucester

stf *Excellent service by anyone's standards, I'm sure everyone will agree. And it pays companies to be efficient, for the word gets around. If you've had a particularly memorable experience – memorable for its excellence or otherwise – why not drop us a line? Write to: Yes, Steve, Funny You Should Ask But I Have Had A Particularly Memorable Experience,* ST FORMAT, *30 Monmouth St, Bath BA2 2AP.* ***stf***

HOW TO WIN £25!

Amused? Puzzled? *Disgusted?* Address your observations to: The Editor, *ST FORMAT,* Beauford Court, 30 Monmouth Street, Bath BA1 2AP, marking the envelope "For publication." We prefer short, sharp letters on a single subject. There's £25 for the best letter, too!

If your letter is about a technical problem, write to *Desktop* at the above address. And if it's to do with subscriptions or special offers, address it to Subscriptions/Mail Order, *ST FORMAT,* The Old Barn, Somerton, Somerset.

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last word plus

And so we bid a fond farewell as ST FORMAT 13 sinks majestically into the west. We shall not see its like again – until ST FORMAT 14 hits the streets with a resounding thump on Thursday 9 August. Order yours now!

Don't miss out!

As *ST FORMAT* 13 gets laid to rest, we wait with bated breath for Thursday 9 August, when large and, we trust, orderly queues will form outside newsagents the length and breadth of Britain looking for *STF* 14.

The pity of it is, we know that some of you are going to be disappointed, since in the past few months we've been disappearing off the shelves faster than you can say, "A copy of *ST FORMAT* please, my good man, and a packet of Opal Fruits to go."

Now, if you've found yourself frustrated in your search, you have three options open to you.

■ Option One: take your chances. Not wise, in the circs. Some doctors believe that being deprived of your copy of *ST FORMAT* is equivalent in terms of risk to smoking 43 cigs, drinking 17 pints of Old Farmer's Grobbly and trying to tell Mrs Thatch where she's going wrong, all in the one evening.

■ Option Two: use the special cut-out-and-hand-to-your-newsagent form below. It might be wise to fill it in before you hand it over, though.

■ Option Three: turn to page 111, fill in the form and take out a subscription. Now that's more like it! You see, not only do you get your issue before the rest of us delivered free, but you also get £25's worth of software absolutely free! If you don't believe us, turn to the aforementioned page 111 and prove it for yourself.

FORMAT EVERY WEEK?

Well, not quite. But if, in between issues of Britain's brightest, best and biggest-selling ST magazine you get an insatiable desire for your Atari fix, fear not. There's no need to go without, for our sister magazine *New Computer Express* features a column in every issue, written by *ST FORMAT* editor Steve Carey with help on the games side from Mark Higham, dedicated to all that's going on in the ST world. So get your copy every Thursday – it only costs a mere 58p – and keep up with what's going down.

Warning: STs can give you babies

You know how the phone always goes when you're in the middle of your best game ever – and it won't pause? Well, when 22 year old ST nut Debra Preston of Tunstall, Staffordshire, found herself well on the way to her largest ever score in *Xenon II*, nothing was going to stop her. Not even the fact that she was going into labour.

Ambulancemen and husband John attempted in vain to persuade her to put down her joystick. Eventually Debra made it to the end of level four and was rushed off to Stoke-on-Trent City General Hospital where a healthy baby, Tara, was born soon after.

Meanwhile *ST FORMAT* games editor Mark Higham has been shy to improve his *Xenon II* top score for fear of making reproductive history.

Are *you* a winner?

Back in our June issue *(STF 11)* we ran two competitions, as a result of which we've been in the postman's bad books ever since. Well, he can relax a bit, for they've now closed.

First off was the chance to win one of two complete comms systems, including modem, software, Micronet subscription and even some on-line time. Stand by **Carl Gillison of Burnley in Lancashire,** and **Kieron Lehmann of Acton in London,** who are soon to get a whacking great parcel left on their respective front doorsteps.

Then there were the 60 copies of Millennium's remarkable *Resolution 101,* which we awarded a *FORMAT* Gold award and a stonking great 93%. 59 of you will soon be getting your very own free copies of this fabulous game. Pity the relatives and poor pet cat of **Matthew Stead of Liversedge in West Yorkshire,** however, for not only will he be receiving *Resolution 101,* but the spooky gorilla mask that was digitised and used in the game itself.

This gruesome thing has been hanging around the offices for weeks now and scaring the life out of the unfortunate receptionist. Look out Liversedge! ***stf***

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