

THE GREAT NEW PACKAGE FOR ATARI ST OWNERS

ISSUE 1 ■ AUGUST 1989 ■ £2.95

ST

FORMAT

GHOSTS

IN THE MACHINE

HARDWARE THAT GOES BUMP IN THE NIGHT

NO FORMAT COVER DISK?
DEMAND ONE FROM YOUR NEWSAGENT NOW!

ON THIS MONTH'S DISK:
BLOODWYCH

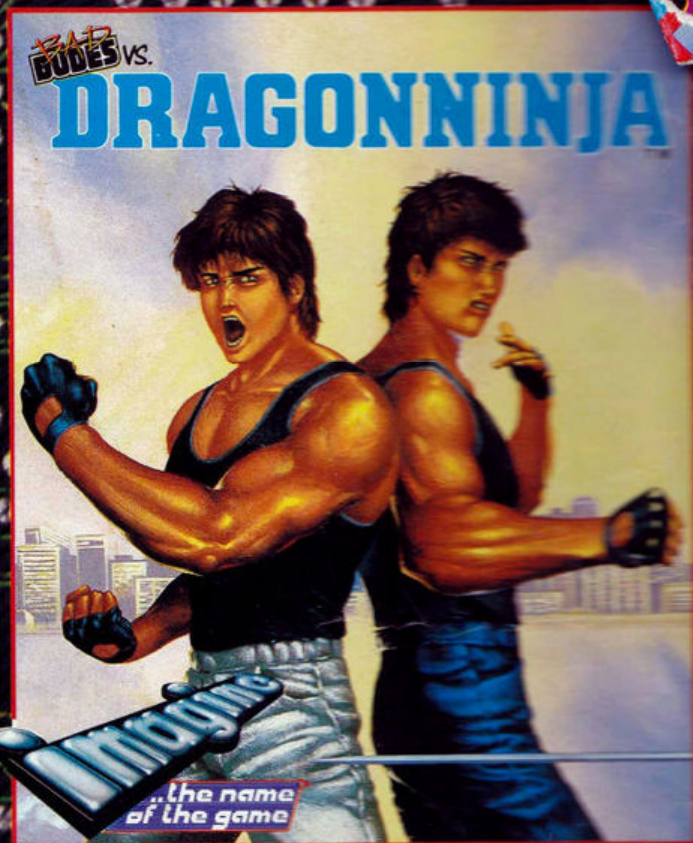
SUPERB PLAYABLE DEMO

GFA BASIC 2

FULLY-WORKING VERSION

GAMES/MUSIC/GRAPHICS/HARDWARE/DTP/£3,000 IN PRIZES

→→→ PLAYFUL



"the most playable and enjoyable licensed games to date"

New Computer Express 5 star

"The graphics are slick, the action is tough ... designed to keep you glued to your stick"

ZZAP Sizzler

"a popular movie license backed up by great game-play, an unbeatable formula - needless to say, I'd buy it ... miss this and you're missing the hottest game of the year"

ST Action



"A sure winner with the official conversion to the home computer"

The Games Machine

"There is more than enough action in this one to keep you coming back for more"

Ace

"a superb game with such addictive gameplay"

Computer Games Week FAB

ATARI ST CBM AMIGA

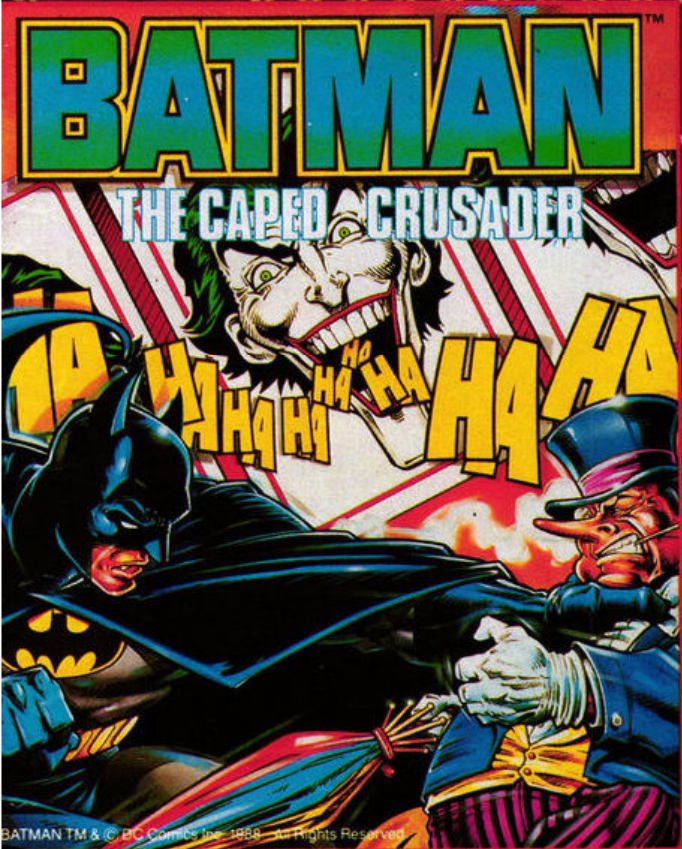
BATMAN

£19.95 £24.95



Ocean Software Limited - 6 Central Street - Manchester - M2 5NS

INTELLIGENCE



"Special FX programmed the game and have done a great job, recreating the character of the originals with a hint of humour".

Amiga User Int.

"The characters and backgrounds are striking – each are superlative – the Amiga features a soundtrack in glorious remixed stereo".

The One



"polished in every aspect – from the humorous storyline to the end of the blasting".

The Games Machine Top Score

"... you're in for the time of your life ... fabulous 3D, hours of absorbing play – you name it, Voyager's got it. And that's not all: Ocean throw in a cassette soundtrack which has to be one of the most mind-blowing pieces of music I've ever heard".

ZZAP Sizzler

"... scrolling 3D graphics, the most impressive I've seen on the ST ... a great arcade formula and clever graphics ... an excellent game that will keep you playing for quite some time".

ST Action



ATARI ST

CBM AMIGA

£19.99 £24.99

ROBOCOP
DRAGON NINJA
VOYAGER



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**MASTER
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Portfolio - a look
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Side 1

BLOODWYCH a completely playable demonstration of Mirrorsoft's superb new action adventure release.

GFA BASIC V2 fully working version of GFA's BASIC interpreter.

FORMAT 10 creates extended format disks capable of storing all the files on the cover disk.

Side 2

STINGRAY sampled demo from the cult TV series.

GFA DEMOS numerous BASIC source files for use with GFA BASIC.

RAMDISK excellent time saving utility.

POSTMORTEM find out why your programs crash.



■ Barter your way through Bloodwych.

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How cyberpunk group **Cassandra Complex** use MIDI and 1040 STs on tour, and relax after gigs with Micropose's Gunship.

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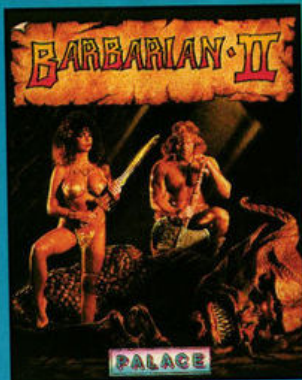
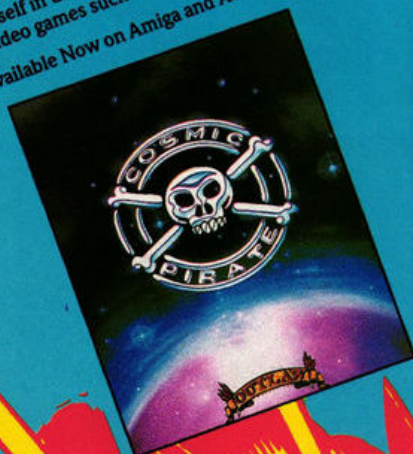
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◀ The ST Format lads from left to right: ART EDITOR Gordon Druce, PRODUCTION EDITOR Stuart Anderton, DESIGN ASSISTANT Kevin Hibbert, EDITOR Richard Monteiro, GAMES EDITOR Prima Donna Higham, DISK EDITOR Gary "has anyone seen my tribble?" Barrett. Other important people not in the shot include PUBLISHER Greg Ingham and AD PRODUCTION person Louise Cockroft.

Working as a space pirate for arch-criminal organisation The Council you go in search of bountiful cargo ships. Succeed and you will gain money to buy new attachments for your ship. Alternatively you might wish to enjoy yourself in the Cosmic Arcade playing video games such as Disasteroids.

Available Now on Amiga and Atari ST.



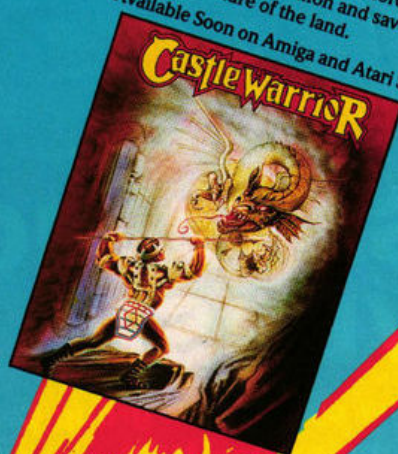
The hit sequel to one of the all time computer game greats!

The search for the evil Drax continues. Now the Barbarian and the Princess fight their way past dozens of incredible monsters, through a maze of caves and dungeons.

Available Now on Amiga, Atari ST and IBM PC.

Classic arcade-style action for home computers as only the 16 bit machines can deliver: large characters, incredible colours and fantastic sound. The evil wizard Zandor has poisoned your father, Edrelred the Good, King of Pacifa. You have one day to force the antidote from the demon and save the future of the land.

Available Soon on Amiga and Atari ST.



EXPLOSIVE 16 BIT ACTION FROM PALACE SOFTWARE



Have you ever dreamed of writing your own computer game but have been held back by a lack of programming skills?

Now is your chance to make your dream come true with Shoot-Em-Up Construction-Kit, the arcade game making program that requires no programming skills.

Available Now on Amiga and Soon on Atari ST.



PALACE SOFTWARE

PALACE



Run, leap, somersault and spin your cyborg through the Bio Challenge assault course. Furious joystick action through many levels as the seconds tick away.

Available Now on Amiga and Atari ST.



MONTEIRO'S MONTH

Atari Corp have sunk more money into development this year than ever before. There are so many projects under way, (as the stories on this page illustrate) and new ones being added, that there is a possibility that developments started six months to a year ago are in jeopardy of never materializing.

For every item of hardware Atari announce, there has to be a development team, somebody co-ordinating the development team, a product manager, a marketing manager and so on.

At the moment Atari only have so many people to look after all the projects. If a real cracker comes along with the potential of amassing huge sales and profit, staff working on a so-so project will concentrate on the new baby. The so-so project will be left on the shelves, or nudged along slowly, while the new project gathers momentum.

The Stacy machine proves the point. It was pencilled in for a June launch, and by all accounts was virtually ready for shipping at that time. A month's delay was incurred so that "final cosmetic tweaks" could be made. The latest news from Atari is that the laptop won't make it for at least another three months. Because Atari's other projects need attention, the laptop has fallen by the wayside. Atari just haven't the manpower at the moment to tackle all the hardware they have on the go; projects that are likely to bring in lots of dosh in a short period are given precedence – the new colour handheld games machine is one example. This will probably sell in hundreds of thousands in no time whereas the laptop will roll along at a cautious pace.

Atari are a 90-day company. Projects nearing completion are given three months to get their act together and hit the streets. In Atari's eyes more pressing launches have come along since the laptop, and consequently the laptop has missed its 90-day slot and has been shoved onto the next. If Atari keeps on coming up with what they think are more important releases, the laptop and other expendable hardware could well be postponed indefinitely.

Enough of the long term future, I hope you enjoy reading *ST Format*. As a new mag, we want to hear from you what you think of the magazine and any comments you have on improving it. Write to me, Richard Monteiro, at the address on page 5.

'ST REPLACEMENT' TO CHALLENGE ARCHIMEDES

Atari is planning to move into RISC technology with a new range of computers aimed at users who require extremely powerful machines.

Acorn's Archimedes has pioneered the use of RISC (Reduced Instruction Set Computer) technology in personal micros, and the Atari

machine is expected to compete directly with it, with an entry-level machine at around £1,000. RISC technology works by paring down microprocessors to the bare minimum, but optimising them so they run like lightning.

The trade newspaper CTW quotes Atari's managing

director, Bob Gleadow, as saying, "The look and feel of the ST hasn't really changed much in the past three years. What we need to do now is look at providing a new up-market second-time-buyer's machine."

No official announcement is expected for some months.

AMIGA-BEATING ST BY CHRISTMAS

A new super ST is set to upset the 16-bit apple-cart before Christmas by offering superb graphics and sound at the regular ST's price.

The STE, as the machine will be called, will challenge the Amiga head on, matching it in specification and undercutting it in price. Senior sources at Atari claim the new micro will offer 256 colours on screen, four-channel stereo sound and hardware scrolling. The lack of these features has always been the main criticism of the ST.

The STE will be fully compatible with current ST software, and will be bundled with the present Power Pack of games software. The STE at £399 with the Power Pack will put Atari in an extremely powerful position in the Christmas market.

■ For full details of the STE see page 13.

MEGA 1 OUT NOW



■ An entry level model of Atari's Mega ST range, aimed at professional users, has been released. Full review on page 18.

OH NO, NOT ANOTHER MAGAZINE!

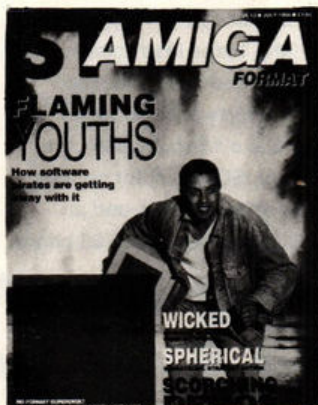
Welcome to issue one of *ST Format*. If you have been a reader of *ST Amiga Format* you know what to expect, if not welcome to an ST magazine that stands out from the crowd.

We are different from the rest because we combine intelligent reviews of software with helpful advice and up-to-the-minute games reviews, and because we give you a program-packed cover disk.

ST Format won't talk down to you as if your main weekly read was the *Sunday Sport*, but we won't talk over your head either. We know you take your computing seriously, whether you prefer DTP or *Dungeon Master*.

Our games writers have years of experience and can instantly tell a lemon from a world beater. The *Format Gold* accolade is the sign of quality software – you can rely on the *ST Format* games team to give you the full story before you part with your cash.

ST Format's cover mounted



■ *ST Amiga Format*, *ST Format's* illustrious parent.

disk gives you more software than any other – our special format gives double-sided drive owners nearly 800K of carefully selected programs (Single-sided ST owners can still get the extra programs – see page 26).

Which other magazine would give you a fully working copy of the highly acclaimed GFA BASIC? Or the top assembler Devpac?

Uniquely, we give you fully playable demonstration versions of the latest games, even before you can buy them in the shops – look out for future releases from Activision, Ocean and US Gold, coming soon.

Add to that the cream of public domain software and a selection from the hundreds of programs submitted by readers and you have the best value cover disk you can buy.

ST Format covers the whole spectrum of Atari computing; we are not a games-only magazine but we don't limit ourselves to wordprocessors. We are not afraid to get technical – our team knows the ST inside out – but we always try to offer beginners a helping hand.

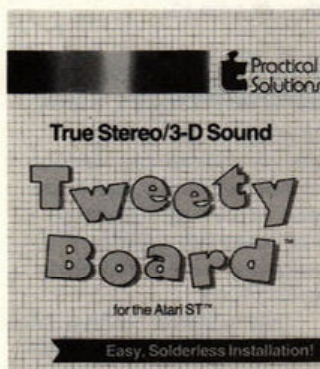
Read this debut issue of *ST Format*, we're confident you'll be looking forward to issue 2, out August 17.

■ There is a special deal for subscribers – you could save pounds. See page 80.

TAXING PROBLEMS

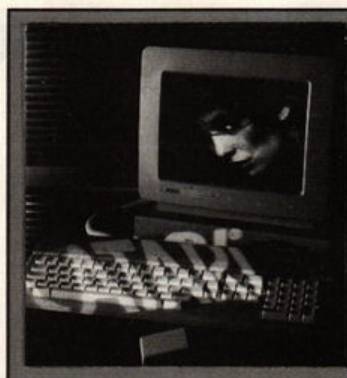


Our friend Nigel uses the computing power of the Inland Revenue's mainframes, so why not play his game? *Personal Tax Planner* is the latest serious product to come from Digita (0395 270273). With *PTP* it's possible to calculate your income tax liability for a given year – and check that the tax man isn't ripping you off! £39.95 if you want to save on tax.



BIRDY'S SONG

Practical Solutions' *Tweety Board* – which provides your ST with stereo output – was demonstrated by the Bath Shack who have recently been appointed distributors of the £49.95 gadget. The Shack are on 0225 310300.



SHOW'S OFF

Last month's Atari Show was the last of its kind. Database, the organisers, are pulling out of machine specific shows altogether, but there are rumours of a possible Atari-sponsored event next year. At the final show there were a lot of visitors but not much in the way of original new releases. These pages are the pick of the crop.

PARSEC IS LIGHT YEARS AHEAD

Elmtech's ParSec graphics interface, first mentioned more than a year ago, made a spectacular appearance at Ally Pally. The superb specifications of the board turn the ST into a viable, low cost system for desktop video and other graphics applications.

Only the basic board made it in time for the show, but even that has impressive features: resolutions up to 1,024 by 768, 4,096 colour palette (four bit planes) with 16 colours per line, 32-bit 50MHz Texas Instruments processor and 768K of video RAM. Ports to the outside include a 15-way video connector, SCSI port for connection of hard drives and an RS232 socket. The 4768 board

costs £918 – to that you must add around £500 for a multi-sync (or compatible) monitor capable of displaying the high resolutions.

Due in the next month is an 8768 upgrade. This will provide the system with a colour palette of 16,777,216 colours; 256 colours can be displayed on each line while 196,608 different colours are allowed on screen. Up to 4Mb of memory can be added to the 8768 board – essential if you want to do anything serious. A price for the 8768 board hasn't been officially set, but it's expected to be around the £450 mark (the price doesn't include extra DRAM).

The ParSec board attach-

es to the ST via the cartridge port, and uses the ST simply as a dumb terminal. Any ST storage device can be used to load and save ParSec data.

Bundled with ParSec is the *Da Vinci* painting package – good, probably better than anything currently available for the ST. But better is on the way. According to David Encill, one of the directors at Elmtech, the graphics package under development will "make the Quantel PaintBox look like a crayon set". Features expected in the forthcoming paint package include mathematical background generation; spatial colour selection; chalk, oil and water colour emulation; 3D airbrush effects; textured surfaces with adjustable brush and pencil pressure.

Other packages in the pipeline include DTP, CAD/CAM, an assembler and a GEM emulator. The GEM emulator will let you run well behaved ST software on the ParSec board.

812 OVERTURE

Tony Racine of 2-Bit Systems is demonstrating a prototype of his latest 812 sound sampler for the ST. 812 is the working title and refers to the digitiser's eight-bit sampling resolution and 12-bit playback resolution. 812 is provisionally priced at £200. 2-Bit are working on a couple of other samplers, the 1214



■ Master Sound, 2-Bit Software's current sampler.

and 1616. Again, both names are working titles. The most exciting – and most expensive – sampler (1616) is still some way off. When it arrives it will let you sample and replay CD-quality stereo sound (16-bit). You can expect to pay around £600 for the privilege. 2-Bit are on 0582 457348.

PROTEXION RACKET

Arnor released V4.21 of their popular wordprocessor *Protext* at the show. The new version, claim the lads from Peterborough, is not a major upgrade – V4.3 due towards the end of the year will be the big one. V4.21, however, contains plenty of features existing owners will find useful.

The procedure for creating and installing printer drivers has been simplified enormously, and a new CONVERT program for converting text files from other WPs is provided. This does away with CVT files of old; all conversion routines are present in one program. And they all work much faster than before.

Arnor have included a reset-proof RAM disk utility with *Protext*. The clever thing with this RAM disk is that files are automatically compressed before saving. Typically this allows files 50% larger than the disc space to be saved.

Protext V4.21 retails for £99.95.

Upgrading from V3.5 costs £30, moving up from V3.6 sets you back £20 and updating from versions 4.0 and above costs £15. Arnor are at 611 Lincoln Rd, Peterborough, PE1 3HA (0733 68909).



ACCESSORY TIME

ISM are distributing *MultiDesk*, a utility allowing the ST to have more than six GEM accessories resident in memory at once.

The £29.95 *MultiDesk*, written by CodeHead in the States, is itself an accessory which, when clicked on, appears as a window into which other accessories can be loaded. A total of 32 accessories can be loaded into this window – including *MultiDesk*. *MultiDesk*'s ability to nest itself means it's possible in theory to have an infinite number of accessories loaded.

It's only necessary to load accessories into *MultiDesk* once because a setup file can be saved which automatically loads all selected accessories when you switch on. The

accessories used by *MultiDesk* needn't be in the root directory, which is useful.

With *MultiDesk* it's even possible to run accessories as if they were .PRG or .TOS files. Compatibility is astonishingly high. The failure rate, reckon ISM, is around the 5% mark.

Details on *MultiDesk* are available from ISM at Grove House, Ventnor Road, Apse Heath, Isle of Wight (0983 867488).

■ The nice chaps at ISM are giving away six copies of *MultiDesk* and six t-shirts hailing the arrival of *MultiDesk*. Send your name and address on a postcard to *MultiDesk* Competition, ST Format, 4 Queen Street, Bath, BA1 1EJ. All entries must be in by Monday August 24. The first six entries out of the bag will win.

NEWS



ST'S MAKING FACES AT ME

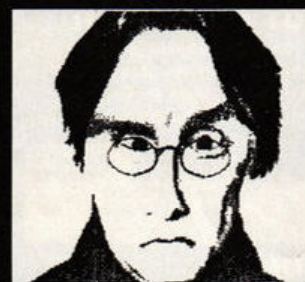
Prize for the most original software release must surely go to Cavendish who, along with showing off the production version of the *That's Write* word processor, displayed *That's Fun Face*. *Fun Face* is an hilarious program that allows you to create faces from a huge variety of hair pieces, eyebrows, eyes, noses, ears, mouths, jaws and other facial features (zits, beards, moustaches and so on). Cavendish reckon on 5,576,787,923,200,000 different faces are possible. We haven't finished counting them all yet!

Fun Face was originally intended as a replacement for the famous, albeit ageing, Identikit used by police forces all over the world to identify criminals. While the programmers were working on the serious version, many people expressed an interest in the basic idea. *Fun Face* resulted.



It really is unique. Apart from putting bits of human together, *Fun Face* features standard graphics drawing primitives, various text styles, numerous levels of magnification, pattern fills, outline, etching, darken, lighten, squeeze, flatten and shade.

Faces can be loaded and saved in .IMG, Degas, .RGH, .CLP, .FAC and .ICN formats.



There's also a good range of printer support: nine-pin, 24-pin, Atari laser and PostScript.

The faces produced with Cavendish's £39 package could be used as characters in adventures, to sparkle otherwise dreary DTP documents, form the basis of cartoons, or any number of other things. Further details on *Fun Face* are available from Cavendish at 209-212 Tottenham Court Rd, London, W1 (01-323 4761).

ST FORMAT NEXT MONTH

The sensational September issue of *ST Format* swoops onto newsagents' shelves on

THURSDAY AUGUST 17TH
Squeezed into the second issue will be:

YOU'RE NICKED!

How the police force identify criminals using a supercomputer running Identikit together with a look at Cavendish's *Fun Face* for the ST.

MAXIMUM JOY

The evolution of a joystick. From preliminary sketches to finished product. The machines that make the mouldings and the computers that check the finished sticks.

BLOOD MONEY

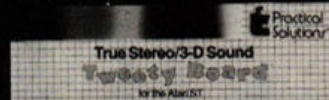
Interview with programmer Wayne Smithson plus an exclusive review of Psygnosis' summer smash.

4,096 COLOUR RISING

A look at Elmtch's graphics board that turns the ST into a workstation with a palette of over 16 million colours. Also an interview with the hardware and software developers.

FOOT AND MOUTH

How to create believable mouth movements with any standard ST paint package. Mark Pickavance, designer of *Flair Paint*, is your host.



SOUNDS SENSATIONAL

Superb music section featuring the latest developments in the music world, music theory, using a MIDI sequencer, *Twenty Board* review, how best to manipulate the ST's sound chip plus other reviews and hints.

REVOLUTIONS

The changing face of computers. From rubber keys to designer machines. The evolution of computers, and how future micros will look like a part of the furniture.

Because of the dynamic nature of the ST market, we can't guarantee that all the features mentioned will end up in next month's pages - but we can guarantee that if anything gets replaced it will only be by an even better feature.

BLOW ME



It's now possible to blow 28- and 32-pin EPROMs with Sinclair's Lakmeyer programmer. The device fits into the cartridge port of the ST and allows the user to program anything from the latest 32-pin 1Mbit chips down to 28-pin 16 kilobyte silicon slithers. Software provides facilities for editing, relocating, conversion of 16 or 32-bit code into multiple eight-bit EPROMs and file storage. Lakmeyer costs £189.75 and is available from Sinclair on 01-316 1779.

SCREEN TEST

Coming soon from Digita is *Multigen*, a professional quality genlock device suitable for a number of micros including the ST.

Multigen will let you mix the RGB output from your computer with the output from any video source. Digita haven't any plans for producing video titling software, so third party software will have to be found. Price for *Multigen* will be £230. More from Digita International at Black Horse House, Exmouth EX8 1JL.



SET GETS READY

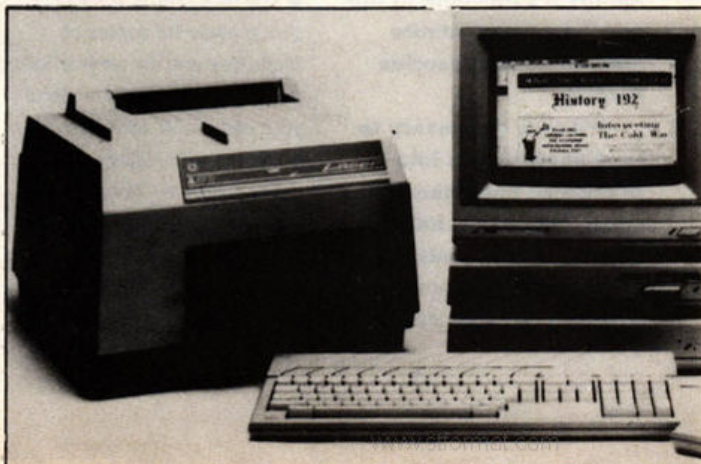
Atari US have recently launched *Wordflair*, an integrated business software package, and a new DTP product called *Deskset II*. It is expected that Atari UK will release versions of the packages soon.

Wordflair combines word-processing, graphics, calculations, data management and page layout tools all within the same environment. The program can contain text, formulae, values, graphs, .IMG or .GEM files. Data, calculations and graphs can be dynamically linked. *Wordflair*

is selling in the States for \$149.

Deskset uses Compugraphic scaleable fonts which can be set in half point increments between 5 and 72 points. Font data

includes automatic kerning information and allows for user-definable kerning pairs. Reverse video and the ability to condense and expand type are also available. *Deskset* is currently retailing for \$295.





As the people of the Bloodwych awake to a new dawn, they find a stranger in their midst – from one of many races he has come. His task: to halt the demon that lies dormant within the Castle of the Bloodwych.

Unification of the Crystals of Sanguis will secure the Behemoth in his lair for all eternity. Should they remain separate, then he shall rise to bring darkness into the world.

This unique role-playing fantasy game allows greater interaction with the environment than has ever been seen before. Argue, barter, negotiate – even lie through your teeth! The fully implemented personalities of all the characters in Bloodwych allows a rich style of role-playing that has only been dreamt of.

With one or two player simultaneous mode, this is the game that you've been waiting for. Bloodwych for those that dare!

**ARGUE!
BARTER!
LIE THROUGH
YOUR TEETH!!!**



Atari ST Screen Shots



Amiga	£24.99
Atari ST	£24.99
Spectrum (tape)	£9.99
Spectrum (disc)	£14.99
Amstrad CPC (tape)	£9.99
Amstrad CPC (disc)	£14.99
Commodore 64 (tape)	£9.99
Commodore 64 (disc)	£12.99



The word is PROTEXT...

Now available - Version 4.2 of Arnor's acclaimed word processor

More and more people are now recognising Protex as the word processor that the ST has been waiting for. Developed over a period of 4 years, Protex has been designed to be fast, flexible and efficient. The emphasis is very much on word processing.

Unlike its competitors, Protex does not use Gem. The scrolling speed is four times faster than that of Gem based word processors. Yet Protex is still WYSIWYG and still allows access to desktop accessories.

Protex is faster all round; for example the search and replace command is six times faster than First Word +, and the spelling checker, too, is faster.

Protex has all the features you would expect from a good word processor - many text editing commands, print commands, spelling checker and mailmerge. What you might not expect though, is the refinement and thought that has been put in to make Protex ideal for the novice or the experienced user alike.

"To sum up, Protex is probably the most powerful word processor on the Atari ST and is quite likely to become the best selling too"... ST USER 4/88

..."At last one that seems to fit most of what I call essential in a word processor" PAGE 6 #34

..."Extremely good for manipulating and merging large text files". "Wins hands down as the all round package". ST USER 8/88

A brief summary of some of Protex's features ...

Background printing edit/create further files while printer is busy
Box manipulation move, copy, or delete any box as well as blocks
Configuration set over 50 options to your own preferences using our menu driven configuration program
Dictionaries add/delete words to/from supplied 70000 word English dictionary. Create your own dictionaries
Disc utilities copy files, erase, rename, type, create directory, change directory, remove directory, catalogue files
Exec files store sequences of commands in files for easy use
File conversion flexible file conversion utility for other WP files
Find & replace very powerful and fast with many options.
Foreign languages 10 built in keyboard languages. Easy to use accented letters: ä æ ç ü ð é ë à ù ô õ ñ etc.
Formatting auto-reformat; reformat para, block or whole text.
Headers & footers up to 9 lines of text, different even/odd headers and footers, auto page numbering, footnotes
Help edit and command help available on-screen
Keyboard macros string any sequence of letters together on a single key e.g. "Yours sincerely". Load and save macro key files. Special recording mode as you type.
Line spacing variable in half lines, including 0, 1/2, 1, 1 1/2, 2, 2 1/2, 3
Printer support works with any parallel or serial printer. Wide range of printer drivers supplied, incl. lasers and 24-pin printers; or create your own drivers or edit ours.
Printing styles bold, condensed, double strike, elite, italics, enlarged, pica, NLQ, subscript, superscript, microspacing, proportional spacing, any other printer fonts

Program mode suppresses formatting; auto-indent; set tab stops
Proportional text will print proportionally spaced, right justified text
Quick dictionary dictionary held in memory is very fast
Ruler lines any number of ruler lines to define document layout, left/right margins and normal/decimal tab stops
Spelling checker check whole text from disc or memory, or as you type. Suggests alternative spellings. Works with foreign languages
Symbol Screen character symbols may be redefined
Time and date set time and date, use within document
Tutorial files help you to start using Protex
Two file editing two documents in memory, copy text between them
Typewriter mode direct printing for envelopes etc.
Undelete retrieve text deleted in error
Word count quick count at any time, whole text or just a block
Word puzzles anagram and crossword solving features
Wysiwyg on-screen bold, underline, italics, sub/superscript

Mail merge

The most comprehensive mail merge program available. Use it for labels, personalised "standard letters", club membership lists, and much more:
* read data from files from any database or spreadsheet program
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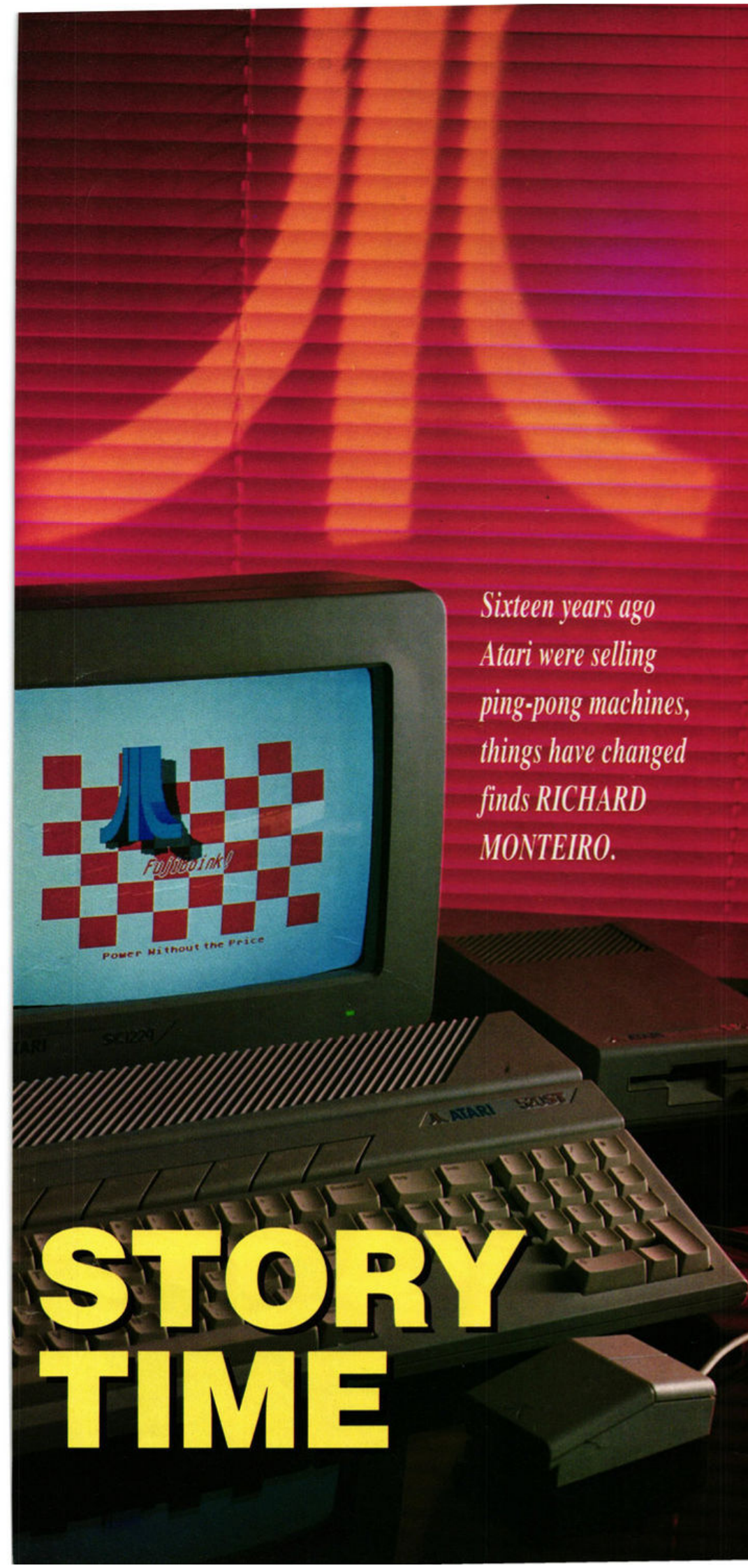
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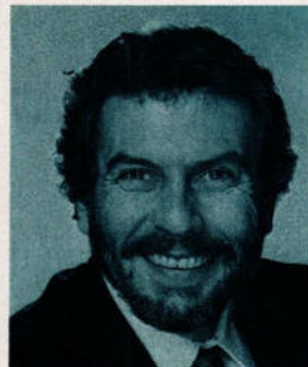
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*Sixteen years ago
Atari were selling
ping-pong machines,
things have changed
finds RICHARD
MONTEIRO.*

STORY TIME

The Atari story starts late in '71 when Nolan Bushnell, then a product engineer for small-time arcade-game manufacturer Nutting, left his job to start his own company Syzygy. The reason: to market the video game Pong. Syzygy, meaning an alignment of celestial bodies,



■ **Nolan Bushnell: Atari's founder.**

didn't last long because another firm had already registered the name. Atari was subsequently born.

For a few months in 1973 the Pong arcade game was a huge success – it got Atari on its feet. And at the end of that fiscal year Atari clocked \$3.2 million in sales. A string of video game hits were produced after that, culminating in a home version of Pong in 1975. At that time Atari was a strange company to work for – there was a frivolity that seemed to match the product line. Employees would walk into the Los Gatos, California, headquarters at any hour of the morning dressed in jeans and T-shirts. This casualness bordering on chaos did the product line no harm. The money kept rolling in.

WARNING SHOTS

Although Atari was successful, it needed big money to go places. And the only way to get that sort of dough was to find a buyer. Bushnell first approached Disney, but after considering the idea his boyhood heroes said no. Warner Communications appeared on the scene and willingly parted with \$28 million in August of 1976. Bushnell got half that amount and stayed on as chairman for two years after the takeover. During that time he witnessed the launch-

◀ **January 1985.** The 520ST was launched to stunned show goers and a disbelieving Commodore at CES in the States. The ST was displayed seven months later in the UK at the PCW show. The Fujiboink demo you can see displayed on screen was written to compete against the Amiga's Bouncing Ball demo.





ing of the Video Computer System and 400/800 home computers. Bushnell eventually resigned in early '79 after Warners blamed him for the failure of the VCS machine.

OVERPRICED

Atari's 400 and 800 systems also ran out of steam because they were priced too high. But there was something else: Commodore and the Vic 20. Who in their right mind would buy a machine that cost more and offered less? – nobody, as Commodore correctly predicted.

Although Atari hit an all time high with sales in excess of \$2 billion in 1982, it soon hit rock bottom in 1983 when the full impact of the Vic and the C64 became apparent. Commodore's success was down to its president, Jack Tramiel, who treated business as war. Commodore's domination, and Atari's demise, would have continued if it wasn't for chairman Irving Gould's disapproval of Jack's intention of putting the Tramiel sons in executive positions throughout Commodore.

JACK THE LAD

Jack said goodbye to Commodore in January 1983 – on Friday the 13th! It was certainly unlucky for Commodore because, over the next few months, much of Commodore top talent left. By this time Warner's Atari was in serious trouble; around \$538 million in trouble. Warner approached Jack with a proposition that is still a little hard to believe. The final deal involved Warner selling Atari to Jack and Jack borrowing the money from Warner to buy Atari!

Before Jack took over Atari, someone at Atari commissioned Amiga Inc. (to the tune of \$500,000) to work on some exciting new custom chips for future machines. Amiga Inc. became unhappy with the way Atari handled the affair and refunded the money. The developments were sold to Commodore for \$20 million. These developments, of course, eventually turned out to be the Commodore Amiga A1000.

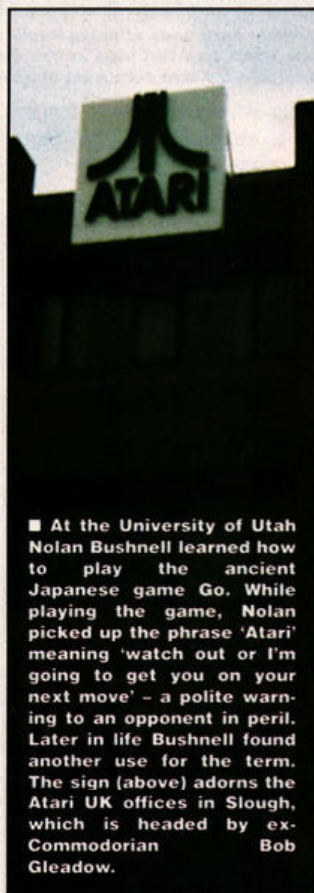
Naturally these events concerned Atari who, in 1984, hit Commodore with a \$100 million lawsuit.

Without wanting to get left behind, Atari started work on its own 68000-based machine. In little more than a year the ST was put together – the important chips in the Amiga, remember, were designed over several years. The ST would never have made it if

many of Commodore's key members hadn't joined Atari and many off-the-shelf items like GEM weren't packed into the machine.

The ST was first shown at the January 1985 CES show in the States. The original model was a collection of boxes – the keyboard and processing unit, the disk drive and the power supply. The operating system, TOS, had to be loaded from disk. Five months later the ST was displayed at the PCW show to an incredulous public. Not long after the show, the ST was available in selected shops. Price for a 512K machine with mono monitor: £749.99.

February '86 saw the addition of a TV modulator to the ST. The machine became known as the



■ At the University of Utah Nolan Bushnell learned how to play the ancient Japanese game Go. While playing the game, Nolan picked up the phrase 'Atari' meaning 'watch out or I'm going to get you on your next move' – a polite warning to an opponent in peril. Later in life Bushnell found another use for the term. The sign (above) adorns the Atari UK offices in Slough, which is headed by ex-Commodorian Bob Gleadow.

520STM. TOS was built into ROM. In March the ST took on the now familiar shape; everything was brought together in one neat box. An F was also added to the title. A 1Mb ST, the 1040, followed shortly after. The Mega ST2 and Mega ST4 were shown for the first time at the September PCW.

In February of '87 the price of the 520 was dropped to £399. September of last year saw the 520 drop a further £100, although for £399 you could get the ST with around £500-worth of free software. That deal is still going today.

Atari has a commitment to



Harrison Ford goes chasing Replicants in Blade Runner and just happens upon an Atari sign in the streets. Any offers as to how much Atari paid for that subtle bit of advertising?

further developing the ST range; this is exemplified by the Mega ST1 reviewed over the page.

THINK GLOBALLY

Today Atari's tentacles cover most corners of the globe. Atari France is separate from Atari Germany, Atari Australia is separate from Atari UK, Atari Spain is separate from Atari Canada – each division is treated as an individual organisation.

There are around a million STs throughout the world – that's an impressive figure given that the machine has only recently taken off in a big way. Germany has the largest population of STs by far (between 400,000 and 600,000 depending who you believe). Most of these are 1040s or higher with mono monitors. STs are used as professional tools in Germany which explains why so many serious packages like *Calamus*, *GFA BASIC* and *Tempus* originate from there.

Like the British, most French ST owners use their machines for entertainment and creativity – the number of games released for the ST over here and in France is ever on the increase. Surprisingly the number of STs in use in both countries is also very similar – around 160,000. In addition to that, there is a 10,000 to 15,000 hardcore of Mega owners over here using their machine for program development and other serious applications like DTP.

In the States the ST hasn't done tremendously well – the reason, say Atari, is because the machine has never been pushed there. This is due to change over the next few months. Most of the STs in America are used by pro-

fessional musicians because of the machine's in-built MIDI ports. A vast range of superb MIDI software from the likes of Dr T also helps.

In countries like Spain and Australia, where the ST has only been in existence for a short while, the number of users is small – 5,000 to 15,000 in each country. The users are mainly hobbyists and their main source of software is PD.

With the ST being such an international beast – and Atari continuing to bring out more powerful versions of the machine – the machine's longevity is assured. And you can expect an international flavour of software for a long time.

THE FUTURE NOW

The much mentioned laptop ST, Stacy, has been delayed again – possibly by up to three months. Part of the reason is down to cosmetic changes. There's also the problem of blowing TOS 1.4 on to ROM in time – Atari may have to resort to using more expensive, though quicker to produce, PROMs.

Four versions of the luggable are planned. The basic model will boast TOS 1.4, 8MHz 68000 processor (identically rated to the current ST processor), 256K ROM, 1Mb of main memory, 32K of static RAM for the screen, Supertwist monochrome LCD screen (with optional backlighting), 3.5-inch double sided floppy drive, trackerball and two mouse buttons on the keyboard. The liquid crystal display will have a resolution of 640 by 400 – the same as the conventional Atari SM124 monochrome monitor.

The other Stacy machines will have various configurations of drive and memory. For instance, the top end laptop will boast 2Mb of RAM and both floppy and hard drive.

Stacy gets its power in the form of standard batteries whose projected lifespan is anywhere between five and 35 hours. It will be possible to use an external DC supply.

All standard ST ports are present on the Stacy: monitor port (for colour or traditional monochrome monitors), serial, MIDI, parallel, floppy, hard disk, RS232, and cartridge.

E BY GAME

ST games players have long been waiting for Atari to produce a machine capable of giving the Amiga a run for its money. It seems an ST compatible computer capable of fulfilling gamers' dreams is just round the corner. The notion of a Super ST, ST Plus, Enhanced ST – call it what you like – has been floated for some time. However, here are the specifications straight from Atari UK's headquarters:

- 4,096-colour palette with one mode being able to display 256 colours and not hog the processor (which Amiga's HAM mode is keen on doing).

- Four-channel stereo sound with frequency and amplitude modulation.

- Extremely rapid multi-directional hardware scrolling.

In all other aspects the STE, as it is to be called, will be identi-

cal to the ST. A double-sided floppy will be provided as standard and the processor will be the same 8MHz-rated 68000 affair that graces all current STs. What's really exciting about the STE is that it will be compatible with the ST. In theory anything written for the ST should work on the STE. There's also the matter of price. Atari is looking to incorporate the machine in the Powerpack bundle later in the year at £399! Yes, the same price as the 520.

As this is being written, STEs are rumoured to be heading for developers' desks. What Atari is planning to do is encourage programmers to write programs for the ST and STE simultaneously. The ST code would lie on the top side of the disk and the enhanced STE code on the bottom half. STEs, remember, will come with double-sided drives while many early STs only have single-sided drives.

If all goes according to plan, you could be seeing STEs by the end of the year.

The STE will probably take on the familiar shape of the 520 and 1040; it is unlikely Atari will go for a Mega-style STE.

TT RACING

There is, of course, the TT to look forward to which is being developed in Sunnyvale. The TT will have a 68030 processor, similar graphics capabilities to the ATW and be TOS 1.4 compatible. Essentially you'll be able to run well behaved GEM software. Look out for it next year. ■

SOFTLY SOFTLY

In the early days Atari was a prolific software publisher; many Atari eight-bit games were coin-op conversions. During his purge to streamline Atari, Jack Tramiel disbanded Atari's software arm. It was necessary; Atari was in debt and it needed to rationalise its product range.

Only recently has Atari restarted its software operation. In the next few months there will be six new games and three new serious packages.

Three of the games will be developed by programming team Frames. The graphic artist at Frames has *Star Trek*, *Stargoose* and *Black Lamp* to his credit. *Hell Raider* is the first from Frames; a diagonally-scrolling shoot-em-up. Then there's *Starbreaker*, a *Defender* clone. And finally *Prince* in which the idea is to move armies around and conquer islands.

The other games due for release are *Grand Prix*, *Armada* and *Enterprise*. Two machines – any combination of PCs, Amigas or STs – can be linked together via a wire and compete against each other in *Grand Prix*. All games will cost £14.95.

Serious packages include *Hyperchart* (presentations program), *Wordflair* (GDOS wordprocessor) and *O-Line* (font fixer for *Calamus*).



■ Bob Katz, Atari UK's software development manager.

HiSoft C interpreter

Learn to program C the easy way

These days you'd have to bury your head in the sand to avoid hearing about *THE* programming language - "C". Unfortunately, the advantages which make C such a good language for program production - being compiled, with a complex and versatile range of facilities, also make it difficult to learn. Far more difficult than traditional languages like BASIC.

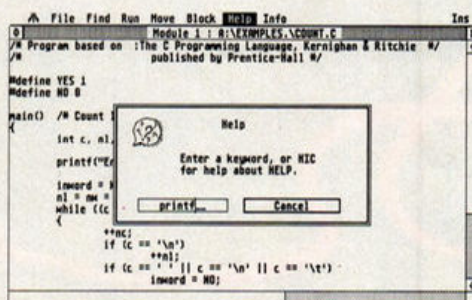
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The HiSoft C interpreter takes a lot of the usual tedium out of the C development process. Just click on a menu item and your program runs straight away. No need for the usual compiler development cycle of edit, compile, link, run, crash, load, edit, compile, etc....

Not only is this great for beginners, but seasoned C programmers will also find the ultra-fast development environment a great relief. You can write your program with the interpreter and then compile it with almost any standard compiler to produce a finished commercial program. Here are some of the highlights of this exciting new package:

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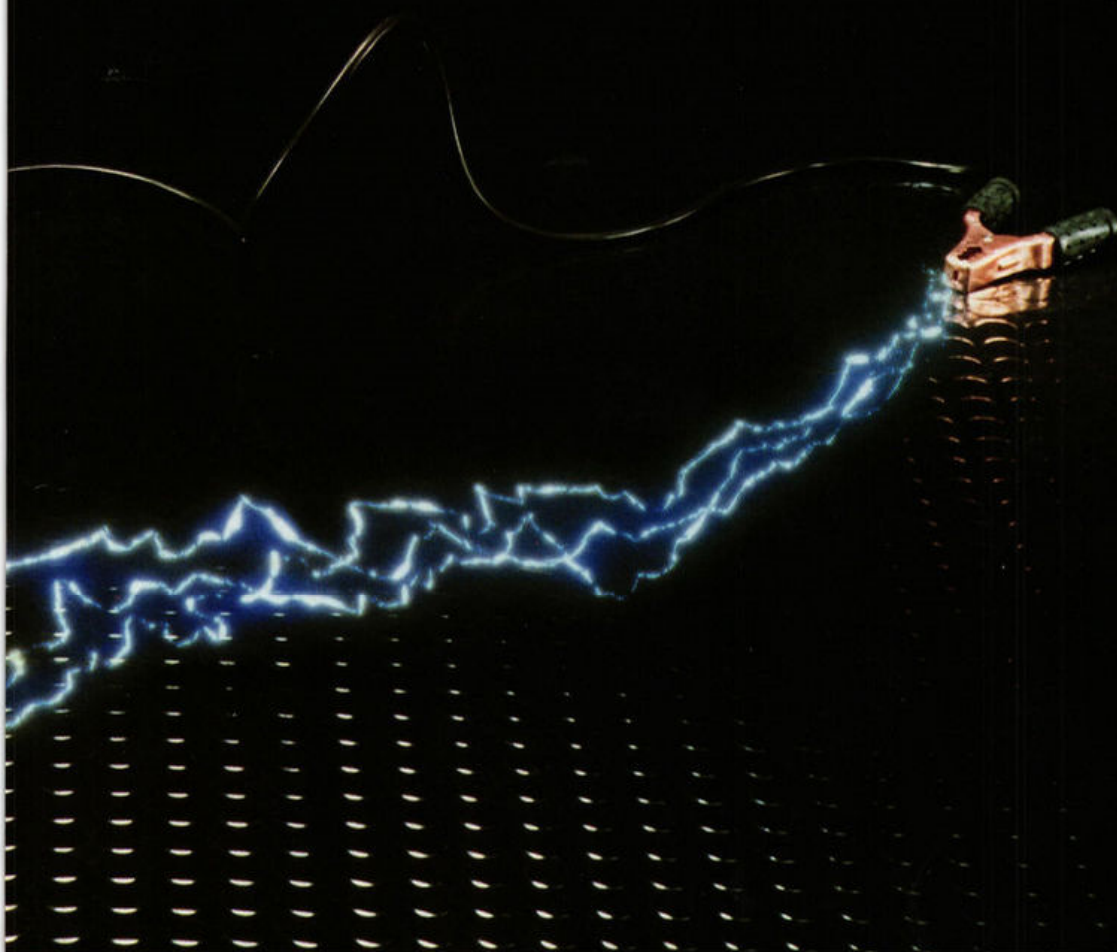
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ATARI

Although the Mega 1 is essentially a 1040 with a better keyboard and more elegant case, it doesn't replace the 1040. The 1040 is viewed by Atari as the top end games machine while the Mega 1 is seen as the entry level serious/business computer.

The Mega 1 looks identical to the other two Megs in the ST range; it is housed in a unit with the keyboard attached separately.

Apart from looks and an obviously superior keyboard, the Mega 1 is little different in most other respects to the 1040. The Mega 1 boasts a battery-backed clock, which is more of a luxury than anything else, and a blitter chip as standard. The blitter is at its most powerful when large numbers of text drawing or animation routines are to

be executed. You'll only notice a marginal speed increase in GEM window updating with the blitter installed.

Opening up a standard Mega and the new Mega 1 reveals no differences, unless you count the obviously lower number of RAM chips in the Mega 1. An internal DMA bus is present which doesn't appear in the 520 and 1040. As with the other Megs, the Mega 1 has no modulator for connection to a television.

The Mega 1 doesn't feature the new TOS 1.4. Sadly the new TOS will only make an appearance in the ST laptop, Stacy.

With an additional £100 on top of the old 1040 price, the Mega 1 might seem like an exorbitant way to clean out your pockets for what are really little more than cosmetic changes.

However, it's an investment which is well worth while – particularly if you make a lot of use of the keyboard. If you haven't used a Mega keyboard before than it's difficult to appreciate the shortcomings of the 520 and 1040. The whole touch is more appealing and certainly lends itself to faster typing. If you are used to serious packages which would utilise a blitter chip then there are advantages there.

Finally, it's much simpler to expand a Mega's memory than it is to expand a standard 520 or 1040.

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ONE UP

MARK HIGHAM reviews Atari's most recent addition to the ST stable, the 1040 in a Mega ST's casing.

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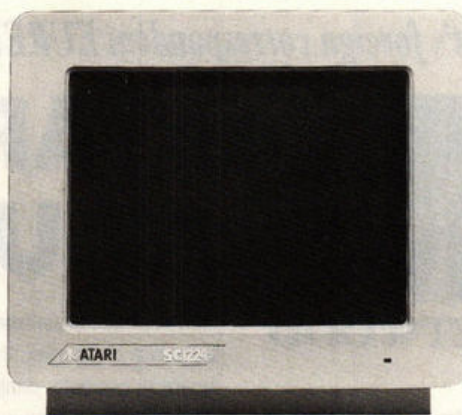
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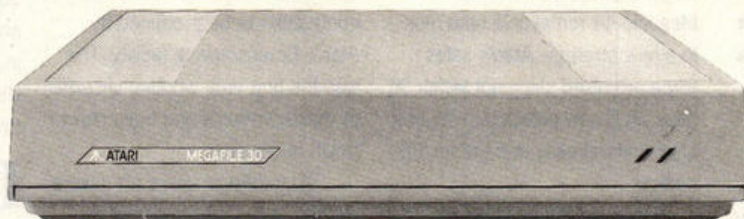
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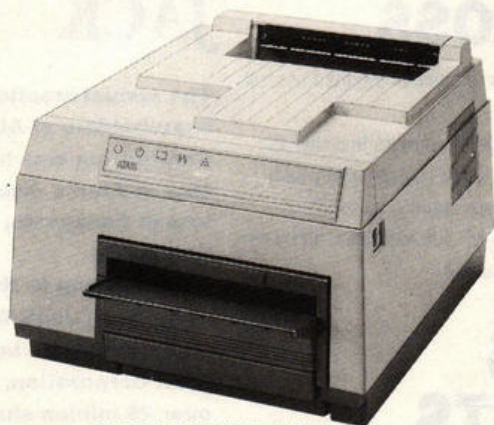
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ALL THE WAY FROM AMERICA

Format's foreign correspondent EUREKA brings you the latest news from the US of A



FLEETWOOD ST?

Highlights of the World of Atari show included a MIDI demonstration/concert, featuring Michael Pinder, formerly of The Moody Blues and staunch ST supporter. Jimmy Hotz and Mick Fleetwood also demonstrated the Hotz Box, a new concept in MIDI instrumentation which is reportedly being marketed and distributed by Atari Corporation.

ATARI STAR AT US SHOW

Atari US made an unexpectedly big splash at Comdex, the annual American computer dealer's exposition, held in Chicago in April. Atari announced a number of new hardware products at the show, including the Portfolio hand held PC, Stacy laptop, PC4, and Megafile 44 removable hard disk. In a new strategy, Atari's sales force promised shipment within 90 days of all new products, with first shipments already marked for US dealers.

Portfolio, the hand held PC developed by DIPS Technology of Bath, Ohio, garnered the most

attention from both the media and the show attendees. Portfolio features an LCD screen and 63-key QWERTY-layout keyboard. It will retail for less than \$400 in the US.

Atari also announced Stacy, the ST laptop, a removable 44Mb hard drive, and the PC4, an IBM-compatible to be produced by Atari's Braunschweig facility. This was the first time working versions of these products had been shown to US audiences.

ST and Apple users alike were excited about the release of the portable Stacy. Users aware of the Macintosh-emulation capabilities of

the ST are envisioning being the first to have a working Mac laptop, using the Stacy with Spectre 128 from Gadgets by Small. Rumours of an actual Mac laptop from Apple Computer have been circulating in the industry for years.

Stacy, weighing in at less than 15 pounds, will be available in one, two, and four megabyte configurations, with an internal floppy disk drive and second floppy or 20Mb hard disk. The LCD display provides 640 x 400 resolution. All standard ST ports, including MIDI and Atari monitor ports, are built-in. Stacy will cost \$1,495 in the US, around £900 at current exchange rates.

I'M ALL RIGHT JACK

The annual meeting of shareholders of Atari Corporation was held in May at Atari's headquarters in Sunnyvale, California.

According to the proxy statement, Jack Tramiel, chairman of the board of Atari Corporation, owns over 25 million shares of stock, or 43.8 per cent. The number of shares owned by Tramiel does not include an additional 3.6 million shares owned by his sons, or another 250,000 held by other family members.

Warner Communications owns a further 24.6 per cent of the Corporation.

ATARI LOSES ANOTHER BOSS

Vince Giamatteo, short-lived general manager of Atari Computer (US), was let go by the Tramiel family in early April. As yet no explanation has given for his release.

Giamatteo had joined Atari Computer in January. He had spent the previous six months in Taiwan, streamlining Atari's manufacturing operations. He had

planned to spearhead Atari's much-postponed assault on the US marketplace.

In Giamatteo's absence, it appears that the US effort will continue, led by company president Sam Tramiel, operations VP Augie Liguori, sales VP Michael Dendo, marketing VP Joe Mendolia, and director of software Antonio Salerno.

AMERICAN DEVELOPERS LOOK TO OTHER MARKETS

American third-party software developers continue to look to other markets to keep their businesses afloat. The small size of the American ST marketplace continues to cause dismay among developers, despite recent efforts by Atari US to revive it.

Migraph, creators of the popular *Easy-Draw* and *Touch-Up* graphics packages, are looking to the IBM PC world for profitability. *Touch-Up* for MS-DOS machines has been announced and will begin shipping in July. Migraph, based in Federal Way, Washington, are pleased with the positive response garnered from

PC users and the prospects for the new version.

Other longtime ST-only developers are now selling software into the Commodore Amiga and Apple Macintosh markets, including Soft-Logik, the St Louis, Missouri, based creators of *Publishing Partner* and *PageStream*.

Despite suggestions to approach Europe for increased sales, American developers seem more comfortable in finding markets inside the US.

ST users can only hope that established developers don't abandon the ST market entirely.

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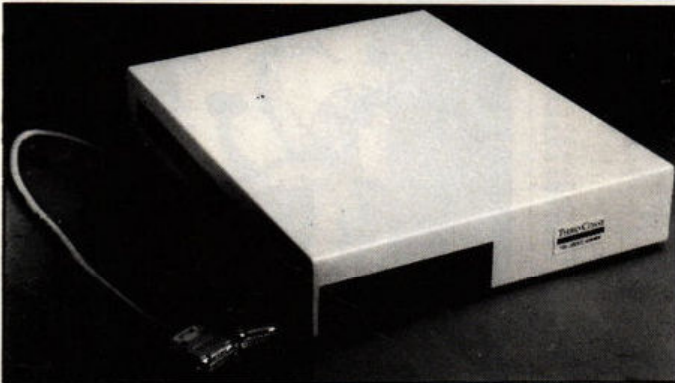
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Official Secrets

Confidential 32-page A4 bi-monthly glossy magazine

Confidential is written for people who take their fun seriously. If you are into Adventure, Strategy, FRPs, MUGs, PBMs, D&Ds, or if you would simply like to see more from behind the scenes then Confidential is essential reading. Regular features include Personnel File, Dead Letters, The Man in Black, Feature Articles, Brain Teasers, Diary, News, Competitions, and The Boss Upstairs. Club participation is welcomed.

Gnome Ranger or Shadowgate free!

Gnome Ranger is an award-winning 3-part adventure by Level 9. "Go out and buy Gnome Ranger pronto" said Atari ST User. Or tick the box for Shadowgate.

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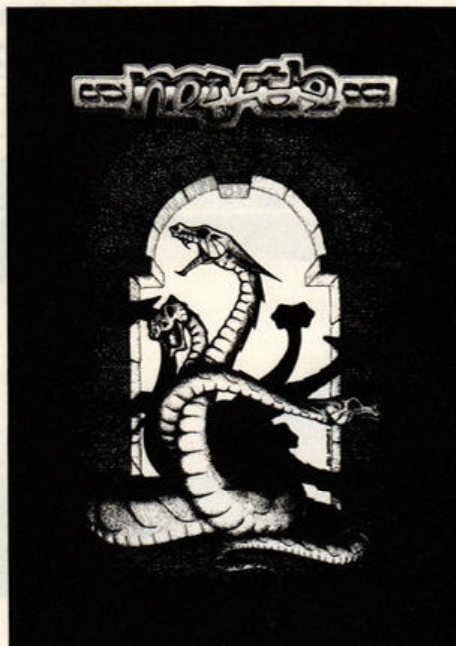
Myth A mini-adventure by Magnetic Scrolls

Written exclusively for members of Official Secrets and, amazingly enough, included in the price of membership. Set in Ancient Greece, you play the part of a young god striving to prove himself worthy of immortality. You'll meet the Ferryman, have a chance to cheat Death, and do battle against the nine-headed Hydra guarding the gates to the Underworld. Myth includes the state-of-the-art Magnetic Scrolls parser and those incredible graphics. For most computers - disk only. Only to members of Official Secrets.

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Myth was rated at 90% by Keith Campbell of Commodore User. He said "Don't be put off by it being a mini-adventure.... text undreamed of in those bygone days."

Please note that there is a surcharge of 50p per game for orders placed by telephone.

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ON THE DISK

THE FLIPSIDE

Single-sided drive owners fear not, you can get hold of the B side of the disk by sending your name and address with a cheque or postal order for £1.75 to: B-SIDE, ST FORMAT, FUTURE PUBLISHING, THE OLD BARN, SOMERTON, SOMERSET TA11 7AY.

The cover disk contains 800K of demos, games and utilities, but unfortunately not all 520STs have double-sided drives. To counter this problem a special format has been devised that allows single-sided STs to read just the A-side of the disk, but double-sided machines can read both.

There are effectively two sides to the disk, A and B (original huh!) and you can only run programs from one side at a time. To

change sides you just have to click on the file called GOTO_A.PRG or GOTO_B.PRG. If you have a single-sided ST then don't worry about doing damage to your disk, you can't swap to the other side. Life's like that.

One final and important point, the Format cover disk MUST be left write enabled at all times. If it isn't then you WILL NOT be able to switch to the other side of the disk.

BLOODWYCH

PROGRAM: BY MIRRORSOFT
MACHINE: ALL COLOUR STS
FILES: BOOT.PRG, CODE

Mirrorsoft's latest addition to their range of role playing games is *Bloodwych*. Fans of *Dungeon Master* will be familiar with the style of game, but *Bloodwych* has the added advantage that two people can take part.

The action takes place within the walls of the Castle of the Bloodwych. Inside the castle there lies a dormant demon who would bring death, destruction and darkness to the world if he was awakened. Only the unification of the Crystals of Sanguis can secure the demon for all eternity in his lair.

A brave warrior arrives in the village of Bloodwych, ready to battle the demon's forces and lock him away forever. You are that warrior.

At your disposal you have magical spells and your martial abilities with which to combat the castle's inhabitants. Inside the castle you'll not only find foes, but also keys, treasure and extra



■ Pick your man and prepare to to battle with the demon's power.

weapons to aid you in your mission.

GETTING HACKING

To get into the castle and save the world all you've got to do is put the cover disk in the drive when you switch the computer on. Choose your character and let battle commence. If you need any more explanation then turn to the review on page 58.



■ You and your partner descend the depths of Castle Bloodwych.

Side A

BLOODWYCH

ST Format's first ever cover disk gets off to a flying start with the first level of *Bloodwych*. It's in a similar vein to *Dungeon Master*, but with simultaneous two player action. Shove that disk in the drive and get hacking away.

GFA BASIC

This month a new regular column on BASIC programming starts and to get you going there's GFA BASIC on the disk. It's faster, more structured and easier to use than ST BASIC and comes complete with a disk based manual. On the disk are some demo programs to show you the power of the language.

Side B



STINGRAY

Anything could happen in the next half hour. Well that's what the *Stingray* demo says just before it plays the tune from the ancient cult TV series.

POSTMORT

Previously when you'd written a program and it bombed inexplicably then that was just life. But now thanks to *PostMortem* you can find out what those registers were up to before the bomb. Tracking down bugs will be much easier.

RAMDISK

RAM disks are very useful when copying files from one disk to another and this month's RAM disk has an advantage over many others, it sits in the GEM Desktop.



PENTOMINOES

Pentominoes is a mathematical game to keep you puzzled for many hours. Shapes made of five squares must be fitted into a grid. Reflect and rotate them to fit them in, provided you don't get a mental block of course.

GFA BASIC

PROGRAM: BY GFA DATA MEDIA (UK)

MACHINE: ALL STS

FILES: GFABASIC.PRG, GFAMAN.TXT, CLRDEMO.BAS, EDSPLIT3.BAS, SPEEDTST.BAS, SPEEDTST.PRG, WINDOWS.BAS

GFA BASIC is a comprehensive BASIC with many added extras that make it a joy to use.

Starting this month in ST Format is a new series for the BASIC programmer that begins with a run down of GFA BASIC and a simple how-to-get started course. The tutorial will build your knowledge of GFA BASIC so you can take advantage of its features, as well as providing programming tips and hints for all BASIC users.

Turn to page 90 for the start of the tutorial.

STINGRAY

PROGRAM: BY THE

POLTERGEISTS

MACHINE: ALL STS

FILES: STINGRAY.PRG,
STINGRAY.FAB,
STINGRAY.SKU, TITLE.BUN,
CODEY, README.STG

Fans of the Stingray TV series can now listen to the title tune of their favourite program, and also look at some digitised pictures of the illustrious Stingray crew.

To hear that wonderful tune just double click on the STINGRAY folder and do the same on the file STINGRAY.PRG. It'll take a while to load, but it's well worth the wait.

POSTMORTEM

PROGRAM: BY M.S. POWELL

MACHINE: ALL STS

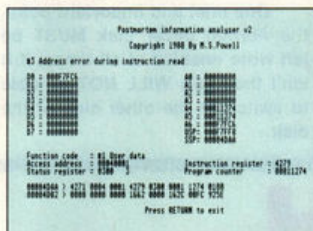
FILES: POSTMORT.PRG,
POSTMORT.DOC, ADDER-
ROR.PRG, BUSERROR.PRG,
ILLERROR.PRG, PRIVVIOL.PRG

When developing programs you occasionally bomb the system and you may have no idea what the program was doing at the time.

Until now that has just been life, but now thanks to *PostMortem* you can find out what those registers were up to when the program bombed.

All you have to do is double click on POSTMORT.PRG and all will be revealed, even if you've reset the machine in-between the bomb and running *PostMortem*.

Also in the POSTMORT folder are four short programs that produce bombs. These are just examples to show you what sort of the information you get from *PostMortem*.



■ Bombers beware *PostMortem*.

RAMDISK

PROGRAM: BY LINK TOMLIN

MACHINE: ALL STS

FILES: RAMDISK.ACC,
RAMDISK.DOC, RAMDISK.RSC

If you ever have to copy files and have only one drive then you'll know how tedious it can be and how many disk swaps you'll have to do if you're copying more than one file. RAM disks make your life easier by being a disk drive in memory. Having one just waiting to be installed in the Desktop is

much easier than having to click on a RAM disk program.

The RAM disk is an accessory and to get it installed you have to do the following. Double click on the folder RAMDISK and you'll find three files: RAMDISK.ACC, RAMDISK.DOC and RAMDISK.RSC. Copy RAMDISK.ACC and RAMDISK.RSC to the root directory of the disk that want the RAM disk on.

Now whenever you boot up your ST from the disk with the RAM disk on you'll have an option on the Desk menu called "QUIKDISK". To activate your RAM disk select "QUIKDISK" and you'll get to choose the RAM disk size which can be between 64K and 512K.

Before you can use the RAM disk though you'll have install the drive which is simplicity itself. Click once on drive A (don't double click) and then go to the Options menu. Select "Install Disk Drive" and change the drive identifier to "M". Click on "Install" and you've got your RAM disk ready and waiting.

PENTOMINOES

PROGRAM: BY F.DRIVER & G. WILLS

MACHINE: ALL COLOUR STS

FILES: PENTO.PRG,
README.PNT

Pentominoes is a mathematical puzzle based on shapes made up from five squares. There are 12 different shapes and you have to fit the shapes into a grid of 60 squares. The shapes can be rotated through 90 degrees or reflected horizontally to help them in one

PICTURE FILE

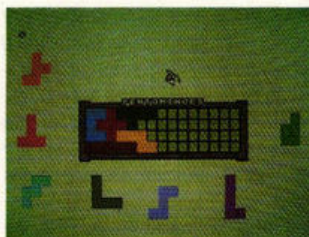
If you have any demos lying about that are good enough to go on *ST Format* cover disk then send them in to the address below. They MUST be in a form that can be clicked on from the Desktop.

Budding artists out there stand to earn themselves some readies by sending in their works of art. It doesn't matter what the pictures are in: *Tiny*, *Degas*, *Neochrome*, *Spectrum 512* or *Quantum Paint*, we'll use the best on the cover disk. The best picture every month will earn the artist £30. What more of an incentive do you need?

of the three different grids: 3x20, 5x12 and 6x10.

Control is all done with the two mouse buttons: left turns a piece clockwise by 90 degrees, right flips it horizontally and pressing both picks up the piece so that you can drop it in the grid. A button at the top-left of the screen allows you to access the game options.

To play the game double click on PENTO.PRG in the PENTO folder.



■ Can you fit the squares into the grid? That's *Pentominoes'* challenge.

EARN £800

Yes, earn £800. We want your software – games, utilities, demos, anything as long as its good, original and preferably short. If you've written anything you think is worthy of the *ST Format* cover disk, send it with this form and full documentation to: Gary Barrett, *ST Format*, 4 Queen Street, Bath BA1 1EJ.

NAME _____

ADDRESS _____

DAYTIME TELEPHONE _____

PROGRAM NAME _____

SIZE OF FILES IN K _____

DESCRIPTION _____

Don't forget to: ■ Enclose an SAE for return ■ Include on-disk and paper documentation ■ Write your name and address on the disk ■ Use a virus-free disk.

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

Signed _____

MAKING A BACKUP

The cover disk uses a 400K per side format rather than the normal 360K and so to fit all of the programs from the cover on one disk you'll need to use the special formatting program supplied on the cover disk, FORMAT10.TOS.

To make a copy of the A side do the following:

- 1) Double click on the program "FORMAT10.TOS" and then take out the cover disk.
- 2) Put the disk that you want to format in the drive and then follow the on-screen prompts.
- 3) Put the cover disk back in the drive.
- 4) Double click on both the Drive B icon and on the Drive A icon. If you have only one drive then put the newly-formatted disk in the drive when it asks for drive A. You'll now have two windows on the Desktop, a cover disk one and an empty window.
- 5) Copy the files as normal by picking them up from the cover disk window and dropping them in the empty window.

Don't copy the files by dragging the drive icon in which the cover disk files are into the empty window because the cover disk contains some hidden files that you don't need.

DON'T copy the file GOTO_B.PRG because it will damage data on your disks if you use it on anything but an *ST Format* cover disk.

- 6) To copy side B of the disk, double click on the file GOTO_B.PRG and repeat the above process.



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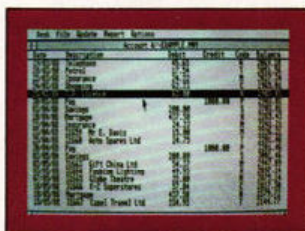
PFM handles Credit and Debit — Monthly, Quarterly, Yearly and even complicated regular payments like 12 payments of £52.99 followed by one of £12.50, PFM will check the date and automatically insert standing orders as they become due.

BUDGET WITH EASE, AT THE CLICK OF A MOUSE

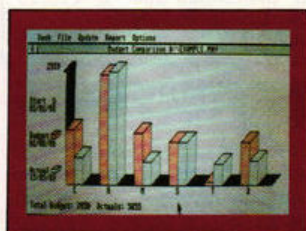
If you're the type that likes to look ahead then PFM allows you to set budgets for both expenditure and income. Up to 10 budgets can be set over a year, a quarter or a month and then displayed either in figures or as a bar graph for a given period. Income/expenditure for these budgets can also be shown as a pie chart so you can tell at a glance where your money's gone. PFM also allows you to display or print your budget groups selectively so you can see your expenditure quickly and easily.

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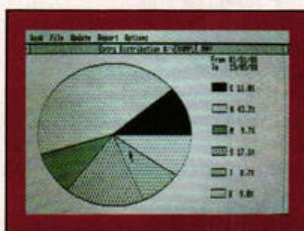
Ron Massey, ST USER

"Personal Finance Manager is a sophisticated home financial package, it will probably help you save money."

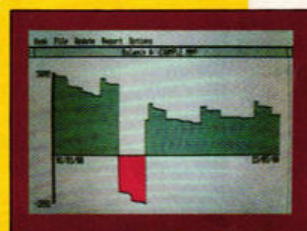
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C CHANGE

BASIC was designed to be simple to understand and easy to use for the novice programmer and that's one reason why it's an interpreted language rather than a compiled one. It's a fine language to learn with and many go no further than BASIC. Some, however, want to much more from their STs and grow tired of the weaknesses of BASIC. That's when they start looking for other languages to use.

In most cases it's a choice of two: assembly language or C. Assembly language is by far the more powerful, but it can be heavy going and bug hunting can take hours. C on the other hand is easy to understand and can do a lot of the things that assembly can. The disadvantage, however, of C is that it's compiled, and having to compile the program before you run it can waste a lot of time. Hisoft have come up an alternative though, an interpreted C to cut out the compilation time and let you get on with the programming.

C FOR YOURSELF

If you've used C before then you'll have no problems at all getting your programs up and running and

COMPILATION TAPED

Computer languages fall into two broad categories; interpreters and compilers. Most languages are compiled, that is the program is written with a text editor and then processed by a compiler into machine code. Most compilers produce code which can be run directly by the machine, without reference to the compiler at all.

Interpreters on the other hand sit in the computer's memory and translate the program into machine code a line at a time. This is slow and you need the interpreter present to run the program, but the effect of any changes you make is instant (a compiler can take several minutes to produce its code).

Beginners find interpreted languages like BASIC much easier to use, but for sheer computing power more experienced users come back to compilers - C, FORTRAN, Ada, the list is endless - every time.

C is one of the most popular languages, but is awkward to use. Hisoft interpreted C promises to make life easier for DAVE PACKER.

beginners will have few problems either, thanks to the extensive tutorial section and the wide selection of example programs provided. There are some exercises for you to try too, with answers in the manual.

Writing and altering your programs is made easy by the many powerful features provided in the editor and you can work on up to eight programs at any one time. Also the eight programs can be considered linked and pass parameters from one to another when your program is running.

Once you've got your program typed in it's just a matter of clicking

on RUN to get going. If you're still testing your routines then you put breakpoints in your program or even single step through it. Breaking into the program is also possible by hitting a couple of keys.

The ST's operating system has many powerful features that you may want to get your hands on and Hisoft C lets you get in there with no problems. Many of GEMDOS calls can be reached with a simple command, but some of the lesser used ones require more effort. Hisoft C has some extra commands for the more difficult to use functions like alert boxes.

There are also some useful

disk utilities that can be found on the help menu, making it possible to format disks, create folders, copy files and even move files from one folder to another.

CONCLUSION

Hisoft C is an ideal introduction to the language C, mainly because it's an interpreter rather than compiler. Being able to make a minor change

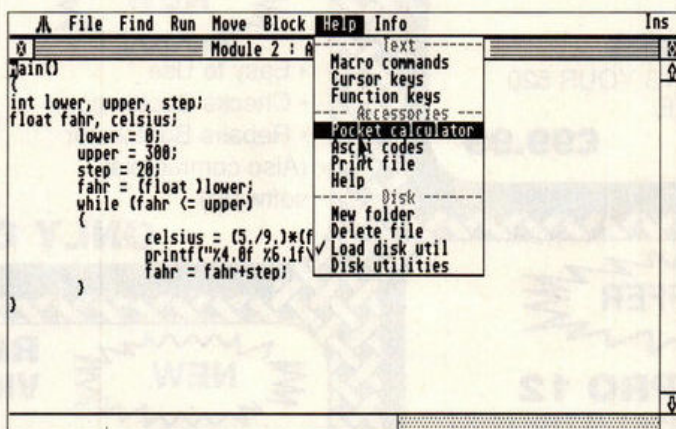


■ Pull down menus are used in the editing and running of your programs. A key combination can be used for most of the menu commands when you're used to the program.

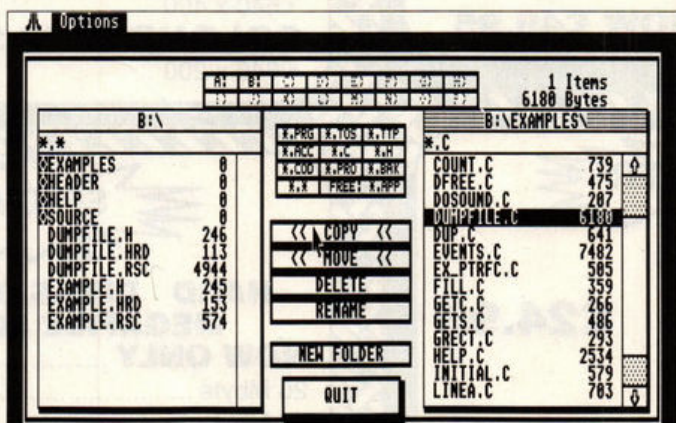
and the run your program immediately is very useful and should stop beginners from throwing things around the room and banging their head on the wall while trying to find a typing error in their program. Experienced C programmers should also find it useful in program development.

The major disadvantage however is the need to have the interpreter in memory to run your program. Not only does this restrict your program size (especially on a 520), but programs run much more slowly. If you ever want to release a program commercially you'll still have to buy a compiler and that's going to burn a large hole in your pocket.

If you've ever been tempted to have a go at C then now's the time to give some more thought.



■ The Help menu provides information on many aspects of C, and also lets you get at the disk utilities.



■ Hisoft C has an excellent set of disk utilities built in. Copying files from one disk to another and moving them from folder to folder is simple.

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Midnight, the witching hour. I have just put the cat out and sincerely hope that all this spontaneous combustion will soon cease. When the computer programmer from IBM asked me to exorcise his haunted Solent Village apartment, I agreed.

I had met him in the India Arms several times, and knew all about his work for the HQ of the Big Blue, overlooking my home town. I had also watched the guy crack up. He sincerely believed that his flat was haunted, and the source of the disturbance was his home micro. I agreed to stand vigil, accompanied by a member of Our Lady of Lourdes Church, Eastney, and a parapsychologist from the University of Southampton. I guess we were computerised Ghost Busters.

The hauntings had manifested themselves in all sorts of ways: his micro spewed out weird data for no reason at all, and every time it happened there was a dramatic drop in temperature accompanied by ghostly tapping noises. The programmer also suffered from blinding headaches, depression and reckoned he could see fairies at the bottom of the garden.

To cut a long story short, which is a great pity seeing as how I'm getting paid by the word, we solved the problem using the standard Ghost Buster kit: a surveyor's damp meter, six networked electronic thermometers, an electro-magnetic pulse analyser, a Casio digital tape recorder and a video recorder.

The 'haunting' was indeed caused by ghosts in the machine, but there was nothing supernatural about it, I am delighted to report. His computer spewed garbage every time the central heating system shut down for the night because an ancient electro-magnetic pump motor switching itself off behind the desk, accompanied by the sound of hot pipes contracting and the draughty air of night. My tame experts reckoned that the poor sap's brain was addled by VDU burn augmented by the fact that power cables strung between pylons hovered above the building.

And the fairies at the bottom of the garden? Refractions of light from the M27 motorway via the angled glass of a cucumber cold frame, when the clouds were saturated and low. In other words the haunted computer theory was total bunkum. ▶

GHOSTS IN THE MACHINE

Have you got haunted hardware? Professional supernatural investigator MEL CROUCHER discovered that machines have a will of their own. Here is his report.



BYE BYE BABY

October 5th, 1960. The Ballistic Missile Early Warning System Computer declared that the United States was under massive attack by Soviet missiles, with a certainty of 99.9%. Its radar monitors in Thule, Greenland had spotted an unidentified hostile object hurtling through space. Nobody had told the computer about the rising moon!

November 9th, 1979. A test tape containing simulated attack data was fed into the NORAD computer. A programmer mistakenly hooked it to the operational missile alert system, and World War Three began. Only 10 tactical missiles were launched during the six minutes it took to spot the mistake, and they were invited not to bother to wipe out several million Russians after all.

June 3rd, 1980. Computers at Omaha, Nebraska detected incoming hostile missiles. The computer display at the National Military Command Centre in the Pentagon confirmed the fact that submarine-launched ballistic missiles were on their way and retaliated. Airborne command took off from Hawaii, B-52 nuclear bombers left their runways and we were at war for three minutes and twelve seconds. A human being overrode the system, which is just as well, because the 'incoming missiles' were invented by a 74175 integrated circuit with a personality problem.

From April 1984 to December 1988, 46 cases of 'haunted computers' were investigated by the Faculty of Parapsychology in California. 41 of these cases were found to be nothing more than accidental glitches or deliberate hoaxes, including one spectacular case of a disgruntled mistress trying to drive her former lover insane. This leaves five cases of ghosts in the machines 'having no scientific or rational explanation whatsoever.'

Haunted computers often feature in the pages of serious technical journals, such as the *Nudes Of The World*. They are littered with tales of paranormal programs and cranky computers, but most of these cases have been fabricated and the 'genuine ones' can be easily explained in scientific and human terms. Malicious damage to machinery, cruddy programming, accidents and rogue electro-magnetics can all behave like computer ghosts, and boffins like Doctor



■ If your ST has haunted hardware, who ya gonna call?

Max Honeyman specialise in busting them. When I telephoned him at the Berlin Free University, I asked him a very simple question: "Do you believe in ghosts?" His reply was an equally simple, "Damn right I do!"

GHOST BUSTERS

Christmas and midwinter are traditional times for ghost stories, and on Christmas Eve 1985 the municipal offices in Fayetteville, North Carolina, needed a visit from the Ghost Busters. Computer records showed that hundreds of telephone calls were being made from two phone extensions, every midnight from the Sanitation and Fleet Maintenance Building. The trouble was, the building was completely empty! City Officials tried calling in the cops to catch phantom phone phreaks, but hard nosed officers ordered several pairs of brown trousers during the midwinter solstice as they witnessed the two phones being used by invisible ghosts and quit the building, baffled.

The Paranormal Squad was called in and soon discovered that they were dealing with thirsty ghosts, because all the numbers being dialled were to branches of the Coca-Cola Bottling Company! It was left to a computer expert to catch the phantoms, who turned out to be none other than a pair of automatic Coke dispensers. Due to a 'manufacturer's flaw', their on-board

computer systems had gone gaga and instead of reporting the day's sales and ordering more supplies from Mission Control, the deranged machines were phoning home over and over again pleading for unending supplies of the Real Thing.

Unfortunately, the local press had gotten hold of the story, and hundreds of enthusiastic ghost hunters refused to believe the Coke theory, claiming to have seen everything from giant horses to Satan himself dancing around the Sanitation Building.

"Ghosts exist, but I'm a scientist not a goddam witchdoctor, so where's the fear? A ghost is a trace of the past, like a recording of a personality or an event. My brainwaves are making a recording right now as I speak, zap! There they go, zip! If some guy in a hood comes along to chop my head off with a goddam axe, or I get walled up alive in the ladies' bathroom, then my brain recording is gonna be one hell of a lot more powerful. Now then, these ghostly recordings get picked up by certain types of sensitive brains in exactly the same way as a record player picks up recorded sound. Electromagnetically. You know as well as me how a computer emulates the human brain, so why shouldn't computers 'see ghosts' like we do, why the hell should we have all the fun?" (Dr. Max Honeyman.)

THE WITCHES OF EASTWICK

If you've seen the film, you will remember the final scene where that horny little

Theresa still lives in Harlesden but prefers to be known as Dagmar. She is a self-confessed witch of the white ilk, sleeps in a coffin lined with black silk and she'll put a curse on anyone you nominate for a small fee. What's all this got to do with video monitors? Not a lot, except for the fact that Dagmar uses a battered Commodore Plus/4 to generate her spells. "I have this routine that holds all the secret words of the Old Religion in string arrays. You have to give me the name, the exact location of your adversary, and tell me the category of their sin. The program covers financial sins, sexual sins, physical attacks and so on."

In the interests of dedicated and accurate journalism, I invested a ten pound note and put the finger on a certain software manufacturer who has committed at least one of the above sins against my unblemished self. After a wee while, the Commodore came up with 'BELTREGENA ASMO ASMO YARBUZA (name of victim withheld) STIMMAN ASMO', and if there's anyone out there who has recently suffered the appearance of twelve large warts on your left arm, you had it coming buster!

DEMON SEED

Anyone who genuinely believes that the Devil lives inside computers should either go and lie down until they feel better, or get in touch with Doctor David Webber of the Southwest Radio Church of Oklahoma City. He is the bozo who believes that the Anti-Christ lives in the



■ Witches of Eastwick: one horny little devil monitors the situation.

devil, Jack Nicholson, appears on a bank of video monitors to talk to his favourite witches' babies. Once upon a time, in the fabled kingdom of Harlesden, North London, a young lady named Mary Theresa Kennedy got thrown out of Saint Joseph's Secondary School for dabbling in witchcraft and the occult. The mumbled spells and lighted candles didn't upset the nuns too much, but they drew the line when it came to the dubious usage of rodents.

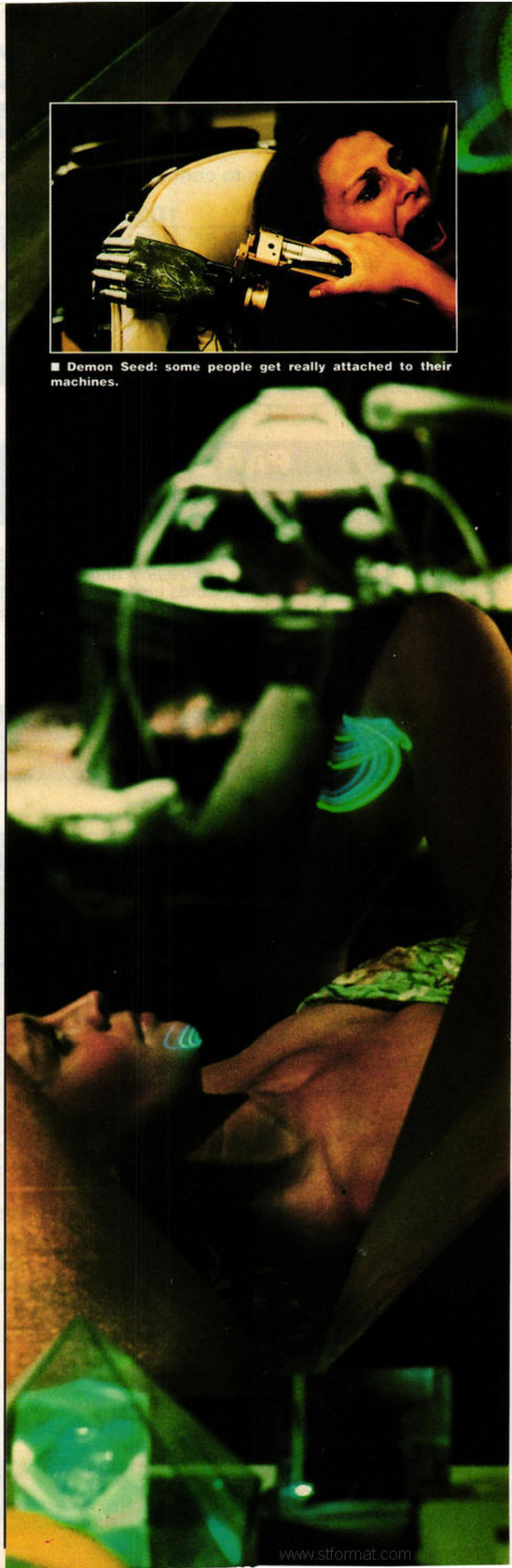
These days, the not so young Mary

Euronet Computer, Luxembourg. Or perhaps you should contact the Reverend Dr. Jack van Impe of Michigan, who has proof that Satan lurks in the EEC database in Brussels, and will take power on January 1st 1992, thanks to the Right Hon. Edward Heath and his Euro-cronies.

Cultists, technophobes and sundry loonies base their beliefs on the fact that the Benelux database is used to track all the credit cards in the world, and is now being upgraded to record all



■ Demon Seed: some people get really attached to their machines.



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the goods and transactions throughout our entire planet. The code numbers for these records are all to have the prefix 666, and those of us familiar with the Book of Revelations, Chapter 13, know that this is the number of the Beast of the Apocalypse. On the other hand, the phrase 'cobblers' comes to mind.

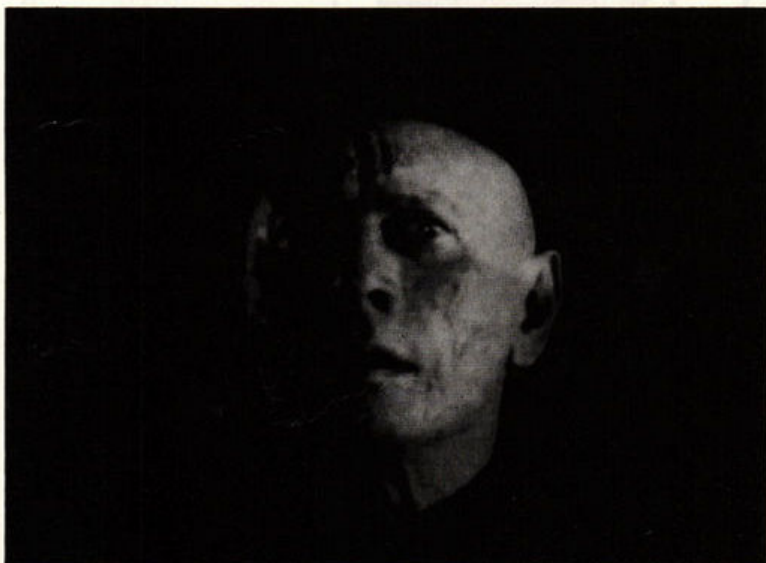
POLTERGEIST

Tales of little girls attracting the unwanted attentions of malicious demons are nothing new, from 'Little Red Riding Hood' to the bile-spurting poppet in 'The Exorcist'. Since 1964, Soviet parapsychologists based at Moscow University have been using computers to study the phenomenon, and have recently released film of young girls manipulating objects from a distance using nothing but mind control. And before you reply

unit wasn't even plugged in! The animals would go through the same routine every time she went near the computer, but as soon as I took it into another room they quietened down. I never saw any ghosts or heard any voices, but several times there was stuff chucked all around the room, and I have witnessed words appear on screen that I definitely have not programmed. The machine only gets haunted when she's near it, but I know my daughter couldn't have written them there, because she can't write!"

WESTWORLD

Homicidal robots have stalked through fiction for years. In 1920 the Czech playwright Karel Capek coined the word 'robot' to describe a machine that looked and behaved like a human. Six



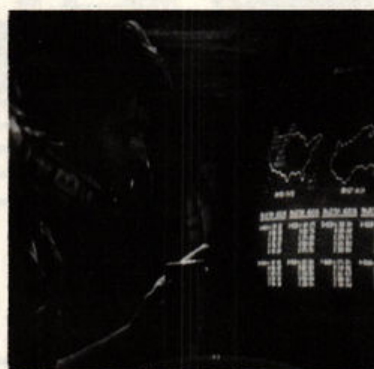
■ Yul Brynner in Westworld, enough to make anyone paranoid about androids.

that the same thing happens on most bathing beaches, the objects in question are glass tumblers, metal scissors and tennis balls.

The 'Poltergeist' series of movies has highlighted the fact that the 'haunting' of a young girl does not restrict itself to ancient objects, but can affect modern technology including televisions and computer monitors. My researches have brought me into contact with Gilbert Simon, a 26-year-old film producer and computer buff, living in Teddington. Gilbert first noticed something bizarre about his wordprocessor a year ago. "I keep pet chipmunks, and they were quite happy to live in the same room as the machine. Then my daughter got old enough to toddle around. Last summer, I was in the greenhouse with my wife when we heard all hell break loose in my work room. I thought a fox or something had got in, the chipmunks were terrified, screaming blue murder, and there was our little girl in front of the wordprocessor with all these glowing pulses coming out of the screen. That is strange enough, but the

years later Fritz Lang's silent movie 'Metropolis' featured a sexy robot leading hundreds of men, women and children to their deaths. It wasn't until 1950 that Isaac Asimov set out his Laws Of Robotics, with 'thou shalt not kill' heading the list, then in 1964 a tin man was put on trial for murder in 'The Outer Limits' episode, 'I, Robot.' And who can forget the gunfighter robot as portrayed by Yul Brynner going murderously apeshit in Michael Crichton's 1973 shocker 'Westworld'. But we had to wait a little longer for the Devil to inhabit a robot for real.

In February 1982, a Kawasaki maintenance worker got himself written into the history books. Kenji Urada has the dubious honour of being the first human being to be murdered by a robot. Since then, robots and computer controlled machines have been bumping off mere flesh and blood with alacrity! Six people were murdered by Nevada federal computers in 1983, when they ordered the waters of the Colorado River to drown a village. A Canadian Therac-25 computer murdered two hospital patients in May



■ War Games: got any good POKES for World War III?

1987, by bombarding them with one hundred times the 'safe' dose of radiation. So who can blame communities such as the Amish fundamentalists from banning all modern machinery from their towns, including motor cars, electric toothbrushes and killer robots.

WAR GAMES

Matthew Broderick and Ally Sheedy were two of the most irritating brats ever to feature in a sci-fi movie. No wonder the disillusioned scientist seemed totally indifferent as to whether or not they all perished in a computer generated nuclear holocaust.

What I found far more frightening about 'War Games' than the banal scripting and wooden acting was the fact that the movie was not based on fiction at all. If the Devil really does want to take us all to hell in a basket, then what better tool than the computer! Computers have declared nuclear war many times. Sometimes it was infinitely more farcical than the loonies in 'Doctor Strangelove'. Sometimes it was due to the horrible cold logic of sentient missiles, more deadly than the fictional philosopher bomb in 'Dark Star'.

Since October 5th 1960, computers have tried to start World War Three at least 200 times. In the early days, computer operators had several hours to recall the long-range rockets. Today, sea-launched missiles and mobile cruise missiles can be less than six minutes from their targets, and once they're off you can't ask them to come back home. So many failsafes have failed, from the space shuttle Challenger to the Trident missile, from Bhopal to Chernobyl, that the inevitable will happen somewhere, sometime, and the irony is that electromagnetic pulses will wipe out every memory bank of every computer on Earth.

Maybe we too will exist as electromagnetic ghosts imprisoned in the fabric and atmosphere of the ruined planet. Fortunately the next dominant species, the dung beetle, will pick up our vibes on their very own computers (intriguing devices made from reconstructed hogweed cellulite), and wonder if there really are ghosts in the machines. We shall not disappoint them. ■

"I abused my electric toaster this morning. Tonight the elevator tried to kill me in revenge." (Woody Allen, 1972)

"It was 20 foot square, linked together by slender wires. These Bits were covered with all the Words of their Language... The Professor then desired me to observe his Engine at work and I promised that I would do him Justice, as the sole Inventor of this wonderful Ghost in the Machine..." (Jonathan Swift, 'Gulliver's Travels', 1707)

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STOS COMPILER

In the beginning there was STOS, the game creator. STOS is a souped-up form of BASIC which has all the commands necessary to create fast, interactive arcade-style games for would-be programmers with the ideas but without the technical know-how.

Although STOS received mixed reviews when released, it quickly became popular. Discovered by a whole range of people who would otherwise have had to shelve their games ideas, it sold well and prompted Mandarin Software to extend the original product with a range of add-ons intended to make games produced with STOS really shine.

The foremost of these new products is a compiler which is intended to convert STOS source code into lightning-fast machine code, speeding up your games by up to 50 per cent – at least, that's the claim. The compiler also claims to compile programs at 500 instructions per second, protect programs so that they can't be examined by users, compile the Maestro sampling commands and compile the sprite editor commands to allow bigger sprites.

But how does the compiler perform in practice? Remember, STOS BASIC itself was intended to be a replacement for the tired old BASIC supplied with the ST and if STOS BASIC is so good, why does it need add-ons?

STOS let you write games easily from BASIC, now the STOS compiler promises speed as well. JERRY GLENWRIGHT gets out his stopwatch.

Well, STOS BASIC is good. It's fast and has almost all the commands necessary to write fine games – but you wouldn't object to just a little more speed would you? Might be nice to increase the size of your sprites and a RAM disk would be useful. The STOS compiler provides you with all of these features.

The compiler provides you with STOS BASIC version 2.4. This new version offers better support for extension files, a new floating point arithmetic ability which greatly improves speed and clears out a few of the small bugs associated with earlier versions of the language.

MEMORY LIMITS

Mandarin Software has taken into account the limited memory of an unexpanded 520ST and has designed the product to work well with all the machines from the basic (no pun intended) machine up. Therefore, if you're using a single disk 520ST, you must keep a copy of the compiler folder on the disk with your programs. By doing this, the compiler will only use about 25K of RAM leaving a large amount free for your programs.

However, this practice will limit the amount of storage on a single sided disk to around 200K (480K on a machine with a double-sided drive).

If you have an expanded 520ST or a 1040ST then it's possible to create a RAM disk. Storing the compiler and associated files in the RAM disk makes execution incredibly fast.

To load the compiler it's a simple matter of booting STOS and typing 'acload compiler' to load the compiler as an accessory. Once loaded, you're offered several choices including SOURCE, DEST, DISK, MEMORY, COMPILE, OPTIONS and QUIT.

Source allows you to tell the compiler where your STOS source code is held – in memory or on the current disk. Dest lets you choose where to send the compiled code, again either to memory or disk. Memory tells the compiler that you want to compile the program currently in

RAM. If your program is just too big to be held in memory then you can select the Disk option which tells the compiler to work on source files held on disk.

Compile sets in motion the compile process using the source and destination selected earlier. Options allows you to choose the ultimate configuration of the program when it's compiled. You can select things such as default palette, resolution, black and white environment etc., and these will be taken into account during compile time. Quit simply returns you to the STOS editor.

TESTING TIMES

The compiler is only compatible with the improved version of the STOS language and provides several additions to the range of commands that offer fine control over the testing process. Checks that are carried out before activities such as sprite updates, CTRL-C tests and menu checking can be switched off during critical sections of the code to speed up execution by up to 10%.

You can choose to have the tests carried out at specific times such as before GOTO and WHILE WEND loops and printing commands or you can choose to have the tests switched on all the time. This means that before every STOS instruction tests will be performed. Although this will slow down your programs, sprite movement will be smoother and you will have a greater degree of control over menus.

It also includes improved floating point routines. The old STOS BASIC provided double precision numbers but Mandarin decided that the majority of users would be better served by single precision numbers which are not as accurate but operate three times faster.

THE VERDICT

What's the verdict? Having used the program to compile several STOS BASIC programs it was apparent that the quick compilation claim is certainly true. Once compiled, all programs showed a marked increase in speed, which although not as fast as games originally sourced in machine code, was certainly an improvement. Twenty quid buys you the STOS compiler and for that it's good value for money. Easy to use and powerful – highly recommended. ■



STOS COMPILER

£19.95 ■ All STs

Mandarin Software, Europa House,
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Tel: 0625 878888

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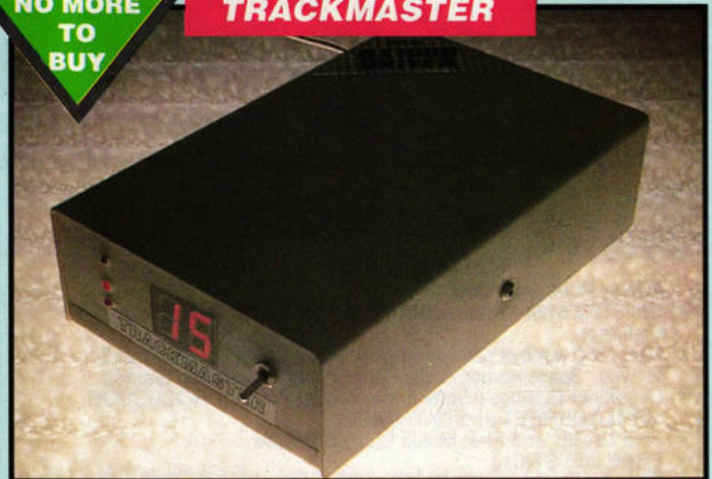
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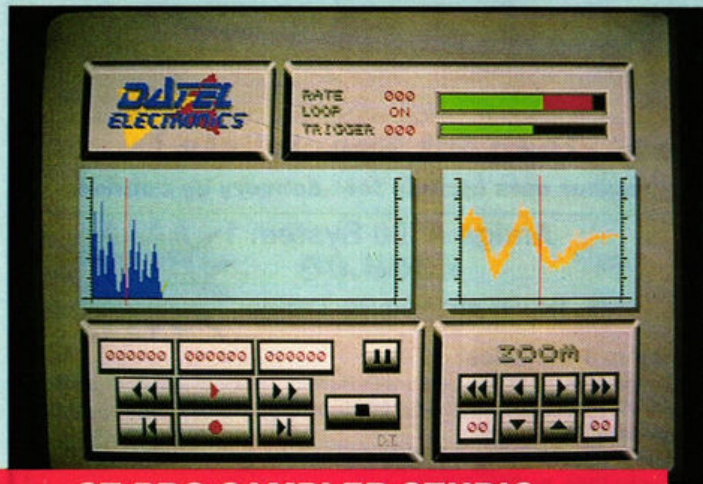
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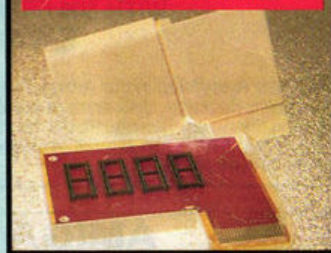
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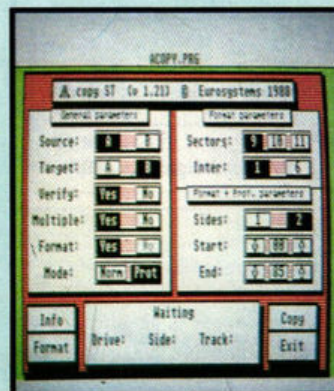
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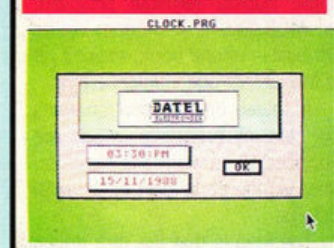
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PUBLIC SPEAKING

There's a lot of software that'll only cost you the price of a disk – the legendary 'public domain'. But is it any good? STUART ANDERTON investigates in his monthly column.

Welcome to Public Speaking where every month I'll be looking at some of the marvels and monstrosities available from the public domain libraries. If you're new to PD, programmers often make their wares freely available to be copied – generous souls. There's nothing dodgy about PD, there is as much excellent software and as much rubbish as there is in the commercial world. Much PD is known as 'shareware'. The idea is that if you like the program you'll send a contribution to the author. The advantage of this is that you get news of upgrades and often a full manual with otherwise undocumented features. So explore the public domain, there are some gems to be found.

BIBLICAL SENSE
The Holy Bible ■ New Testament £4.00, Old Testament £12 ■ South West Software Library, PO Box 562, Wimborne, Dorset BH21 2YD.

Now I don't really have to tell you the plot to this one do I? The Bible on disk is the full King James version, saved chapter by chapter as compressed ASCII files.

A decompressor is included but I found it less than obvious how to use it. I worked it out eventually though, and the format of the files is sensible enough. These disks (the New Testament comes on two disks, the Old on six) will be a boon to any clergyman who uses an ST to produce his parish newsletter. South West Software also suggest

foreheads.
13:17 And that no man might save he that had the mark, or the beast, or the number of his name.
13:18 Here is wisdom. Let him that understandeth count the number of the beast: for it is the number of a man: his number is Six hundred three

■ The Bible on disk – electronic sermons have never been easier.

it could be useful for anyone who needs a large amount of ASCII text to work on to test a program, or to linguists who need a lot of words to analyse.

Very specialist, but undeniably useful nonetheless.

★★★★

GET STUFFED

STuffed issue 2 ■ £3.50/issue or £12 for 12 ■ Floppyshop ST ■ 50 Stewart Crescent, Northfield, Aberdeen AB2 5SR Tel: 0224 691824

STuffed is not strictly public domain, but it is distributed by one of the main PD suppliers and contains some PD software so it's worth a look at.

STuffed is a disk-based magazine. It's a concept that has been tried before, but disk mags suffer from being rather awkward to use

and difficult to read. *STuffed* is quite easy to load up, once you realise you have to wait a minute or so for the program to decompress. A 'Loading please wait' message would have saved me trying it out on several machines around the office before eventually discovering, thanks to a distracting phone call, that you just have to wait a bit.

The mag has a lot in it – reviews of wordprocessors and databases, TOS 1.4, some news, interviews with programmers a feature on viruses and, of course, games reviews. The features are, on the whole, well-written and informative, but they do concentrate rather on the public domain side of things – not surprisingly given who publishes it.

A nice feature of the games section is the grabbed screens – you can see exactly what you will get with the game. But the news section gave me headache very



■ Games reviews are illustrated withwith screen grabs.

quickly – the justified low-res text is painful to the eye, unjustified it would have been less painful.

The mag also contains adverts and a readers' gallery of rather unimpressive art.

Included on the disc are some public domain disk utilities and the *Rat Trap* desk accessory which banishes those annoying unwanted drop-down windows in favour of sanity-retaining pull-down ones.

Overall the disk is interesting, and you get a floppy and some software out of the deal, but I'm not convinced by the idea of reading a magazine from the screen, and the price is too high. ★★★



■ The uninformative loading screen – has it crashed?

THE RATINGS

- ★★★★ Indispensable
- ★★★★ Good
- ★★★ Worth a look
- ★★ Nice try but no banana
- ★ Forget it

TALK TALK

Softville PD Comms 7 ■ £3.00
■ 55 Highfield Avenue,
Waterlooville, Hants PO7 7PY
Tel: 0705 266509

Softville PD's Comms 7 disk contains all the programs you need to get started in the outside world of communications. The main program on the disk, *InterComm*, is a comprehensive communications set up which rivals many commercial packages in the features stakes.

It is fully menu driven and on-line help is provided, making up for the lack of documentation. You can dial directly from the software – unlike some other PD communications programs – but there is no telephone directory.

Viewdata format (as used by Prestel) is not supported, but the protocols provided should get you onto most bulletin boards and systems like Telecom Gold. The industry-standard Kermit file transfer

```
Modem Control Menu
1 - Dial the phone
2 - Phone number: now "0225466234"
3 - Automatic dial on startup? No
4 - How to dial modem: now "ATDT=phone"
5 - Hangup string: now ""

Space - move to item      Backspace - previous item
Enter - change this item  Esc - leave menu
number - change item      ? - help on this item
```

■ *InterComm's* menus lead you through the options.

system allows you to ship data and programs down the telephone line to your friends or to bulletin boards.

Two desk accessories are provided: *GEMTerm* gives you a very simple pop-up terminal program, and *MOBZDial* is a modem dialler with built-in phone book, making up for the lack of one in *InterComm*.

A folder on the disk contains two sets of programs which are supposed to network STs together, either via the serial port or the MIDI sockets.

The idea is that the disk drives of other machines on the network appear as icons on your Desktop and you can use them as if they were your own. A fascinating idea, but as yet I have failed to get this to work

★★★★



ST UK Public Domain & Shareware Software

MEGAPACKS

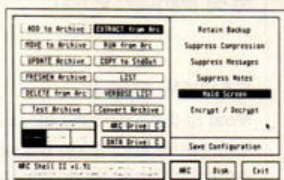
★ ★ Mega Packs consist of 3 disks for only £61 ★ ★

- **Mega 1:** Starter pack for the new STer. Disk 1 has a 250k text file of version 4 of the book 'Your 2nd Atari ST manual'. Disk 2 has ST Tour a tutorial. Disk 3 has RAM disks, spooler, picture converters, desktop accessories, monochrome emulator, Auto loader GEM, extended disks formatters and loads of other utilities.
- **Mega 2:** Clip Art Pack 1. Full of clip art suitable for most DTP and WP packages.
- **Mega 3:** Clip Art Pack 2. Full of clip art suitable for most DTP and WP packages.
- **Mega 4:** Graphics Pack. Graphic packages and utilities. Disk 1 contains Neochrome a colour only paint package and Master Painter a fabulous all features monochrome and colour art package. Disk 2 is full of picture converters. Disk 3 has Public painter a brilliant monochrome package.
- **Mega 5a:** Bible Pack 1. King James version of the Holy Bible Old Testament.
- **Mega 5b:** Bible Pack 1. King James version of the Holy Bible Old Testament.
- **Mega 6:** Bible Pack 2. As Mega 5a and 5b but on 3 double sided disks.
- **Mega 7:** Games Pack 1. Damonoid, Football and Blitz III.
- **Mega 8:** Games Pack 2. Othello, Darts and Doctor Boris.
- **Mega 9:** Games Pack 3. Tycoon, Money Spinner and Ace Invaders.
- **Mega 10:** Games Pack 4. Zenith, Speculator and Maelstrom.
- **Mega 11:** Picture Pack. 3 double sided disks full of colour pictures.
- **Mega 12:** Demo Pack 1. Wave demo (requires 1Mb RAM), Quantum Paint 4069 colours at once picture show and GigaByte Crew show part 1. Contains double sided disks. Requires 1Mb RAM.
- **Mega 13:** Demo Pack 2. ThunderBirds, Sting Ray and Captain Scarlet digitised sound demos from 'The Poltergeists'.
- **Mega 14:** Demo Pack 3. Exceptions demo pack! The BIG demo!, The Amiga Demo! and their 3rd demo! 3 excellent demos from the ST graphic masters!
- **Mega 15:** Demo Pack 4. Cyber Pack. 1 double sided and 2 single sided disks full of excellent animation demos. The Best!

★ ★ ST UK SUPER STARTER PACKS! ★ ★

- **Super Starter Pack 1:** Mega Pack 1 (as above), the book 'Your Second Manual', five blank disks and a 100 capacity disk box for only £15.00.
- **Super Starter Pack 2:** as Super Starter Pack 1 plus a Public Dominator mouse mat only £20.00.
- **Super Starter Pack 3:** as Super Starter Pack 2 plus Public Dominator T-Shirt only £25.00.

APPLICATION DISKS



ARCHIVER V191 ON DISK A5

- **A5 - Archiver II** file/disk compactor version 1.91 excellent.
- **A6 - AutoGEM** - auto boots any GEM program on booting the ST 1.09 compatible. Xformat2 - Extended disk formatter. VC spreadsheet - non GEM spread sheet.
- **A13 - Publishing Partner** disk 1. Public domain fonts for non postscript printers. Hudson, Columbia, Devoli, Thames, Spokane and Saturn. There are colour and monochrome screen drivers and printer drivers. Font editor - create your own fonts, very complex.

Avant Garde 1234567890
ARTISTIC 1234567890
Broadway 1234567890
Courier 1234567890
Elegance 1234567890
Saturn 1234567890
Thames 1234567890

SOME OF THE MANY PUBLISHING PARTNER FONTS

- **A24 - Astrolab** German astronomy program. Monochrome only, version 0.7 latest version - much improved!
- **A29 - Skymap** monochrome only star system - 1500 stars are included excellent astronomy program.
- **A30 - DEC** edit clone for the ST (editor). Disk engineer version 3.01, allows you to do anything to any disk is GEM based can give you a complete report on any disks, format, copy, listings and FAT info. Includes source code.
- **A31 - 401st** Word printer drivers - all Epsoms, Panasonic, Atari and Atari Laser, NEC Pinwriter, Star, Olympia, Toshiba P321 SLF etc.
- **A38 - Publishing Partner** disk 2. 6 fonts for PP Caligrity, Elegance, Courier, Roman Bookface, Westside and Avant Garde.
- **A40 - Harddisk 1.** Disk full of hard disk programs - including Turtle

version 2.8 and UnTurtle - Turtle restorer.

- **A41 - Monochrome** emulator version 5. Run monochrome programs on a colour monitor. TOS 1.09 compatible.
- **CMFonts** converts Macintosh fonts to ST GDOS format. Deformatter - this program deformats your disks.

A Virus killer and disk immuniser.

- **A51 - 12** communication packages and utilities etc. all ARCHIVED to fit onto a single disk. Disk contains ARCHIVER II and help doc.
- **A52 - Hard** disks disk 2. Eight hard disk utilities.
- **A63 - Fontkit 3.31** by Jeremy Hughes - Epson, ST screen and Degas font editor - excellent, needs A64 as well.

- **A64 - Fontkit 3.31** by Jeremy Hughes - Fonts and utilities for A63 - excellent, needs A63 as well.
- **A65 - Clip Art 3 - 1930's** trademarks in tiny format can be used with most DTP and WP packages.

- **A66 - Unix** disk 1 and A67 - Unix disk 2 - Full of Unix Utilities all with docs.
- **A75 - Nicholas** Ekins-Daukes collection of programs: Shares Program, High scores, Weather 1 and 2, Weather 2 variation of Weather 1, Beat Box and Beat Bind drum sequencer and beat box file merger. Graph plot for plotting line charts.

- **A76 - The Labels** disk, packed with programs to print labels.
- **A87 - Home** Accounts: v1.0 by David Pullin. Up to 3 different Statements in memory at once. Up to 100 entries per statement, Regular Income/Outcome Section with automatic updating. A note pad feature with upto ten different notes.

- **A88 - Double** Click Format v3.03 THE ST disk formatter 9/10 sector, 80/82 tracks, regular/fast format. Can format Magic disks, place MSDOS boot sector, it can write an executable bootsector to do things like bypass HD autoboot, set time, run a program that you write and call COMMAND, PRG and loads of other things. It will also automatically copy any disk, including MAGIC disks. Meg A Minute Elite v2.1, TOS 1.09 compatible 1Mb a minute HD backup.

- **A90 - Superboot** v5.1 THE ST Boot program - choose: desktop accessories, AUTO programs to run, DESKTOP.INF, GDOS ASSIGN.SYS, display a welcome screen, date/time setter, enforce a password on booting and loads more including even stopping Super Boot from running with a 'key hold' includes a 50K document file, excellent.

- **A91 - File** Selector v6.0 replacement for the GEM file selector excellent select drive, sort, print, get full info on selected file, rename, shows time or size in selector very good TOS 1.09 compatible. Virus Killer v2.01 excellent virus detector and killer looks for the 6 different kinds that are currently known of very easy to use because of a novel idea of using quite large pictures instead of standard GEM buttons.

- **A94 - Data** Handler V1.0 very good database, Magic Shadow Archiver.
- **A95 - Publishing** Partner disk 3. 6 new fonts: Artist, Broadway, Letter Gothic, Oriental, Ultra Block and Wilkes-Barres.

- **A96 - DOUBLE** SIDED Sheet v2.0. powerful all features spreadsheet, includes documentation and tutorial. Lotus compatible. 1280 rows by 280 columns.
- **A99 - VDOS** Virtual to Disk Operating System with a graphic interface. You can have up to 53 Auto Execute programs. You can also define a default Graphics, Financial, Database, Terminal, and alternate CLI in addition to the Editor (or Word Processor), Compiler, and Linker that are executed with two key presses or by a single mouse click. Also has 45 DOS commands including: MEM-FREE MORE PRINT FORMAT DIR-X CHECK PRINT DEL COPY (VERY FAST!) VERIFY CHDIR MKDIR RMDIR CHMOD WHERE? FIND TOUCH CALENDAR SCREEN SAVER ACCESSORY FDA-TIME DATE TIME DEFINE SLOT CLEAR SLOT REBOOT and more all selectable with a click of the mouse. Excellent package requires minimum 520ST with 2 disk drives.

- **DA1 - 14** DAs including: the excellent Intact RAM disk, Texas instruments calculator and Tiny Tool.
- **DA2 - Dozens** of DAs including 5 Calculators, Screen protector, RAMdisks, RAM free plus.
- **DA3 - Dozens** of DAs including W/P tools, Diskman - disk utility, X - utilities, the very useful New Word (word processor).
- **DA4 - Dozens** of DAs including Caps key On/Off, Read Only Control Panel, the World famous Rat Trap by Alan Thomas which controls menu selecting, SpeedMouse - sets the speed of mouse movement - excellent.

- **DA5 - Clip** Art 3 - 1930's trademarks in tiny format can be used with most DTP and WP packages.
- **DA6 - Unix** disk 1 and A67 - Unix disk 2 - Full of Unix Utilities all with docs.

- **DA7 - The** Labels disk, packed with programs to print labels.
- **DA8 - Home** Accounts: v1.0 by David Pullin. Up to 3 different Statements in memory at once. Up to 100 entries per statement, Regular Income/Outcome Section with automatic updating. A note pad feature with upto ten different notes.

- **DA9 - Double** Click Format v3.03 THE ST disk formatter 9/10 sector, 80/82 tracks, regular/fast format. Can format Magic disks, place MSDOS boot sector, it can write an executable bootsector to do things like bypass HD autoboot, set time, run a program that you write and call COMMAND, PRG and loads of other things. It will also automatically copy any disk, including MAGIC disks. Meg A Minute Elite v2.1, TOS 1.09 compatible 1Mb a minute HD backup.

- **DA10 - Superboot** v5.1 THE ST Boot program - choose: desktop accessories, AUTO programs to run, DESKTOP.INF, GDOS ASSIGN.SYS, display a welcome screen, date/time setter, enforce a password on booting and loads more including even stopping Super Boot from running with a 'key hold' includes a 50K document file, excellent.

- **DA11 - File** Selector v6.0 replacement for the GEM file selector excellent select drive, sort, print, get full info on selected file, rename, shows time or size in selector very good TOS 1.09 compatible. Virus Killer v2.01 excellent virus detector and killer looks for the 6 different kinds that are currently known of very easy to use because of a novel idea of using quite large pictures instead of standard GEM buttons.

- **DA12 - Studio** and VanGoGo - two excellent colour only art programs. VanGoGo includes an sprite editor - German but easy to pick up.
- **DA13 - Public** Painter Mono only absolutely fabulous!
- **DA15 - JIL2D** CAD drafting program from Jesus Is Lord corp. Looks good and is very complicated.

- **DA16 - ADVSYS** adventure writing language.
- **DA17 - 'C' COMPILER** including Text Editor, this disk contains all that you need to compile C source code.
- **DA18 - Toy** prolog - German full documentation, demos and source codes.
- **DA19 - Xisp** version 1.7 includes documentation.
- **DA20 - Bradley** Forth includes EMACS.
- **DA21 - ST** ICON version 6.3, based on SNOBOL4. Complete documentation.
- **DA22 - Little** Smalltalk. Includes Smalltalk language, full manual, example progs. and demo. See Jan and Feb 1988 issues of Personal Computer World for tutorial etc.
- **DA23 - C MAKE** incredibly like Unix Make utility.
- **DA24 - L13** AND L14 Modula 2 development system V1.0 from Ana systems. Consists of the M2/68 compiler, linker, libraries, development shell and Micro-Emacs editor. Requires minimum 520ST with 2 drives OR a 1040ST. This is a 2 disk set. Both disks are needed.
- **DA25 - Sozobon** C Compiler. A complete implementation of the C language as defined by Kernighan & Ritchie and prevailing practice. The package includes a compiler, optimizer, assembler, and linker, as well as several other associated utilities.

- **DA26 - ST** Writer with document files, tutorial etc. 2 versions 1.75 and GEM/text based 'Elite' version of STWriter. The same program that can be switched into GEM mode and back to original non GEM version, usual full manual and quick reference etc. with new features. very good word processor.
- **DA27 - Micro** Emacs editor V3.925 full screen editor includes tutorial and manual files.
- **DA28 - SIGPIC** v2.00 great program from Germany that converts a mono screen image into a one page SIGNUM document, this can then be inserted anywhere into the doc, Inhibit - generates a table of contents or an index of a document written with Word Plus.
- **DA29 - Newsletter** Maker - Allows you to make a GEM disk magazine - very good. Demos - we have hundreds of demo disks including pictures, animation, sound, digitised pictures and sound, product demos etc.
- **DA30 - DOUBLE** SIDED STWriter Elite V3.0, English, German and Spanish versions. Includes document files etc.

- **DA31 - 14** DAs including: the excellent Intact RAM disk, Texas instruments calculator and Tiny Tool.
- **DA32 - Dozens** of DAs including 5 Calculators, Screen protector, RAMdisks, RAM free plus.
- **DA33 - Dozens** of DAs including W/P tools, Diskman - disk utility, X - utilities, the very useful New Word (word processor).
- **DA34 - Dozens** of DAs including Caps key On/Off, Read Only Control Panel, the World famous Rat Trap by Alan Thomas which controls menu selecting, SpeedMouse - sets the speed of mouse movement - excellent.

- **DA35 - Clip** Art 3 - 1930's trademarks in tiny format can be used with most DTP and WP packages.
- **DA36 - Unix** disk 1 and A67 - Unix disk 2 - Full of Unix Utilities all with docs.

- **DA37 - The** Labels disk, packed with programs to print labels.
- **DA38 - Home** Accounts: v1.0 by David Pullin. Up to 3 different Statements in memory at once. Up to 100 entries per statement, Regular Income/Outcome Section with automatic updating. A note pad feature with upto ten different notes.

- **DA39 - Double** Click Format v3.03 THE ST disk formatter 9/10 sector, 80/82 tracks, regular/fast format. Can format Magic disks, place MSDOS boot sector, it can write an executable bootsector to do things like bypass HD autoboot, set time, run a program that you write and call COMMAND, PRG and loads of other things. It will also automatically copy any disk, including MAGIC disks. Meg A Minute Elite v2.1, TOS 1.09 compatible 1Mb a minute HD backup.

- **DA40 - Superboot** v5.1 THE ST Boot program - choose: desktop accessories, AUTO programs to run, DESKTOP.INF, GDOS ASSIGN.SYS, display a welcome screen, date/time setter, enforce a password on booting and loads more including even stopping Super Boot from running with a 'key hold' includes a 50K document file, excellent.

- **DA41 - File** Selector v6.0 replacement for the GEM file selector excellent select drive, sort, print, get full info on selected file, rename, shows time or size in selector very good TOS 1.09 compatible. Virus Killer v2.01 excellent virus detector and killer looks for the 6 different kinds that are currently known of very easy to use because of a novel idea of using quite large pictures instead of standard GEM buttons.

- **DA42 - Studio** and VanGoGo - two excellent colour only art programs. VanGoGo includes an sprite editor - German but easy to pick up.
- **DA43 - Public** Painter Mono only absolutely fabulous!
- **DA45 - JIL2D** CAD drafting program from Jesus Is Lord corp. Looks good and is very complicated.

- **DA46 - ADVSYS** adventure writing language.
- **DA47 - 'C' COMPILER** including Text Editor, this disk contains all that you need to compile C source code.
- **DA48 - Toy** prolog - German full documentation, demos and source codes.
- **DA49 - Xisp** version 1.7 includes documentation.
- **DA50 - Bradley** Forth includes EMACS.
- **DA51 - ST** ICON version 6.3, based on SNOBOL4. Complete documentation.
- **DA52 - Little** Smalltalk. Includes Smalltalk language, full manual, example progs. and demo. See Jan and Feb 1988 issues of Personal Computer World for tutorial etc.
- **DA53 - C MAKE** incredibly like Unix Make utility.
- **DA54 - L13** AND L14 Modula 2 development system V1.0 from Ana systems. Consists of the M2/68 compiler, linker, libraries, development shell and Micro-Emacs editor. Requires minimum 520ST with 2 drives OR a 1040ST. This is a 2 disk set. Both disks are needed.
- **DA55 - Sozobon** C Compiler. A complete implementation of the C language as defined by Kernighan & Ritchie and prevailing practice. The package includes a compiler, optimizer, assembler, and linker, as well as several other associated utilities.

- **DA56 - ST** Writer with document files, tutorial etc. 2 versions 1.75 and GEM/text based 'Elite' version of STWriter. The same program that can be switched into GEM mode and back to original non GEM version, usual full manual and quick reference etc. with new features. very good word processor.
- **DA57 - Micro** Emacs editor V3.925 full screen editor includes tutorial and manual files.
- **DA58 - SIGPIC** v2.00 great program from Germany that converts a mono screen image into a one page SIGNUM document, this can then be inserted anywhere into the doc, Inhibit - generates a table of contents or an index of a document written with Word Plus.
- **DA59 - Newsletter** Maker - Allows you to make a GEM disk magazine - very good. Demos - we have hundreds of demo disks including pictures, animation, sound, digitised pictures and sound, product demos etc.
- **DA60 - DOUBLE** SIDED STWriter Elite V3.0, English, German and Spanish versions. Includes document files etc.

- **DA61 - 14** DAs including: the excellent Intact RAM disk, Texas instruments calculator and Tiny Tool.
- **DA62 - Dozens** of DAs including 5 Calculators, Screen protector, RAMdisks, RAM free plus.
- **DA63 - Dozens** of DAs including W/P tools, Diskman - disk utility, X - utilities, the very useful New Word (word processor).
- **DA64 - Dozens** of DAs including Caps key On/Off, Read Only Control Panel, the World famous Rat Trap by Alan Thomas which controls menu selecting, SpeedMouse - sets the speed of mouse movement - excellent.

- **DA65 - Clip** Art 3 - 1930's trademarks in tiny format can be used with most DTP and WP packages.
- **DA66 - Unix** disk 1 and A67 - Unix disk 2 - Full of Unix Utilities all with docs.

- **DA67 - The** Labels disk, packed with programs to print labels.
- **DA68 - Home** Accounts: v1.0 by David Pullin. Up to 3 different Statements in memory at once. Up to 100 entries per statement, Regular Income/Outcome Section with automatic updating. A note pad feature with upto ten different notes.

- **DA69 - Double** Click Format v3.03 THE ST disk formatter 9/10 sector, 80/82 tracks, regular/fast format. Can format Magic disks, place MSDOS boot sector, it can write an executable bootsector to do things like bypass HD autoboot, set time, run a program that you write and call COMMAND, PRG and loads of other things. It will also automatically copy any disk, including MAGIC disks. Meg A Minute Elite v2.1, TOS 1.09 compatible 1Mb a minute HD backup.

- **DA70 - Superboot** v5.1 THE ST Boot program - choose: desktop accessories, AUTO programs to run, DESKTOP.INF, GDOS ASSIGN.SYS, display a welcome screen, date/time setter, enforce a password on booting and loads more including even stopping Super Boot from running with a 'key hold' includes a 50K document file, excellent.

- **DA71 - File** Selector v6.0 replacement for the GEM file selector excellent select drive, sort, print, get full info on selected file, rename, shows time or size in selector very good TOS 1.09 compatible. Virus Killer v2.01 excellent virus detector and killer looks for the 6 different kinds that are currently known of very easy to use because of a novel idea of using quite large pictures instead of standard GEM buttons.

- **DA72 - Studio** and VanGoGo - two excellent colour only art programs. VanGoGo includes an sprite editor - German but easy to pick up.
- **DA73 - Public** Painter Mono only absolutely fabulous!
- **DA75 - JIL2D** CAD drafting program from Jesus Is Lord corp. Looks good and is very complicated.

- **DA76 - ADVSYS** adventure writing language.
- **DA77 - 'C' COMPILER** including Text Editor, this disk contains all that you need to compile C source code.
- **DA78 - Toy** prolog - German full documentation, demos and source codes.
- **DA79 - Xisp** version 1.7 includes documentation.
- **DA80 - Bradley** Forth includes EMACS.
- **DA81 - ST** ICON version 6.3, based on SNOBOL4. Complete documentation.
- **DA82 - Little** Smalltalk. Includes Smalltalk language, full manual, example progs. and demo. See Jan and Feb 1988 issues of Personal Computer World for tutorial etc.
- **DA83 - C MAKE** incredibly like Unix Make utility.
- **DA84 - L13** AND L14 Modula 2 development system V1.0 from Ana systems. Consists of the M2/68 compiler, linker, libraries, development shell and Micro-Emacs editor. Requires minimum 520ST with 2 drives OR a 1040ST. This is a 2 disk set. Both disks are needed.
- **DA85 - Sozobon** C Compiler. A complete implementation of the C language as defined by Kernighan & Ritchie and prevailing practice. The package includes a compiler, optimizer, assembler, and linker, as well as several other associated utilities.

- **DA86 - ST** Writer with document files, tutorial etc. 2 versions 1.75 and GEM/text based 'Elite' version of STWriter. The same program that can be switched into GEM mode and back to original non GEM version, usual full manual and quick reference etc. with new features. very good word processor.
- **DA87 - Micro** Emacs editor V3.925 full screen editor includes tutorial and manual files.
- **DA88 - SIGPIC** v2.00 great program from Germany that converts a mono screen image into a one page SIGNUM document, this can then be inserted anywhere into the doc, Inhibit - generates a table of contents or an index of a document written with Word Plus.
- **DA89 - Newsletter** Maker - Allows you to make a GEM disk magazine - very good. Demos - we have hundreds of demo disks including pictures, animation, sound, digitised pictures and sound, product demos etc.
- **DA90 - DOUBLE** SIDED STWriter Elite V3.0, English, German and Spanish versions. Includes document files etc.

- **DA91 - 14** DAs including: the excellent Intact RAM disk, Texas instruments calculator and Tiny Tool.
- **DA92 - Dozens** of DAs including 5 Calculators, Screen protector, RAMdisks, RAM free plus.
- **DA93 - Dozens** of DAs including W/P tools, Diskman - disk utility, X - utilities, the very useful New Word (word processor).
- **DA94 - Dozens** of DAs including Caps key On/Off, Read Only Control Panel, the World famous Rat Trap by Alan Thomas which controls menu selecting, SpeedMouse - sets the speed of mouse movement - excellent.

- **DA95 - Clip** Art 3 - 1930's trademarks in tiny format can be used with most DTP and WP packages.
- **DA96 - Unix** disk 1 and A67 - Unix disk 2 - Full of Unix Utilities all with docs.

- **DA97 - The** Labels disk, packed with programs to print labels.
- **DA98 - Home** Accounts: v1.0 by David Pullin. Up to 3 different Statements in memory at once. Up to 100 entries per statement, Regular Income/Outcome Section with automatic updating. A note pad feature with upto ten different notes.

- **DA99 - Double** Click Format v3.03 THE ST disk formatter 9/10 sector, 80/82 tracks, regular/fast format. Can format Magic disks, place MSDOS boot sector, it can write an executable bootsector to do things like bypass HD autoboot, set time, run a program that you write and call COMMAND, PRG and loads of other things. It will also automatically copy any disk, including MAGIC disks. Meg A Minute Elite v2.1, TOS 1.09 compatible 1Mb a minute HD backup.

- **DA100 - Superboot** v5.1 THE ST Boot program - choose: desktop accessories, AUTO programs to run, DESKTOP.INF, GDOS ASSIGN.SYS, display a welcome screen, date/time setter, enforce a password on booting and loads more including even stopping Super Boot from running with a 'key hold' includes a 50K document file, excellent.

- **DA101 - File** Selector v6.0 replacement for the GEM file selector excellent select drive, sort, print, get full info on selected file, rename, shows time or size in selector very good TOS 1.09 compatible. Virus Killer v2.01 excellent virus detector and killer looks for the 6 different kinds that are currently known of very easy to use because of a novel idea of using quite large pictures instead of standard GEM buttons.

- **DA102 - Studio** and VanGoGo - two excellent colour only art programs. VanGoGo includes an sprite editor - German but easy to pick up.
- **DA103 - Public** Painter Mono only absolutely fabulous!
- **DA105 - JIL2D** CAD drafting program from Jesus Is Lord corp. Looks good and is very complicated.

- **DA106 - ADVSYS** adventure writing language.
- **DA107 - 'C' COMPILER** including Text Editor, this disk contains all that you need to compile C source code.
- **DA108 - Toy** prolog - German full documentation, demos and source codes.
- **DA109 - Xisp** version 1.7 includes documentation.
- **DA110 - Bradley** Forth includes EMACS.
- **DA111 - ST** ICON version 6.3, based on SNOBOL4. Complete documentation.
- **DA112 - Little** Smalltalk. Includes Smalltalk language, full manual, example progs. and demo. See Jan and Feb 1988 issues of Personal Computer World for tutorial etc.
- **DA113 - C MAKE** incredibly like Unix Make utility.
- **DA114 - L13** AND L14 Modula 2 development system V1.0 from Ana systems. Consists of the M2/68 compiler, linker, libraries, development shell and Micro-Emacs editor. Requires minimum 520ST with 2 drives OR a 1040ST. This is a 2 disk set. Both disks are needed.
- **DA115 - Sozobon** C Compiler. A complete implementation of the C language as defined by Kernighan & Ritchie and prevailing practice. The package includes a compiler, optimizer, assembler, and linker, as well as several other associated utilities.

- **DA116 - ST** Writer with document files, tutorial etc. 2 versions 1.75 and GEM/text based 'Elite' version of STWriter. The same program that can be switched into GEM mode and back to original non GEM version, usual full manual and quick reference etc. with new features. very good word processor.
- **DA117 - Micro** Emacs editor V3.925 full screen editor includes tutorial and manual files.
- **DA118 - SIGPIC** v2.00 great program from Germany that converts a mono screen image into a one page SIGNUM document, this can then be inserted anywhere into the doc, Inhibit - generates a table of contents or an index of a document written with Word Plus.
- **DA119 - Newsletter** Maker - Allows you to make a GEM disk magazine - very good. Demos - we have hundreds of demo disks including pictures, animation, sound, digitised pictures and sound, product demos etc.
- **DA120 - DOUBLE** SIDED STWriter Elite V3.0, English, German and Spanish versions. Includes document files etc.

Most of the disks in this advert actually contain more files than is listed. The ad also only shows a small portion of our catalogue, so for details of the service and a free copy of the catalogue send a Stamped S.A.E. (If you are ordering you will get the latest catalogue).

ALL individual disks, whether single OR double sided, are £3.00 for 1 to 5, £2.75 for 6 to 10 and only £2.50 for 11 or more!

*** PDOM ACCESSORY SHOP ***

Public Dominator T-Shirts and mouse mats are available separately at £6.00 each.
SONY blank disks: 10 2DD branded double sided including labels £15, 10 bulk double sided including labels £10. Blank disk labels: 100 @ £4.00. Disk boxes: 50 Capacity £8.00, 100 capacity £10.00 both lockable. Your Second Manual £3.95. Virus Destruction Utility £10.00.

All prices are fully inclusive. To order please send a cheque, postal order payable to ST UK or credit card details to:

**ST UK, 1 BARTHOLOMEW ROAD,
BISHOP'S STORTFORD,
HERTFORDSHIRE, CM23 3TP.
TELEPHONE 0279 757692.**





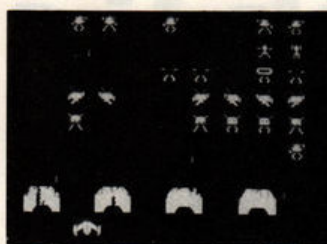
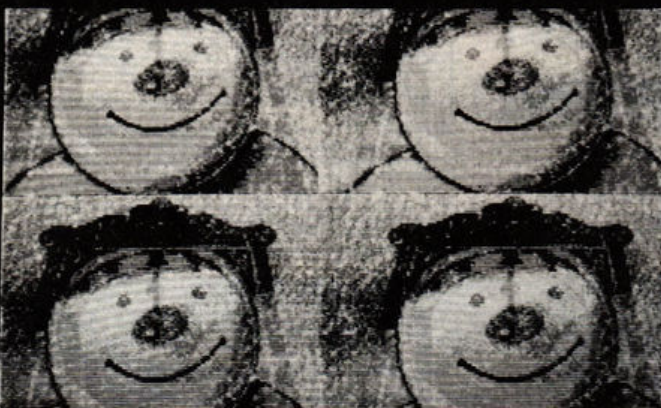
HEY THERE'S A SNOWMAN

The Snowman Demo ■ MPH PD Demo Disk 90 ■ £2.25 (£1 if own disk and sae provided) ■ 10 Chandlers Court, Eaton, Norwich NR4 6EY

This has got to be the best demo for the ST – no House samples, no garish colours, no scrolling messages, just brilliantly digitised and animated scenes from The Snowman film, complete with soundtrack.

Perhaps it doesn't push the technology to the limits, but this demo exudes quality. The only problem is it needs a 1040 to run it.

★★★★★



■ Ace Invaders – a faithful copy of the arcade classic.

ACE INVADERS

Ace Invaders ■ £3.00 ■
Floppyshop ST ■ Disk GAM47C
■ 50 Stewart Crescent,
Northfield, Aberdeen AB2 5 SR
Tel: 0224 691824

Yes, I know it's ancient, but it's still one of the best games around. No spending days pouring over the manual for details of the key combinations here, just left, right and kill.

Ace Invaders is a pretty straight version of the machine that killed pinball (I will never forgive it for that), with only the tarted up sprites revealing its 16-bit nature. The sound, however, is unspectacular and lacks the classic *Invaders* 'heartbeat'.

It's tough compared to the original, in fact I must admit I struggled to complete level 1. Pathetic I know. I must say though that I liked the scrolling message at the beginning rather more than the game.

Ace Invaders was written by Budgie UK and is one of their range of 'licenceware' games, not strictly PD but as near as damn-it. The distributor pays a small royalty to encourage the authors, but the program is still widely copied.

★★★

UTILITIES

Disk GD255 ■ Goodman PDL ■
£2.50 ■ 16 Conrad Close, Meir
Hay Estate, Longton, Stoke on
Trent, Staffs. ST3 1SW Tel:
0782 335650.

Utilities disk 255 is one of those miscellaneous utilities disks which litter the PD libraries. Wonderful things are to be found on disks like this, and so, it must be said, is a load of dross.

This particular disk is, as befits the genre, a mixture of both. Let's start with the good stuff.

CSS236 is a disk copier and formatter. It allows a good deal of flexibility in terms of tracks per disk and sectors per track, and claimed to have formatted with disk at 880K of space. Unfortunately tests showed it was not telling the truth, but I suppose 86 tracks of 10 sectors was pushing it!

An interesting option is to change the number of sectors occupied by the FAT – the author claims this can be reduced by two sectors a side without any harmful effects, freeing more space for data.

Two standard, but well implemented, utilities are the RAM disk and a disk cache. My rather superficial tests showed them to work well.

Two mystery programs are on this disk. One appears to be a ROM copier and the other an icon grabber. I say 'appears' as the programs and documentation for both are in impenetrable German. If your language abilities are up to it you can try them out, but most of my German consists of swear words, so I was defeated.

There are a few desk accessories; a lister to print out program listings from inside the text editor, another RAM disk, and a mouse speed setter.

Completing the disk are a keyboard map editor, a system for remembering what configuration a disk requires, and an obscure C debugging routine.

The main problem with this disk is not the programs – bar the German ones that is – but the lack of theme. A more disparate set is difficult to imagine, so some if not most of the applications are bound to be irrelevant to you.

★★

SUPPLIERS

Most of the programs mentioned this month are also in the catalogues of other suppliers sometimes with different names or coupled with different software. Try contacting:

ALPHA COMPUTING, 32 Meadow

Drive, Halifax, West Yorks HX3 5JZ

BUDGIE UK, 5 Minster Close,

Rayleigh, Essex SS6 8SF

COMPUTER CONNECTIONS,

Ashlaw House, Euximoor Drive,

Christchurch, Wisbech, Cambs

PE14 9LS

ENTERTAINMENT SOFT, 4

Trelawney Drive, Tilehurst, Reading

RG3 5WQ

FLOPPYSHOP ST, 50 Stewart

Crescent, Northfield, Aberdeen

GOODMANS PDL, 10 Conrad

Close, Meir Hay Estate, Longton,

Stoke on Trent ST3 1SW

MPH, 10 Chandlers Court, Eaton,

Norwich NR4 6EX

SOFTVILLE PD SERVICE, 55

Highfield Avenue, Waterlooville,

Hants PO7 7PY

SOUTH WEST SOFTWARE

LIBRARY, PO Box 562, Wimborne,

Dorset BH21 2YD

The South West Software Library's hit list

Hit your friends with the latest and the greatest ST demo programs. Probe the limits of ST graphics and sound – see what the new crews are doing – amaze a granny today!

- The Lost Boys' DEF DEMO** The Definitive demo – the ultimate one that does everything – for now anyway
 - 007DEMO** Newer than new – Bond theme, radical sprites
 - The Union Demo** The smash of the summer. Found the hidden TEX screen?
 - TEX Amiga Demo** All-time classic gonzo emulation
 - RoboMix** From the makers of MicroMix: part samples, part visuals, all demo!
 - The Omega Demo** The fun starts when you press Reset
 - Like A Prayer** Mega samples, dynamite sequencing
 - Ghostbusters** The ST Squad's version
 - The Transylvania Demo** The Lost Boys present the first Heavy Metal sound demo
 - Captain Scarlet** We know that you can hear us, Earthmen!
- Nos 4, 6, 7 – DS disk and 1Mbyte RAM. No 1 – choose SS/512K or DS/1Mbyte.

Price: £3.00 each (1 to 3) or £2.50 each (4 or more) inc p&p
Lots more in our big 20-page PD software catalogue, free with order
Cheques, POs to: **The South West Software Library**
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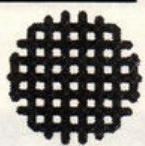
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Master Sound is Software Horizons' first sound package and comes from the programmer who created Prosound. One of the first things to hit you when you see the front screen is the similarity to Prosound. The whole environment bears more than just a passing resemblance to what was one of the first samplers to appear on the ST. Where it differs is in the addition of a simple sequencer which might not aim to challenge the likes of Steinberg 12 but will certainly offer a much-needed low-cost package for anyone looking to add music to their programs.

The entire package consists of a small grey box which plugs into the cartridge port, a brief A5 manual and the Master Sound disk. Contained in the



■ The 34-band spectrum analyser really moves when you get an input signal. Unfortunately the sound isn't played through your monitor.

disk are the main program, examples of sampled music and a demo program. The demo program allows you to add your sequences to a scrolling demo.

A SAMPLE OF SUCCESS

Master Sound behaves in the same way as Prosound as far as grabbing samples is concerned. Mono input is taken from a cassette player and fed into the cartridge. Then the wave form produced can be viewed using an oscilloscope option so that the perfect volume level can be obtained. Correct sample rates are selected and then the next step is to hit the Record key.

Once the sample has been grabbed it will appear in the display window as a wave pattern with peaks and troughs representing the volume. Two pointers at either end of the display can be dragged across the wave form to indicate specific areas which will be manipulated or played.

Now the sample can be subjected to all sorts of punishment using the icons and the shifting pointers. There are options to cut areas of the sample and paste them elsewhere, to overlay them in order to add an echo or to shift them up the scale so that a n-n-n-nineteen effect can be achieved. A useful feature not present in Prosound is the ability to fade the sample in and out and also to make volume increases in selected areas. With options to zoom in on areas of the sample, you can ensure that editing is as precise as you need.

Master Sound only offers sample

Samplers have made lots of noise at a hefty price. Master Sound breaks the rules at £35.
MARK HIGHAM
follows the beat.

rates in the region of 5kHz to 20kHz which can seem limiting when compared to others on the market such as AMAS which goes to 25kHz and Replay 4 which can stretch to a mind-boggling 50kHz. However, at 20kHz the sample can still be replayed with remarkably good quality. A feature to muffle the sample can then be used to remove the tinny sound which may result on the lower rates. In addition Master Sound is capable of compressing a sample so that one taken at 20kHz may be crunched down to 10kHz, losing some quality but still better than one taken at the lower rate. This might seem to be unnecessary but although the sampler operates on different rates, the sequencer only functions correctly on 10kHz.

MAKING A SONG AND DANCE

The sequencer is one of the more appealing aspects of the package, allowing you to load up to 18 samples and then play them back in a pattern. This feature works by assigning sections of the sample to the 18 keys on the keypad and then programming them to be replayed in order. Programming sees parts of the sample replayed each time

a key is struck so that you can listen to the effects created. At the same time these keystrokes are recorded so that the exact pattern may be replayed and edited later.

BASHING OUT A SEQUENCE

Setting up a sequence necessitates going into the front screen and sampling (or loading from disk) all the sounds that you will require. So, for example, a backing track might make up the first 30 seconds of sample, offering short bursts of music which can be replayed in a certain order to give a wealth of effects.

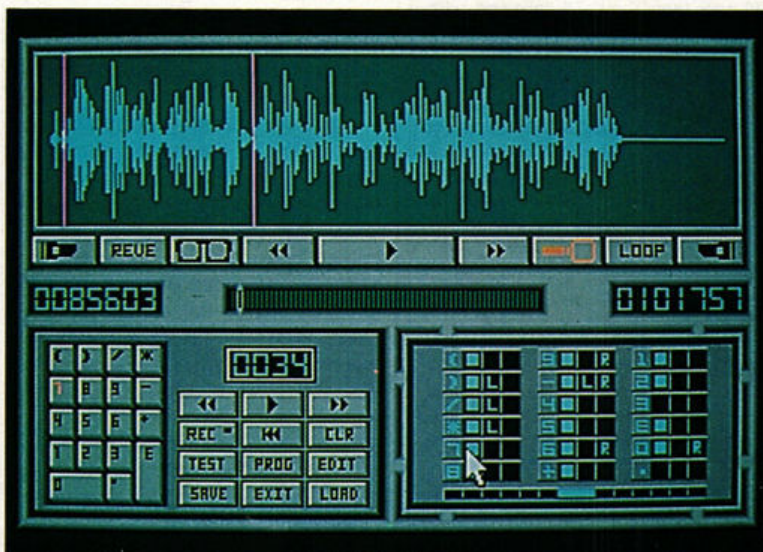
A brief intro section to make up the start of the track is also a good idea. Then to follow are series of speech and more impressive sequences which will be recorded to add life to the piece.

With all of these now in memory you go into the sequencer area of the program. Using the start and end markers on the wave form you can select areas of your sample and then choose either to play them untouched, loop them or reverse them. The section may be heard to ensure that you are at the exact point you want and then this section of the sample can be programmed into a key. This process is repeated for up to 18 keys.

With all your samples assigned to keys, the next stage is to set the sequencer on record mode. A tape counter is set to zero and the software waits for you to press a key before activating the record option. The pitch of the sample can be altered from the keyboard and then played by typing the keypad numbers. The pitch and sample are stored as the tape counter spins round.

The best way to go about creating a sequence is to record your backing track first and then overdub more elaborate sequences later.

Master Sound unfortunately only



■ The sequencer can be conjured up from the main display and allows you to program up to 18 samples into the keypad keys. These may then be replayed in any order you like. The letters next to the programmed keys indicate whether the sample will loop or be played in reverse.

MASTER SOUND

MASTER SOUND

plays one track at a time so it will quantise events into 20ths of a second. This means that if a key event is recorded over a previous one then the old event will be lost.

SOUNDING OFF

With the sequence completed, it can be replayed using the PLAY icon. The tape counter provides an exact indication of the moment when each key was pressed so you can fast forward or rewind to certain events and edit them if necessary.

Once all of this has been completed, the sequence can be saved to disk. The sample shown in the display window is saved in the same file as all the keystrokes. Because of the way the sequencer works, it is important not to alter the sample in the display window. Each key will recall a certain part of the sample so if that's changed then the whole sequence will be altered. Samples are saved in a .SAM format which is compatible with most samplers, however the sequences are not compatible with anything else.

GOING FOR A SONG

Master Sound's greatest asset has to be its price. At just £35 it provides a startlingly cheap way to enter the music market but it will in no way compare to the more expensive sequencers such as MIDI Studio or Steinberg 12. The manu-

THE MASTER OF SOUND

Ferry Rowasi is the programmer who created Master Sound. Among his previous projects are ProSprite Designer, Pro-Midi and Prosound Designer for Eidersoft.

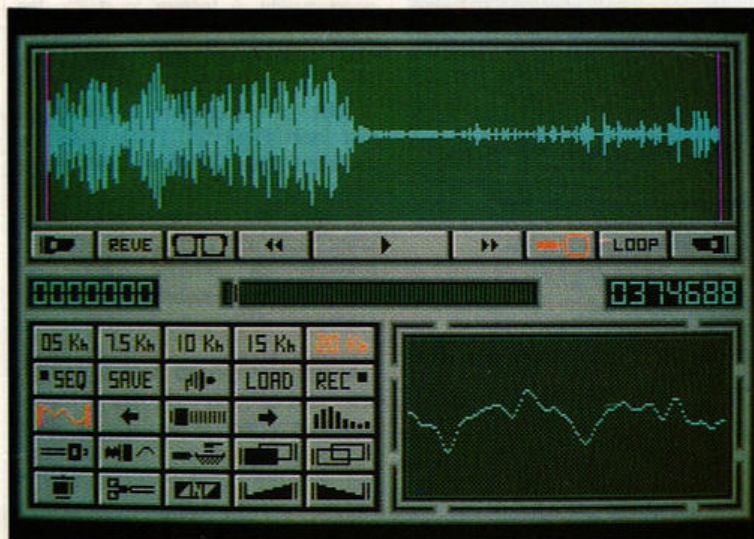
At 28, Ferry has done nothing but program computers ever since he kissed goodbye to school and his beloved PET - the Commodore model that is. A brief interlude with the Vic 20 and then the C-64 followed with Ferry finally ending up on the ST. 'It's my favourite machine', he admits.

Ferry took the idea for a cheap sound sampler to 2-Bit Systems in the hope that they could come up with a reasonably-priced cartridge. 'I wanted to use a cartridge,' says Ferry, 'because the sound quality is so much better. We used the printer port in Prosound to cut costs which meant that we left out filters. Master Sound does a much better job and the hardware is half the price.'

When 2-Bit Systems decided that the idea was possible, they came up with a prototype which was then given to Ferry who spent three months writing the software using Devpac. There were some problems using the cartridge for input but these were soon ironed out. When it was all finished the next step was to persuade Software Horizons to accept a reduced profit on the product so that it could be marketed at



■ Additional features to muffle the sample or raise the volume alter the waveform and allow you to adjust the quality of the sample. Since the Master Sound hardware already incorporates a filter these should not be necessary in most cases.



■ The oscilloscope allows you to adjust the volume of your input signal to obtain the best results. This, like the other features, can be easily accessed by clicking on an icon - a structure which makes Master Sound a dream to use.

al is simple which might be satisfactory for the general sampling features but is lacking in its explanation on using the sequencer. However, a few experiments soon remedy this.

With the samples compatible with most others on the market, it's simple enough to progress onto more expensive packages at a later date or even to follow the current trend in stealing tracks from games. However, the sequencer is less attractive.

Since this is not compatible elsewhere, there's the feeling that a decent program should have been provided to allow you to play a sequence within your own programs. But while there is software to take a sample and play it from BASIC or machine code programs, no such option exists for the sequences. There is an auto-boot routine which calls a demo to display Degas pictures and scrolling text while your sequence is playing but this does not let you run sequences within your own programs.

Master Sound is, therefore, a tool for playing with music and it does this well. The general environment is very simple to get used to and surprisingly effective results can be obtained in no time at all. If you want to add music to your programs then this has to be one of the best choices around. ■



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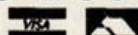
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PHOBIA

MIRRORSOFT/IMAGEWORKS – £19.95

Most shoot-em-ups set you down at the start of a hideous, twisting terrain and leave you to battle through wave after wave of aliens until you finally meet your maker. Even those that claim some kind of plot invariably have an unbelievable story-line. *Phobia*, however, is different in that the storyline has some relevance to your objective.

Lord Phobos has imprisoned the daughter of the Galactic President and is holding her captive on the surface of the Sun. Phobos has played on human phobias by surrounding the Sun with all manner of fearsome creatures designed to keep people away.

There are fifteen different planets situated in front of the Sun, inside each of these is a rare element which affords protection from the Sun and thus allows you to make an attack.

Nine of these have to be tackled in order to retrieve enough pieces of the special element to launch an attack on the Sun.

A display of the arrange-

ment of planets allows you to select a route through the planets towards the Sun. The horizontally-scrolling shoot-em-up section materialises once you get onto a planet.

Other active defence systems present on each planet mean that you need to collect space pods just to move between planets and track down those essential elements to increase the efficiency of your craft.

EFFECTS

The game claims to use 32 colours on screen at once and judging by the smooth tone which runs at the top and bottom of the screen, they're there.

The creatures that you have to shoot have been well-drawn with everything from spiders and snakes to dentists making up the different phobias. These are surprisingly large and soon occupy the vast majority of the screen. An end of planet alien also makes an appearance just to complicate matters.

With the lack of auto-firing and an accumulation of indestructible missiles this can soon make the whole affair a tumult of action.

Sound is limited to spot effects and is forgettable.

CONCLUSION

If there is a problem with *Phobia* then it is the difficulty factor. Surviving life on one planet is hard enough without

contending with the other eight.

Since such large sprites are being manipulated and the ST is pushed into doing horizontal scrolling, which it has never been able to do too quickly, inevitably the action can be slow. This limits the addictive factor but you'll still find it challenging to play, particularly if you're a shoot-em-up freak.

Mark Higham



■ There are fifteen different planets in front of the sun and you have to tackle nine of these to obtain pieces of heat shield.



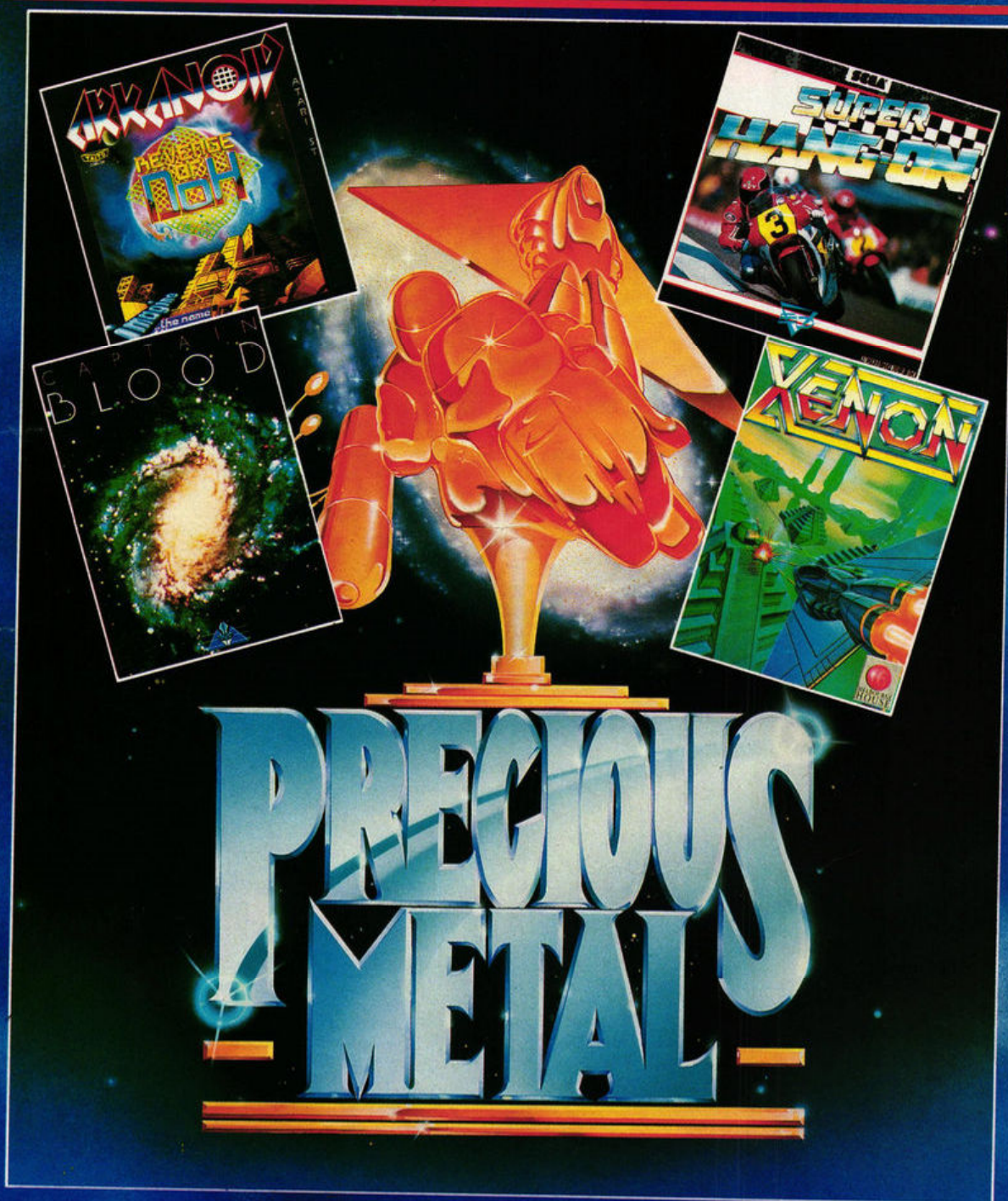
■ Pods must be collected if you're going to move between planets without losing one of your three lives.



■ The map where the arrangement of planets is displayed. You select which ones to explore in your quest to reach the Sun.

GRAPHICS	7
SOUNDTRACK	2
SHORT TERM INTEREST	6
LONG TERM INTEREST	5
OVERALL	65%

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Once upon the a time the world got badly burned in a nuclear holocaust. As a result of the rather large amounts of radiation drifting around with nothing to do but mutate things there evolved a lot of mutant beings (and beans).

Most of the mutants were just dumb and ugly, but there were the odd ones born with strange powers of the mind, psi-powers. Tuners is the name given to these gifted individuals and they became very unpopular with the dumb and ugly mutants.

The Tuners in this story are Raven and Sci-fi, two people in love (aah!), but now they're separated because Sci-fi has been captured. Raven must free her to live happily ever after (and if she's to live) and that's where the action starts.

Raven begins his rescue bid in front of the Master of Ordeals in the temple of Zorq, where Sci-fi is being held. To rescue her he must prove his worth by completing a series of tasks. There are five tasks in the first part of the game and each one requires a different object to complete it. Your purpose in solving puzzles is to obtain skulls, because five skulls are needed to become a Divo and only Divo are allowed into the second circle of the temple. Sci-fi is in the second circle.

Once you've rescued your beloved (a real fire

KULT

EXXOS - £24.95.

woman) it's time to foil the plans of the temple inhabitants who want to eradicate the Tuners.

EFFECTS

Exxos' previous game, *Purple Saturn Day*, had a distinctive style to the graphics and *Kult* is visually similar. Detail isn't great and there are many variations on the colour purple. Icons are used well and the method of selecting options is good - you click on a bit of brain.

Before the action commences you get a tolerable tune, but only just. If you've played *Captain Blood* then you'll recognise the sort of sound effects that you get as conversation, random gibberish that'll make you turn the volume down after a while. Other sound effects are good though.

CONCLUSION

Kult is basically an adventure with little text. There are problems to solve using objects and people to interact with, but instead of having to guess particular phrases which solve a problem you have a several options. Initially it's frustrating



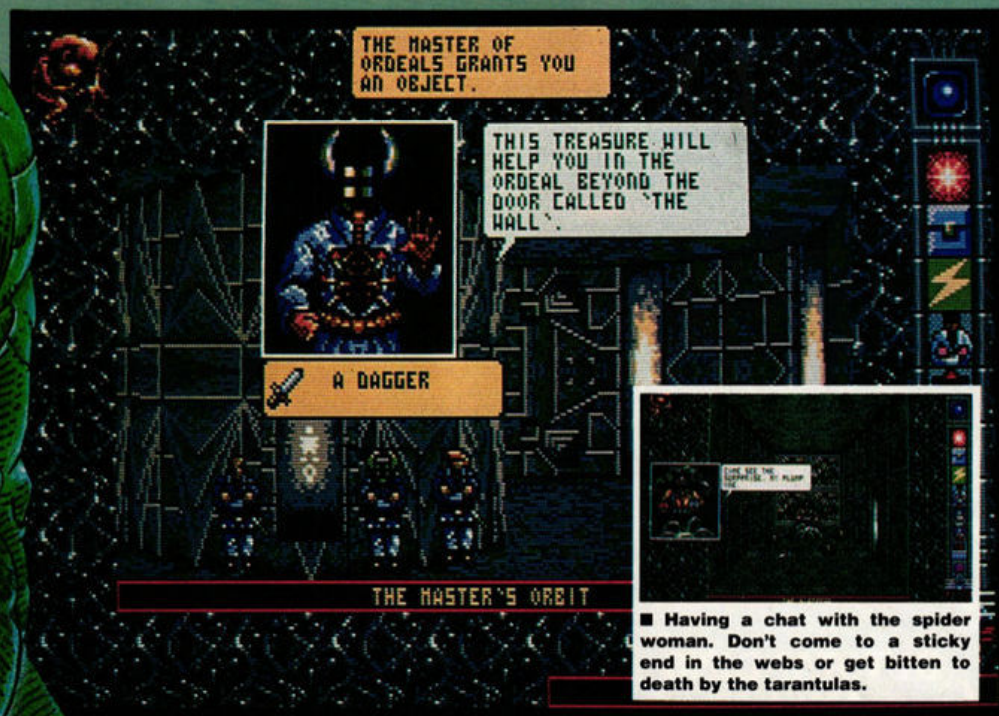
■ Careful use of your psi-powers is needed. They range from mind reading and seeing in the dark to violence and brain warping.

and you'll find yourself dying easily which can put you off, but perseverance, examining everything and some luck will get you past all the problems in the end.

Once you've solved it you're unlikely to play again, but that first completion is going to take time.

Gary Barrett

GRAPHICS	7
SOUNDTRACK	5
SHORT TERM INTEREST	7
LONG TERM INTEREST	6
OVERALL	73%



■ The Master of Ordeals gives you a gift to help you through the tasks ahead of you.

www.stormnet.com

A dark and foreboding cloud of fear hangs over the people of Bloodwych, for the demon Behemoth entombed within the great castle is once again beginning to awaken, soon to rise again and bring famine, pestilence, and death to the land.

A pretty tough spot for any unsuspecting peasant to find himself in, but all hope is not lost for, as legend would have it, the unification of the crystals of Sanguis which also lie deep within the castle of Bloodwych will seal Behemoth in his prison forever. If only they can find a chap or two for the job!

Imagine the classic *Dungeon Master* and add two player simultaneous action and a wealth of character/monster interaction and you are beginning to get a picture of what *Bloodwych* is all about.

The screen is split horizontally with each half showing the stats, options and a *DM*-style 3D perspective view for

BLOOCH

MIRRORSOFT - £24.99

each character.

On the right of the screen is a set of icons that gives access to the standard options you would expect to find in a role-playing game; fighting, inventory, movement and, of course, spells.

On the left of each half is a portrait of the character you are playing; a stats bar that shows how fit you are and three shields bearing a small picture of any other characters you have in your bold adventuring party (you can have up to four). Click on the stats box and all of this is replaced by icons for pausing/saving the game etc and,

most importantly, the communication menu.

Your original character is chosen from a menu at the beginning of the game. A large variety of character races are available, from humans and elves to skeletons and lizard men and there are four character classes; warrior, thief, wizard and adventurer. Warriors have high strength, thieves high agility, wizards high intelligence and lots of magic points and adventurers are charismatic good all rounders.

Once your character is chosen the quest begins. Each character has its own starting

position within the castle and these can be several dungeon levels apart so be careful who you choose if you wish to meet with the other player's party without too much exploring first.

On your travels you will meet other inhabitants of the castle, some friendly, some not so friendly, and this is where the game's unique communication menu comes into play. The menu gives a wide range of options from boasts, threats and small talk to trade and information gathering and the programmers have given every individual character its own unique personality. It is



■ Time for a quick browse of the spell book. Once you've chosen your spell a click on the trigger is all that's required.



■ Confronted with an enemy, Dr Flay decides attack is the best form of defence.



■ Mr Flay boldly heads on towards the prison while Eleanor thinks of having a rest.



■ Murlock Darkheart finds a curious sign while Megrim, her first follower in tow, stands before ominously closed doors.



■ Choosing your character before the quest begins.

BLOODWYCH



this, even more than the game's two player DM style, that makes it stand leagues ahead of the already stiff competition.

Conversation with the natives is the only way to recruit new characters to your party and the only way to gain those useful bits of local gossip that make life in the dungeon and your search for the crystals so much easier. Be careful who you approach though, for you are just as likely to get a sword in the belly as a juicy morsel of information.

The game's spell system is also worthy of note. No jum-

bling together of meaningless runes or fumbling around for obscure spell components here, just click on your spell book and thumb through the pages (a very nice graphical touch as the pages flip over as you browse) until you find your chosen magic and once selected a star shaped trigger icon appears on the main menu and it's ready for use.

Spells become easier to cast as you advance in character level, but at first many spells have a good chance of failing altogether, however, this can be compensated for by spending more than the required minimum spell

points, if you have accumulated enough of them.

EFFECTS

Dungeon graphics are very similar to those in *Dungeon Master*, if on a smaller scale, with rooms and corridors of grey stone or wooden boards fading into the gloomy darkness ahead.

Movement is also similar, working in a stepped effect much like taking a photograph with every stride you take. Animation of the character is also somewhat limited with the odd swing of the arms being about all you get. Despite this the overall effect manages to exude the medieval menace required.

Sound is limited to the odd spot effect but these are well placed, unobtrusive and add to the game's atmosphere.

CONCLUSION

Two player DM is not something to be sniffed at, but add to this the brilliant communications system, character personality profiles and the wonderfully simple but effective spell system and you're looking at one hell of a hot piece



■ It may be best to leave those mean looking barbarians behind bars.

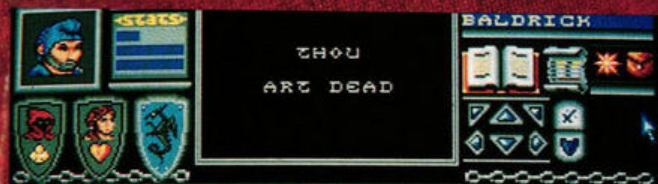
of adventuring software.

Bloodwych represents the way forward for computer role playing and though the ideas used in the game may not be very original, their implementation is easily the best yet seen on an ST.

With a vast castle to explore and a whole host of unique game options you and a friend are in grave danger of long sleepless nights pounding the path of fear in search of those ever elusive crystals of Sanguis.

Dave Packer

GRAPHICS	7
SOUNDTRACK	?
SHORT TERM INTEREST	9
LONG TERM INTEREST	9
OVERALL	95%



■ A spot of bother leaves Murlock's party dead with Baldrick taking the defiant last stand. No problems for Megrim though.



■ The two bold parties face each other. Could this mean battle?



■ Mr Flay discovers stairs down. Now he has a full complement of friends he feels more ready for the terrors below.



■ Mr Flay finds a red clad ninja to chat to and is not frightened to boast.

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Freeze punk, if ya wanna keep all yer important bits. This *King of Chicago* is Cinemaware's latest down-town interactive movie an' you gotta be one helluva gangster to last out the day.

The game is set in 30s and 40s Chicago with you assuming the role of Pinky Malone. The city has been left open after the imprisonment of Al Capone and someone has to take over the organisation so it seems natural that the job should head in your direction. Unfortunately there are others on the beat who don't agree. You have to call out the dirty tricks brigade if you're going to do a better job of keeping out the rain than a cullander.

The game is laid out in the old Fighting Fantasy books style - questions appear on the screen with a list of viable answers and then you must reply in a certain way to be led off to confront different challenges. Since the game usually opens with a different plot you can guarantee that none will be the same.

Aside from tackling just about every hoodlum who ever lived and some who didn't, you can make demanding visits to Lola, your mistress, and boy is she one hell of a girl - Lola gets what Lola wants.

EFFECTS

King of Chicago is visually very appealing. Full screens of clear, well-drawn, atmospheric

KING OF CHICAGO

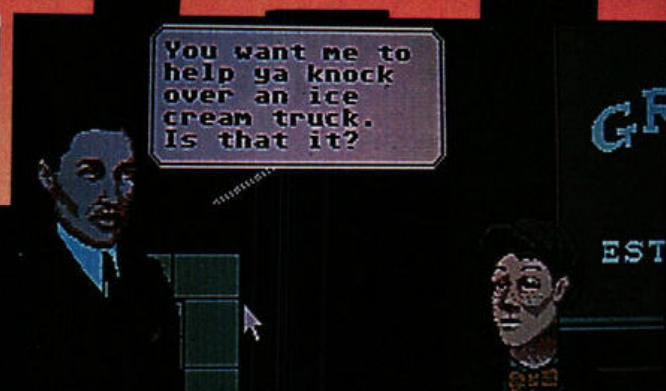
MIRRORSOFT - £19.95.

pictures make up the main display. Periods of animation occupy most of these scenes but unfortunately these are slow, jerky and not entirely believable. Sound effects aren't just poor, they're virtually non-existent. No sampled speech, no decent music or gunfire all combine to let down the suspense.

CONCLUSION

The size of scenario is very important in this kind of game where the ability to meet a different challenge each time is vital. This Cinemaware have admirably achieved. Clear, imaginative graphics add atmosphere to the whole thing but where the problems do emerge is in the speed.

King of Chicago is, in many ways, like an adventure game where paragraphs of text are read and followed so that the continuity of the storyline proceeds. This is accompanied by short bursts of ani-



■ Hero worship's a hard thing to handle.

mation in otherwise stationary pictures. All of this would make for the perfect environment if only you weren't left watching and reading all the time. At the very least a key press should lead you through the game faster. It would have been better to have a much larger number of interactive elements.

Being a Cinemaware game, a vast number of disk swaps means that a DS drive really is essential. Sound

effects could have been revamped and smoother graphics would have assisted in removing some of the tedium associated with viewing bursts of text and pictures.

However, *King of Chicago* has an exciting and unusual gameplan bursting with comic interludes. If you're prepared to put up with the agonising waits and put a lot of time into it then you can find a challenge.

Mark Higham



■ Life's tough for gangsters in the depths of Chicago. Ya live by yer instincts an' that ain't good for the soul. One of the first tricks ya learn in this business is the power of a good shoot-out - in one fell swoop ya can kiss goodbye to all them dirty rats. Inset: The calm before the storm.



■ Ma weeps at your funeral.



■ Lola gets what Lola wants.

GRAPHICS	8
SOUNDTRACK	2
SHORT TERM INTEREST	3
LONG TERM INTEREST	6
OVERALL	61%



US Gold have agreed to give away a Thunderblade arcade machine as part of the launch of ST Format. Answer the questions on a postcard and drop it off to our usual

Now it's your turn to take the wheel of a helicopter and fly through one tortuous level after another in search of the ultimate accolade – to be the best. Without doubt Thunderblade is one of the fastest games around and now US Gold are giving you the opportunity to win a second-hand arcade machine.

US Gold are considered the masters of coin-op conversions with such hits as *Outrun* and *Forgotten Worlds*. Thunderblade was last year's Christmas No. 1 conversion and if you were a fan of the game then here's an opportunity to master the arcade game for absolutely nothing.

You could be the lucky winner of this illustrious machine in our competition so why not answer the three questions below and send your answers on a postcard to US GOLD COMPETITION, ST FORMAT, FUTURE PUBLISHING, 4 QUEEN STREET, BATH BA1 1EJ. The winning entry will be pulled from a hat on August 10th so make sure you have submitted your entry by then.

QUESTIONS

If a Thunderblade helicopter landed on your front lawn how tall would you have to be to have your head whipped off by the blade?

- a) 6 ft
- b) 9 ft
- c) 15 ft

Outrun was a game involving which type of craft?

- a) Microwave ovens on wheels
- b) Ferrari Testarossas
- c) Sinclair C5s

US Gold have recently released a shoot-em-up for the ST. What was it called?

- a) *Worlds of Bios*
- b) *Forgotten Worlds*
- c) *Roger Rabbit Goes to War*

RULES

1. Competition entries must be received by August 10th if you want to participate. Anything received after this date will be ceremoniously ripped up.

2. Employees of Future Publishing and US Gold may not enter unless they want to be packaged and tossed from a helicopter at 12,000 ft.

3. The editor's decision is absolutely final and no correspondence will be entered into – so no complaining if you don't win.



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Talespin is a package which allows the collecting together of drawings, texts and sounds onto a series of pages together to form an interactive story, guide or textbook, which is read purely by clicking the mouse on the drawings or texts. Variables may be used to control the flow of narrative or record progress made. Talespin itself is entirely mouse-driven and very user-friendly, requiring no programming skills for its use. It includes an art package as well as importing Neochrome, Degas or IFF picture files and also imports ST-Replay or Amiga A.M.A.S. created Digitised Sound. The use of sound is optional. Its facilities include giving full details of disk space usage, location of all pages referring to any particular page, drawing, sound or variable, completely interactive development allowing changes to any part of a title at any time, the copying of drawings and sounds from other titles, the 'chaining' to other titles allowing the spreading of a story or textbook across several disks, and the provision of Demo mode, which allows a title to run on its own for demonstration purposes.

WHAT IS IT FOR?

It can be used to create interactive adventure games, for profit, pleasure or instruction. Or in business to create a sales demonstration, or product servicing manual. Or in education: either using Talespin itself to teach the design and logic of computer systems in a non-technical way, or using Talespin as a vehicle for the teaching of any other subject. Or create an expert system with it. Or a school magazine. Or...

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Once you've finished developing your program whether it's an adventure, an educational program or other you can lock your program so no one can enter the development mode.

TALESPIN comes with a public domain display program called "Telltale" with this you can distribute your own programs or offer them to publishers.

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The manual comes as a complete Tutorial with a scaled down version of "The Grail" adventure and also a comprehensive reference guide.

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colour *Page entry options *List conditions *list/set variables *move drawing *swap
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REVIEW FOR TALESPIN

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MICRO COMPUTER MART: 'Talespin in my opinion, is a highly commendable program.'

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LICENCE TO KILL

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Britain's number one secret agent is back with a vengeance, well he's back for vengeance in fact. James Bond has a licence to kill and Domark have a licence to the film. The result of which is a simultaneous release of the game with the national launch of the film.

As with all Bond movies there are as many young ladies as there are bad guys, unfortunately though the game concentrates on 007's day time activities as he tries to defeat a drug smuggler by the name of Sanchez.

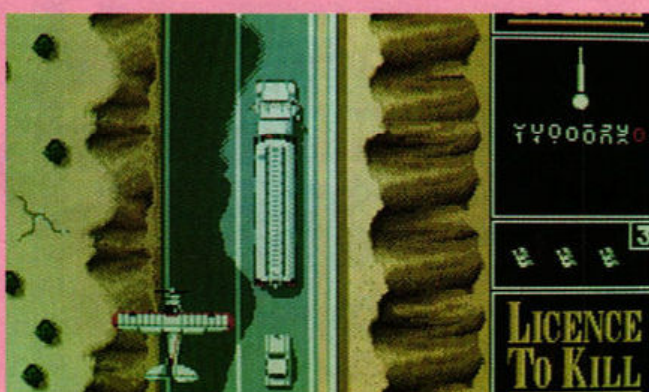
The game is split into six different stages which starts with Sanchez escaping in a jeep and you have to pursue him in a helicopter, avoiding his henchmen who are being paid good money to blast you from the skies. Scene two switches to a *Commando*-style game of hunt the henchman while trying to find your old mate Sanchez after which you return to the helicopter. Sanchez has opted to leave the country and head for Cuba in his plane. Not being the sort of person that lets the bad guys get away you decide to chase him in your helicopter. Your

CIA buddy, Felix, guides the helicopter through the cloudy skies while you dangle from a rope and try to drop on the tail of Sanchez' plane. If you succeed then you can force the plane down and the action switches to scene four, fail and you'll get a Stinger missile up your bottom and have to try again.

In scene four you interrupt a drugs drop and have to swim for your life as divers and boats come gunning for you. Eventually a sea-plane lands and you have to fire a harpoon into the floats. Hit the plane and scene five begins with you barefoot waterskiing your way to the plane. Boats and rocks get in your way as you try to get to the plane. Finally you catch up with Sanchez' drugs convoy which is stored in a fleet of 18-wheel oil tankers. Your first task is to land on a tanker and take control of it, from then on you have to knock the other tankers off the road and once that's over with you can go around again.

EFFECTS

The sound effects are a bit on the tinny side, but they're adequate



■ 007 gives chase to a convoy of tankers with a cargo load of drugs. He'll have to keep an eye open for Stinger missiles though.

and there are some good tunes on the title screen and in the game itself. Sprites are both large and colourful and the background scenery scrolls quickly and smoothly.

CONCLUSION

Plotwise it's not what you'd call an original concept, but the game is presented well and has enough addictive qualities to keep you busy and frustrated for a long time.

Licence to Kill is the best of the Bond games to date and I'm

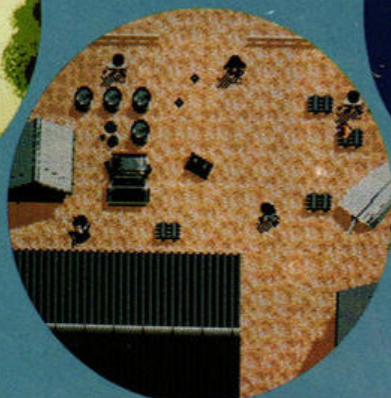
sure that when Timothy Dalton next dons his 007 hat Domark will be in there after the licence to sell. Lets hope they keep up the good work.

Gary Barrett

GRAPHICS	7
SOUNDTRACK	6
SHORT TERM INTEREST	8
LONG TERM INTEREST	6
OVERALL	76%



■ Bond's on the ground and looking for trouble with his gun in hand and plenty of henchmen to blow away.



■ Scene one has Bond chasing Sanchez from the pilot's seat of a helicopter, while Sanchez's men try and shoot 007 down.



■ Sanchez makes an escape bid in his plane in scene three. 007 tries to drop on his tail while Felix guides the plane



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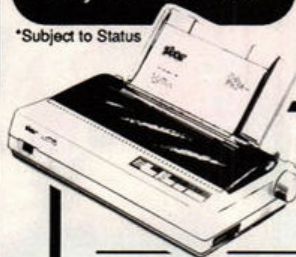
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Look for reviews in
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GARFIELD

A WINTER'S TAIL

SOFTEK/THE EDGE. £19.95

The seasons come and go and with them appear all sorts of relevant software – car games timed with famous races, Bond games timed with the release of new films, classic shoot-em-ups aimed at the Christmas junkie and, of course, games about winter timed with the first fall of snow. Well, that at least, was the intention with the latest Garfield game. Delays changed that a little.

This latest Garfield

extravaganza sees you confronting five challenges which range from skiing in the Alps to eating ridiculous amounts of lasagna. Garfield has fallen asleep in front of the frosty gasps of breath from the fridge and the challenges are really dreams entertained by this furry orange bundle of food.

Out of the five different challenges you can select three from the main screen where Garfield sleeps. These consist of a jaunt down the Alps, a visit to the chocolate factory and a burst of skating across a frozen lake. All of these dreams require you to eat as much food as you can find otherwise Garfield will suffer hunger pangs and wake up, indicating the end of a game.

You can choose to complete each level in turn in which case you approach the following levels with increased energy and hence last longer. This method also gives you access to the other two levels – the lasagna factory and the grand finale, the Swiss village.

The wild and wacky objectives for each level range from eating the

chocolate footsteps left by a hoard of charging chickens to gulping down as much lasagna as possible.

EFFECTS

A Winter's Tail is graphically very similar to the original Garfield game from last year. A large, animated Garfield and Odie parade across simply decorated landscapes. Some of these are so simple that there's nothing else on the screen – particularly in the skiing level. With such gigantic sprites being manipulated, the game unfortunately suffers from a lack of speed which does little to heighten the addictive factor.

Sound effects are limited to the Garfield tune which plays throughout the game and can only be extinguished by dropping your machine from a great height or locating the volume control.

CONCLUSION

With *A Winter's Tail* split into five separate challenges, you can approach a more diverse range of tasks than were possible in its predecessor. However, these are not fantastic by any stretch of the imagination. A lack of speed is one of the most serious limitations. The skiing level in particular

suffers from being too slow but it's perhaps more noticeable here because it's the kind of challenge which has surfaced in many an arcade action game.

The opportunity to kick Odie and the eccentricities of the challenges combine to reinforce some of the classic comic elements of Garfield. If you're a fan of the series then the game will hold just as much appeal.

Mark Higham



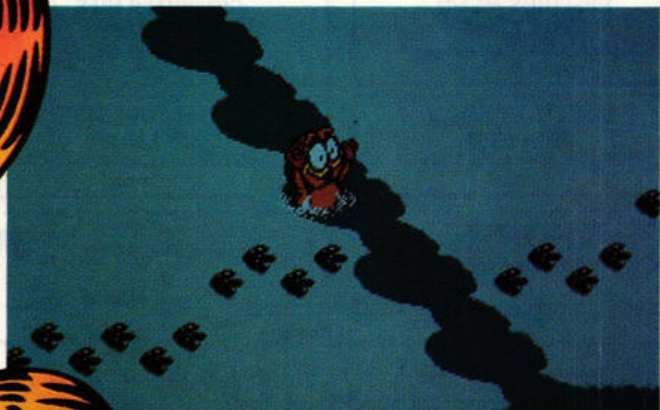
■ To sleep, perchance to ski.



■ A bout of mountain skiing is Garfield's forte but it's not easy trying to snatch the food as you whizz past spectators.



■ No, it's not an electric chicken. The chocolate-laden pipes must be directed towards the chickens. It's not easy.



■ Onto the lake for a paddle. The chocolate footsteps must be followed to track down that awesome chicken. Hang around for too long though, and a shifty character appears with a saw and makes things tougher.

GRAPHICS	6
SOUNDTRACK	3
SHORT TERM INTEREST	7
LONG TERM INTEREST	5
OVERALL	70%

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LET SLEEPING GODS LIE

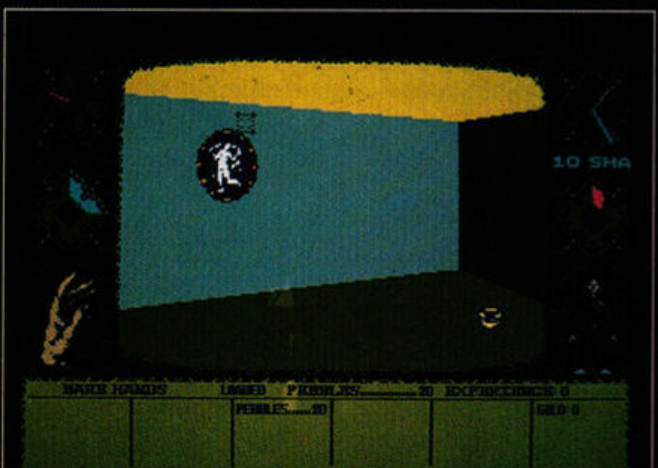
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■ The book gives background on the game and information on the gods and the world of Tessara.



■ Just north of your home you'll find a hermit who will aid you provided you find a map that was stolen by a bandit. Most problems in the game are like this, you solve one to help you solve a previous one and eventually you'll wake the sleeping god N'Gnir.



■ Play begins at home where you'll find two essential items to your quest, an earthenware bowl and some pebbles. Initially pebbles are your only weapon, but you'll find more as you explore Tessara.

In the beginning there was nuffin', then these gods zapped into existence and said unto each other "Ere, John, wouldn't it be a laugh to make some mortals and stick-em on a planet?" and thus was created the world of Tessara. Having done their bit of model making they grew bored and one said unto the others "Right then, last one in the pub buys the drinks." One god, N'Gnir, got left behind, because he was asleep and missed out on the drinks.

Ok, so I lied a bit about the scenario, but that's close enough. You're on a mission to god (though your name is not Elwood) and must awaken him. To achieve this you have to travel through the eight kingdoms looking for clues to his location and finding objects to aid you in your quest.

The action is viewed in 3D from your eyes as you wander over the huge landscape. A panel at the bottom of the screen shows what objects you're carrying in your inventory, weapons, gold, experience and weapon currently selected.

There's also a compass, clock and stamina indicator which gradually decreases until you the time comes for you to die.

EFFECTS

The background to the game is provided by an on-screen book which you flick through and the pages turn smoothly to reveal the plot and history of Tessara. In the game itself



■ Are you a man or a mouse? This guy sure doesn't know.

everything is viewed in a fairly simplistic 3D and animation is poor, but everything moves around smoothly and quickly. Sound in the game is just simple effects and explosions and the only tune is played when the game is loading.

CONCLUSION

Let *Sleeping Gods Lie* is in essence a typical computer adventure, finding objects, solving puzzles, helping people and generally doing adventurous things. What makes it different though is the 3D aspect. It makes mapping much easier and the lack of command line interpreter means that you are never told "You can't do that".

Gods is similar to the *Freescape* games from Incentive. The 3D is not as good, but the improved speed does help considerably. Problems are of a similar nature although there is more character interaction than blasting to solve the problems.

It's a nice idea that's executed well, but falls short of excellence due to the time you spend travelling and the number of bad guys you must kill.

Gary Barrett

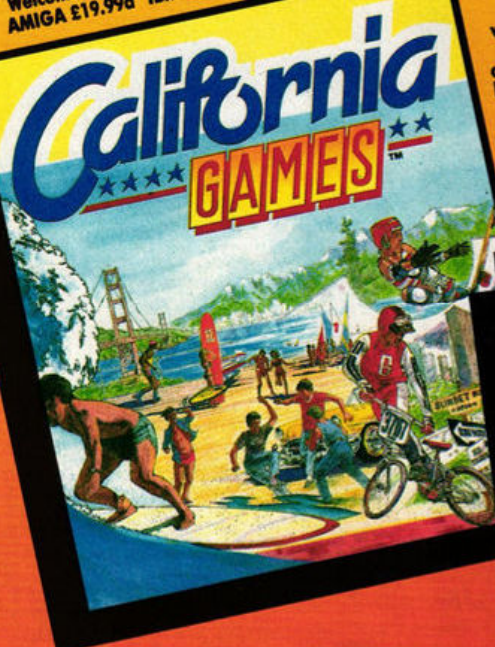


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GRAPHICS	6
SOUNDTRACK	5
SHORT TERM INTEREST	7
LONG TERM INTEREST	6
OVERALL	72%

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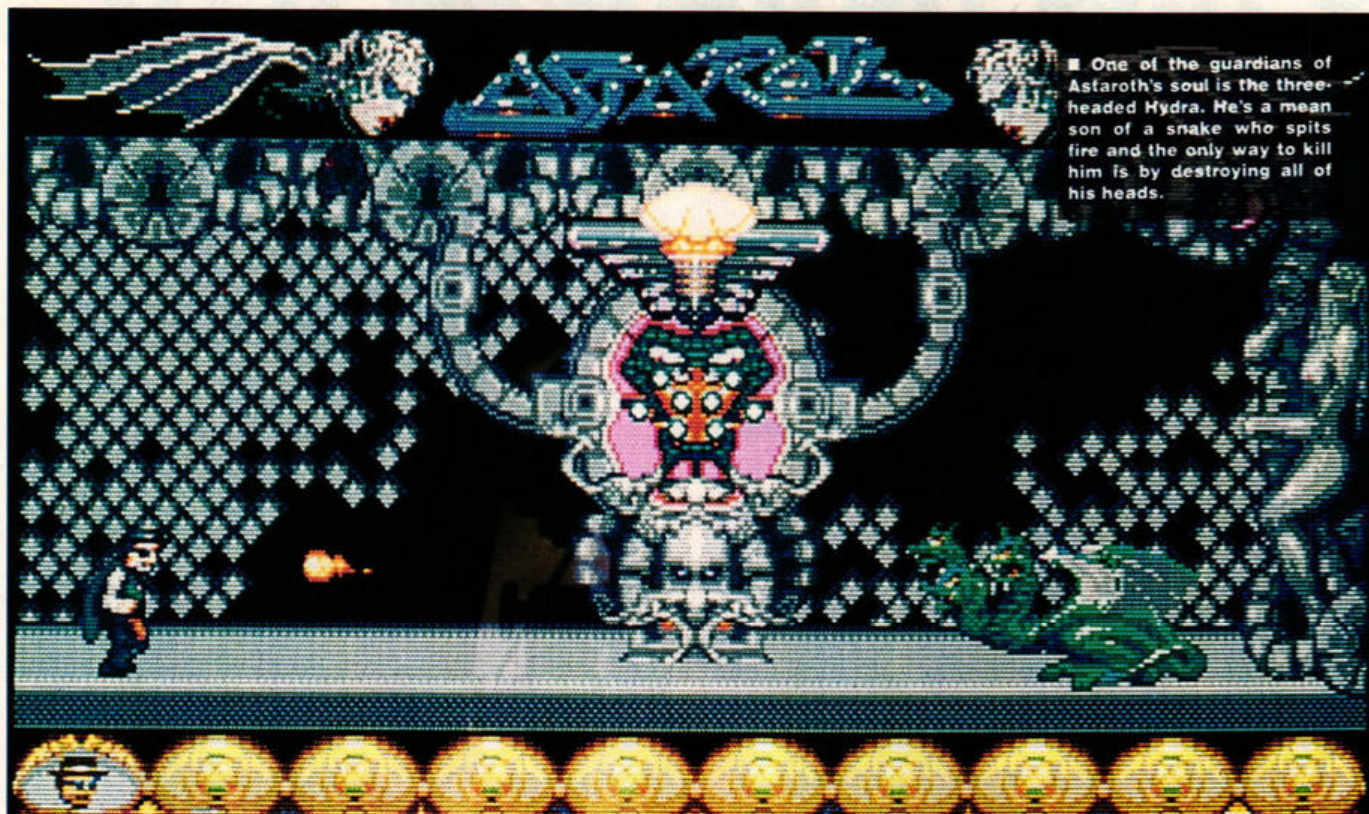
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■ One of the guardians of Astaroth's soul is the three-headed Hydra. He's a mean son of a snake who spits fire and the only way to kill him is by destroying all of his heads.

ASTAROTH

HEWSON – £24.99

Ozymandias is tough. He's the sort of guy that laughs at danger, throws caution to the wind and leaps without looking. Yes, that's right he's a hero. Now he's heard a rumour about this mean lady by the name of Astaroth, called the Angel of Death by her friends, who lives in a hill. Also inside this hill are a lot of her friends who guard the labyrinthine crypt.

Her three best buddies are: Sphinx, Hydra and Marilith the demon. They look after Astaroth's soul and get very cross with anyone who trespasses, Ozymandias for example.

You start the game near the top of hill with nothing to defend

yourself with but your hands. The hill is made up of a multitude of interconnected caves which are filled with Astaroth's friends. Coming into contact with any of them is bad for your health, maybe even fatal.

In certain chambers there are objects that you collect when you move over them and they give you mental powers. There are nine powers in all: telekenetics, pyro-kenetics, telepathy, shapeshifting, levitation, transmigration, cryo-kenetics, night vision and meditation. Telekenetics lets you use your mind to collect objects that would normally be out of your reach. Pyro- and cryo-kenetics are mentally destructive powers.

The only way to go is down at first, but with the aid of levitation you can travel upwards or shapeshifting can turn you into a bird which achieves the same result. Night vision speaks for itself and transmigration lets you travel without all that tiring walking. You'll need to collect all of the mental powers to stand any chance in the battle of wits with Astaroth at the end of the game.

EFFECTS

There's an excellent (if a little under dressed) picture of Astaroth herself on the loading screen. Sprites are smoothly animated, but not particularly big and colour in them is used well. The background scenery is well drawn too and the scantily clad theme of the game is carried on here with statuesque nudes holding up the ceiling. If you want to see more nudes then look no further than the instruction manual where you'll find a topless harpie, water elemental, sphinx and your old friend Marilith the demon.

Hewson are consistent in the quality of the music for their

games and thankfully it's consistently good unlike some software houses that I could mention. Sound effects are likewise good.

CONCLUSION

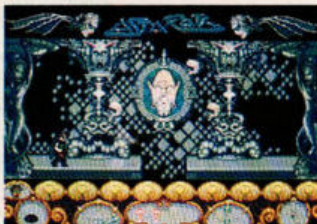
Your first few games of Astaroth will be short lived and you're better off spending your time finding the right route to the mind powers and generally learning the map of the caverns. After overcoming the initial frustration of being able to do little to defend yourself you'll get into the swing of things and gradually work your way deeper into the labyrinth.

It's another of those games that you'll only ever play to completion once, but you'll get plenty of enjoyment out of it.

Gary Barrett



■ What a rude place this is. I don't know where to look, nude statues everywhere. There are plenty of bad guys around to keep your eyes averted though.



■ Across the bottom of the playing area are 10 icons that show which mental power you're using. Here Ozymandias is levitating his way back up a shaft.

GRAPHICS	7.5
SOUNDTRACK	7
SHORT TERM INTEREST	7.5
LONG TERM INTEREST	6.5
OVERALL	72%

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Could you have rewritten history by changing the outcome of that historic battle at Waterloo? PSS have released their latest war game which offers you the chance to replay the battle between Napoleon and Wellington which took place back in 1815. The troops under your command closely resemble those who actually took part in the battle.

Inevitably any game like this is going to be compared to *Borodino* – Atari's classic wargame – and one of the first things to strike you is the astonishing similarity between the two. This is hardly surprising when you learn that both games were written by the same programmer, Dr. Peter Turcan.

This type of strategy game can usually be split into two categories – simplistic, frivolous affairs which aren't meant to be taken seriously and dedicated, accurate games which have been lovingly recreated to be as realistic as possible. *Waterloo* definitely falls into this latter category, being a serious attempt at recreating history.

You take on the role of commander-in-chief – either Napoleon or Wellington. This enviable position means that you do not move your troops around the battlefield like chess pieces but instead issue orders to your corps commanders who in turn issue their orders to the generals. These commands are then passed down

WATEL

PSS/MIRRORSOFT – £24.99

the line until they reach the relevant troops. It's possible that an order may not even get to the troops if a rider is killed somewhere along the route. The advantage of this approach is that realism is sustained at every step – that is, the whole thing can become a complicated mess just like real war.

The battle lasts from

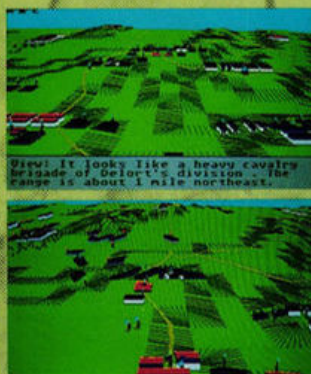
11.30am until 9.30pm with up to eight orders issued per turn, representing 15 minutes of real time. The orders can vary from simple commands such as 'Lobau give support to Reille', in which case Lobau is left to decide how best to give his support, right up to something more specific like: 'Lobau form a defence line from two miles North of Frichermont



■ The Duke of Wellington and the Emperor Napoleon clash swords in the latest war game from PSS. It's written by Dr. Turcan who's the same programmer that created *Borodino*, Atari's classic wargame. Hence, the basic display and layout of the game is similar.



■ The pointer (above) can be moved over areas of the map and clicked to provide information (below).



■ The game may be set to show notes about what's happening during play.

SKY FOX II

ELECTRONIC ARTS – £9.99

Electronic Arts' *Skyfox II* boldly goes where so many space video games have gone before, but some new final frontiers are tackled here. So, whether you be



■ Within starbase Tokyo pre-launch countdown complete, waiting space doors to open.

a veteran James T., a spotty young Luke, or a druggy Major Tom, take your protein pill, put your helmet on and kick some green Xenomorph ass.

You begin in one of scores of Federation starbases to which you'll return on numerous occasions for repairs, energy and munitions. As a member of the elite warp-warriors you'll have to lock photons in mortal combat with Xenomorph fighters. To aid the fight you have neutron disruptors (your run-of-the-mill laser), photon pulse bombs and anti-mat-

ter mines. A handy on-board computer keeps you informed of any UFOs within range and monitors all weapons systems. Considering that the game requires you to blast at ships the moment they appear this can come in useful.

There is a novel form of locomotion involved – wormholes, remnants of spent black holes, suck your ship into a spectacular flight to any other point in the universe, which is handy if you're a long way from home and in need of a little TLC. But be warned, Xenos sometimes lay in

ambush by wormholes so it's best to come out fighting.

Inevitably you'll suffer damage so repairs are essential. These can be made by finding a friendly starbase. Unfortunately repairs take time and you may have to leave before completion in order to defend the mother ship from a bout of Xenos.

EFFECTS

Animation of the stars and craft is fast, smooth and of effective 3D quality.

Each star maintains its perspective as you whizz past but don't become too pie-eyed or you'll end up pulverised by an asteroid field. Both kinds of hazards appear thick and fast. Xenomorph fighters appear from nowhere in groups of up to eight and are

WATERLOO



based on the scene in front instead of an overall map, so realism is an important factor. Viewpoints can be changed.

Screen updating is fairly slow but this is unimportant in this type of strategy game.

CONCLUSION

Waterloo is surprisingly easy to get to grips with even for someone unused to war games. Options to replay the war based on the original historical orders or by going for your own, mean that you're going to be playing Waterloo for months before it'll become boring. Quite simply, Waterloo is brilliant.

Mark Higham

linking with D'Erlon to the west flank.' It takes some time to get to grips with the way to go about giving orders but there's an option to watch the computer playing itself so you soon pick it up.

Waterloo can be played either as a one or two player game with options to view the orders from both sides as they are made or go for the more realistic approach by

playing so that you see nothing your commander-in-chief would not have seen.

EFFECTS

The views on screen are shown exactly as they would have appeared had you been at the battle so when playing the game you are forced to make decisions



Mail: 4 pm Wellington, a request has arrived from Lancey. My corps needs artillery support to attack 1/2 mile southwest of La-Haie.

4 pm Orange is deciding his moves

The commander-in-chief (you) can only order divisional generals under you. These will then dispatch orders to those below them until the troops receive the command. All of it takes valuable time and riders may be killed so that orders never reach their intended recipient.



At the start of the game both sides have been issued with the same orders as those in the actual battle. These can be changed so that the battle may be replayed differently.

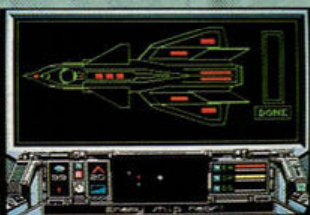


Seven types of orders may be issued to your troops. These range from battle orders to defence and attack line commands such as giving support to weak armies or retreating from battle.



Support may be given to troops under pressure - useful near the end of a battle.

GRAPHICS	8
SOUNDTRACK	N/A
SHORT TERM INTEREST	7
LONG TERM INTEREST	9
OVERALL	91%



Well needed repairs in progress.

agile and fierce, although knocking out their starbase tends to make them scarper.

Sound effects are limited to unimaginative beeps and burps which do little to enforce the atmosphere.

CONCLUSION

The action can be a bit extreme. Lock on dog fights are tough and too short in duration, and hence

quite ferocious, while the opposite is true for long haul flights on auto-pilot, where you can find yourself finishing that thank-you letter to auntie Mabel, or brewing that essential cuppa to prepare for the next Xenomorph encounter.

The flight animation is a joy, so if you fancy a jaunt through the constellations with occasional skirmishes, this may just turn you on.

Pac

GRAPHICS	6
SOUNDTRACK	2
SHORT TERM INTEREST	7
LONG TERM INTEREST	2
OVERALL	58%



An engaging scene of approaching Xenomorph fighter at 8 o'clock high. If you can't stand the heat then thwack on the hyperdrive, autopilot, and out manoeuvre dense random clouds of asteroids.

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On a planet that's not far, far away (Earth) there's a war going on between those capitalist pigs and communist dogs. You have a choice of playing against the pigs, the dogs or taking on a human opponent.

Before you get into the conflict you can choose which of the three scenarios to play, the length of the scenario and computer difficulty level. There are a few other options to customise the scenario a little more, including chemical weapon usage and season.

The battlefield is made up of thousands of hexagonal tiles in which both your and your opponents forces are displayed. Only a small section of the map is displayed, just over a hundred hexes worth. Down the side of the screen are a row of icons that allow the map to be scrolled and provide information on the whole battlefield.

Special operations, air strikes and paratroop assaults can be called up from the menu across the top of the screen. Political, strategic, and weather reports can also be obtained from the menu.

Everything is controlled by the mouse including giving your



■ In the blue corner we have the capitalists and in the red the communists. Battle has just commenced and the West looks heavily outnumbered.

troops orders – it's just a matter of selecting the unit and clicking on the route that you want it to take.

The airforce play a very important part in the game and can shift the balance of the war in your favour. Airstrikes can be called up and sent to destroy your enemies airbases, disrupt his supply lines or attack concentrations of his forces. Air support and reconnaissance are also useful to your war effort.

After each movement both

NATO and Warsaw Pact airstrikes are resolved and then ground based combat takes place. Reconnaissance and supply phases follow and then it's back to movement again.

EFFECTS

Sound is hardly worth mentioning, because there's very little of it, there's ping, ping and errm... ping. Although the graphics are colourful there's little animation and scrolling of the playing is area is slow. Alert boxes are used frequently, but they're the boring standard ones that you get on the ST, it would have been more visually appealing if they were redesigned by the programmer. A lot could have been done to make the game look better, but it just wasn't bothered with.

CONCLUSION

Red Lightning is another fairly standard war game that's up to the standards of SSI's other war games.

It's about time that war games were made more attractive to the general public rather than being aimed specifically at the minority of dedicated enthusiasts who'll probably buy any game that comes out, simply because there are so few released. Many potential buyers are put off by the boring presentation and huge, but detailed manuals that accompany the games.

Gary Barrett

GRAPHICS	6
SOUNDTRACK	1
SHORT TERM INTEREST	5
LONG TERM INTEREST	7
OVERALL	64%



■ Airstrikes, support and reconnaissance aircraft can be used to help shift the balance of the war.



■ An overview of the whole battle can be called up with a myriad of blobs to represent the forces of NATO and the Warsaw Pact.

NAVY MOVES

DINAMIC/ELECTRONIC ARTS – £19.95

Dinamic introduced the public to the lifeless *Army Moves* last year and they're hoping to reaffirm their position with this new game in the same vein.

The objective of *Navy Moves* is to destroy the enemy's U-5544 nuclear submarine. An easy task, you chuckle? You have to complete a two-stage nightmare of bullets and bombs before you even get the opportunity to attempt it.

The first stage places you in a plastic dinghy customised with a super-fast engine. You must race along at speed, leaping over the floating mines and blowing up opposing motorboats.

The mines come at such a ridiculously frequency that you spend more time in the air than you do in the water. There is little variation in level one but once you've worked your way through the maze of mines then it's into the second level. This is not the only route through to this part of the game – an option at the beginning allows you to select to go straight into level two.

This is a standard platform shoot-em-up – you must blast every character who moves. It's set inside a maze of elevators and floors inside a submarine so you tend to encounter a legion of navy officials. Searching one of these will reveal certain codes necessary to complete the challenge, for example, opening the door to the base of the reactor.

A range of weaponry comes in useful for wiping out the more dubious characters although it's not too difficult to avoid offending enemies by taking advantage of all the elevators.

EFFECTS

There are some attractive sprites in the game. The enemies in the platform level are effectively portrayed and realistically drawn. They have not been animated too brilliantly and they're far from menacingly massive but this is compensated for by some fast action sequences. These aren't easy to tackle since the screen can often

become grossly overpopulated with enemies.

The backdrops in the first level are striking. The sea looks good and the reddened sky is very eye-catching even if it does make distinguishing the identically-coloured red mines damn near impossible.

Sound is limited to standard spot-effects some of which are fairly dire.

For example, when you're in the dinghy, you can fire missiles to blast away any other craft; unfortunately every time you fire a missile the noise of the engine disappears, your missile is fired and then the engine noise returns – not exactly realistic.

CONCLUSION

Army Moves was a ridiculously difficult game to play and *Navy Moves* has inherited the same complexity. Level one is annoyingly hard to survive, especially when the other boats make an appearance but what is most frustrating

here is that after every collision with a mine you're immediately returned to the start of the level.

If you can survive this then level two poses yet more problems. Men appear out of nowhere to make life under the ocean wave a misery. When the screen becomes a hive of activity it's not easy to keep track of all the action so survival is limited to a few brief minutes.

Navy Moves boasts a better gameplay than its army counterpart – which isn't too difficult – but it's still the type of game which is good for a few brief plays but becomes quickly boring.

Mark Higham

GRAPHICS	6
SOUNDTRACK	2
SHORT TERM INTEREST	6
LONG TERM INTEREST	4
OVERALL	69%



■ *Navy Moves* is Dinamic's follow-up to *Army Moves*. It's split into two levels – a sea adventure and a platform shoot-em-up.



■ Swimming through an underwater cavern with hostile divers in abundance.



■ Running along in the platform shoot-em-up stage of the game.





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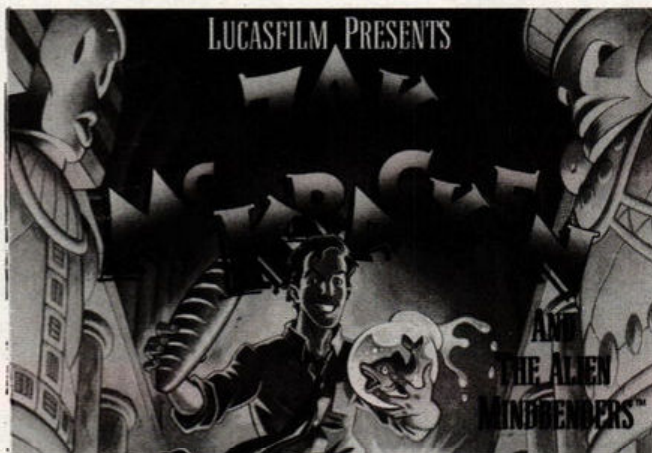
ZAK MCKRACKEN

This month there have been lots of letters from poor adventurers having problems in that little game called *Zak McKracken and the Alien Mindbenders*. Spiros Gaoutsis from Salisbury has been hard at it trying to solve the game and has these tips for people still struggling through the early stages of the game.

First of all go to the chest and open the drawer where you'll find the phone bill. Pick it up and walk to the desk. Use the phone bill with the cashcard and you'll be able to get the cashcard from under the desk. Inside the desk drawer is a kazoo that you'll need to use later to attract the attention of the sleepy bus driver. Get Sushi off the desk and use her in the lamp. Don't turn the lamp on or the poor dear will suffer. Turn on the answering machine while you're by the desk.

Tear off the loose wallpaper and go into the kitchen where you'll find some yellow crayons in the cabinet. Use the crayons on the wallpaper and you'll have

If you encounter problems that just can't be solved, or lose your last life when the end is in sight, then don't despair or pull out your hair. Write in to your favorite agony aunt, AUNTY JUDITH, and listen to her wisdom.



drawn a map.

Go over to the TV and pick up the seat cushion. Pick up the power cord to the TV and use it in the power outlet. Underneath the other seat cushion you'll find the remote control which you can use to turn on the TV.

Get the egg out of the fridge and the key that's hanging by the door and go outside to 14th Avenue. Inside the loans shop buy the nose glasses, hat, tool kit, guitar, golf club and wet suit. Now go to the outside of the barber shop and use the wire cutters in the tool kit on the bobby pin sign.

Now you can annoy the baker by ringing on his doorbell three times which will result in him throwing a stale loaf of bread at you.

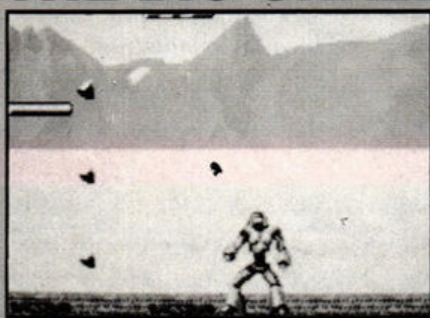
Go home and open the cabinet under the sink, use the monkey wrench on the pipe and then use stale bread with the sink. Push the button on the wall and then do it again. Pick up the breadcrumbs and while you're there pick up the butter knife.

Go back outside and walk to

TAKE THE BIO CHALLENGE

Andrew Triggs from Croydon has been pumping iron to get you some tips for *Bio Challenge*. The result of his joystick exercise are some tips for the first three levels.

On level one get the green armour as soon as possible. If you have all of the amulet don't go to the sphere unless you have collected at least four lots of monster remains, you'll need



them to battle the end of level guardian. He's a bit soft in the head so time your jumps carefully to hit him there.

Level two gets tougher and there are four planets to visit. Go to everyone if want to get maximum points. Again the green armour is very useful so get it as quickly as possible. There's loads of ammo for the guardian this

level, unfortunately that means there are loads of monsters for you to deal with. This time the back of the guardian's head is the soft spot.

Now things get really mean on level three. The best bet is to stand on the slabs and somersault. There are six planets here and the transporters are more difficult to see so you have to watch more carefully.



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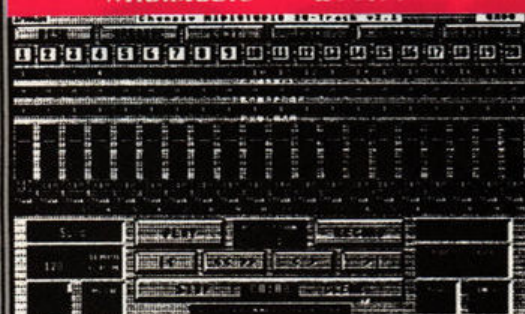


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the bus. Wake the driver by using the kazoo and then use the cashcard in the cashcard reader to make the driver take you to the airport.

There were loads more tips from Spiros, but that's all you're getting for this month.

RETURN OF THE JEDI

Apparently that rather unpleasant gentleman by the name of Darth Vader has been causing young master Luke Skywalker some problems in *Return of the Jedi*. If you haven't been using the Force properly then you'll be grateful to



a budding Jedi knight by the name of Ian Pocock from Eston under Nab. All you have to do is get your name on the high score table and type in "DARTH VADER" and then when you play again you'll be able to skip to the next level simply by pressing the <F2> key.

ARKANOID II

Ian Pocock has found a way to make your life easier in *Arkanoid II*. Just type in "DALEY 88" on the title screen and you'll go straight back to the level that you were last playing. Simple huh!

STARGOOSE

Has your goose been cooked once too often in *Stargoose*? Well

SUPER CHARGED DESTRUCTION



fear not if it has, because Mark Hunt from Croydon (I'm sorry you live in Croydon, can't be helped I suppose) has a useful tip to make you game longer lasting. All you have to do to obtain eternal shields for your ship is hold down the function keys F1 to F6 when the game begins. Simple really

ROADBLASTERS

Silly word of the month is LAVILASTRANGIATO. What does it mean you ask? Well, according to J. Craigon of Colchester you should type it in on *Roadblasters*. Why, I hear you cry? Because then you can press those very same keys again when playing the game to advance to the next level.

WORLD GAMES

Roy Alexander from Poole has a little tip for all you athletes out there. In *World Games* there are many games in which the only way to qualify is by beating the clock. All you need to do on those events is keep the fire button depressed (get Marvin to talk to for a while, that'll depress anything) during disk accesses and when the event appears you will have completed it in less than a second. Beat that Zola!

SDI

Gary Nolan from Plymouth has been delving into the mysteries of *SDI* and has come up with this tip. Play the high score game until

you've destroyed all of the asteroids and then type the word ALER-IC into the high score table. Pressing F will now take you to the next level.

FALCON

Jeff Snelling from Essex has a couple of useful tips for budding fighter pilots. Simply by pressing Control-X you'll be armed with eight Sidewinder missiles and 5000 rounds of ammunition.

Another useful bit of information is for when you get shot down. Just press <ESC> and end the mission. You'll be given merit points for any targets bombed and enemy MIGS shot down. It's also useful to do this if you have a habit of crashing your plane.

PLATOON

The first casualty of war is innocence (I didn't know they had time for that kind of thing in the middle of a war!). W. E. Cresswell of Edinburgh has a tip to help get you through the first stage of the game more easily, type HAMBURGER - HILL (don't forget the spaces between the R and - and the - and H) on the title screen and then you can get to the TNT by pressing F2, to the bridge using F3 and to the village with F4.

BYE BYE

That's it for this month, but as my old pal Arnold Schwarzenegger would say "I'll be back", and when he says it he means it.

Next month there'll be more hint and tips and maybe even a poke will work its way onto the cover disk.

Prezzies from Aunty Judy

If you want to earn yourself a little prize from your favourite aunt then just send those lovely tips and pokes to: Aunty Judy, ST Format, 4 Queen Street, Bath, Avon BA1 1EJ.

This month's prizes go to Spiros Gaoutsis for his *Zak McKracken* tips. Some goodies will be heading his way soon.

FINDING LORD BRITISH IN ULTIMA V

Richard Lindley from Clacks has found out where the missing Lord British is imprisoned in *Ultima V* and he's decided to share his secrets with you. The Shadowlords are dead thanks to some tips in issue 12.

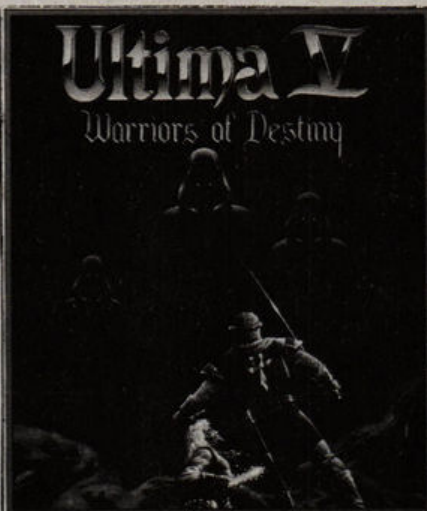
Richard reckons that you should be at least fifth level and will need some potent spells, scrolls and weapons to stand a chance of survival.

Visit the most southern lighthouse and learn to play the harpsichord. Return to the home of Lord British and enter his study. Play 'Stones' on the instrument by looking at it and pressing the correct numbers. A box will appear which you should take.

Go to Spiritwood and take your skiff into the pool. Fall down the waterfalls and you'll enter the underworld. Once inside use Lord British's diary to retrace his steps through the underworld and you'll find his amulet. Find the dungeon Dastard and use it to reach the surface..

Enter the dungeon Shame and again trav-

el to the underworld beneath it. The first room in Shame is difficult to get through. Climb onto the rocks in the SW corner and push them until you find the exit. Once you're in the



Underworld cross the swamp by traveling east until you can go no further. Get someone to cast the spell IN POR. Go east again and you'll arrive by a volcanic island. Make your way to the darkness and wear the amulet. You'll then find the last dungeon and can open it with VERAMOCOR.

This is the most dangerous of the dungeons and you have to work your way right down to the seventh level. Find a room filled with demons, dragons and sand traps (no they're not laying it on heavy are they?). Fight your way through them all and a ladder will appear. Go down it and fight the multitude of monsters that you find below. Shoot the walls near to the waterfalls on the north side and a bridge will appear.

Cross it and search the next room to find exits to both the north and south. Take the middle trapdoor in a C-shaped passage and Lord British is only a few rooms away. Make sure you still have the box from Lord British's study with you.



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■ *Blood Money* has been out on the Amiga for some time and now the ST version is lined up to make an appearance. After all the arguments which raged about the differences between the ST and Amiga versions of *Menace*, Psygnosis have decided to make sure that the same doesn't happen with the conversion of *Blood Money*. It looks set to be one of the most visually stylish games on the ST.



■ Lucasfilm, the US company who brought out *Battlehawks* some months ago are now poised to release two games centred around the new Indiana Jones movie - *The Last Crusade*. The first will be an action game (shown above) which is based around the chase and fighting sequences of the film, whilst the second is an adventure, boasting some very impressive graphics.

COMING SOON

■ *Ooze* is the latest game from Dragonware and is a humorous adventure set in the ruins of Carfax Abbey. You assume the character of Ham Burger. The first signs indicate that the game has done well in its native Germany.



■ Palace's next release is *Castle Warrior*. It's an arcade-style action game set in that typically adventurous setting of wizards and warlocks. The idea is that you must overcome the evil wizard Zandor who has poisoned your father.



MICROPROSE LOOKING FORWARD

Verminator, the Firebird game which has been consistently previewed in magazines for the last year, is finally going to make it onto the streets next month. With this being the last of Telecomsoft's original games line-up, Microprose can now turn to their own projects.

Recently Microprose announced the formation of two new labels - Microstyle and Microstatus. The Microstyle label will support the more traditional games, shoot-em-ups and standard adventure games, whilst the Microstatus label will be reserved for games which tax the ST to its limit. These include such extravaganzas as the recent *Darkside* and *Total Eclipse* where the use of Freespace 3D set them apart.

Products lined up on the Microstyle label include *Rainbow Warrior* and *Xenophobe*. Meanwhile Microstatus is alive with *Mid-Winter*, *Survivor* and *Tower of Babel*, most due for the PC Show. *Midwinter* and *Survivor* feature light-sourced, solid 3D land depicted in real-time action sequences. *Survivor* supposedly incorporates graphics which are the next step on from those in *Mid-Winter*.

■ *Xenophobe* is a conversion based on the Bally Midway arcade game where the objective was to destroy derelict space stations and moon bases.



■ *Rainbow Warrior*, is an environmentalist adventure. You must confront such obstacles as acid rain and destruction of the ozone layer.

■ *Verminator* - ready to be released at last.



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TELEPHONE LINES

This month sees the start of a series devoted to comms. The great communicator – the BLACK BARON himself – goes on line.

On the software front this month, there's *Mini Office Professional* from Database which offers a communication package capable of supporting split baud rates and viewtext. This, at least, is what it claims. There's no disputing that split baud rates are possible but the viewtext option borders on the laughable. Not only does colour go unsupported but the viewtext graphics seem to have been mislaid somewhere along the RS-232 lead. It's still superior to K-Comm's method of handling view-



■ *Mini Office Professional*: good at creating graphics screens but dodgy viewtext emulation.

text. This package takes so long to display a page so that you actually find your modem is capable of chugging along faster than your machine.

Where MOP is better than the enormously popular *FaSTcom* is the ease with which your own graphics pages can be prepared. The correct codes for transmitting double-height characters, colours or flashing text are all available

from a panel located down one side.

For use on standard terminal systems, *Mini Office* offers the same features as most packages with one extra bonus, on screen text can be increased to double size for people who are going blind – presumably after too much time on a porno board.

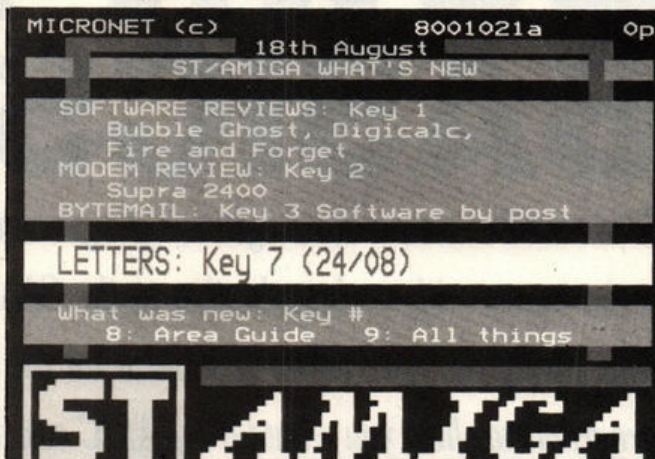
Telephone numbers and logon sequences can all be stored in a file so that contacting a system is made as painless as possible.

Mini Office Professional costs £24.95. Database are on 0625 878888.

CHARGES HELD

Parties are the oddest place to find arguments about the comms scene, especially when the majority of guests are primaevial apes who've just slipped off the back of a Harley Davidson. However, at a recent bash I listened to all the rows about the Government's decision to impose VAT charges for commercial systems.

It's not as if your average comms fan has mountains of dosh to splash out on the telephone bill, let alone cross the Governments' sticky palm. Even we spotty, square-eyed comms freaks are finding that it's no longer good enough to give up alcohol, sun-drenched holidays and the delectable *Melissa* (*Have you spelt that right Mark? – Ed.*) in an effort to raise enough cash to pre-



■ *Micronet*: 16-bit section splits.

vent being knee-capped by BT.

Micronet have promised to hold their costs for the moment but anyone who pays on a quarterly basis will notice the difference soon. Annually paid membership fees are staying the same with Micronet absorbing the raise – which makes you wonder what they did with all the dosh before VAT.

If the splitting of *Format* isn't enough, Micronet have recently taken their ST and Amiga on-line magazine and applied a careful job with a scapel to split them into two separate magazines. ST

Micronet users are currently only behind PC owners in numbers so it's certainly about time we saw some action.

SPIES WANTED

If you know of any bulletin boards with unusual sections or areas of interest on the commercial systems then drop us a line. Anyone who finds a bulletin board which we consider to be eccentric or which has any grossly offensive areas will be offered a prize. Send your tips to:

THE BLACK BARON, ST FORMAT, 4 QUEEN STREET, BATH.

TECHNOBABLE

Split baud rates – the facility to receive data at one speed and transmit at another. This is used mostly by systems such as Prestel although a large number of bulletin boards function only on 1200/75 baud, ie, receive rate of 120 characters per second and transfer rate of 7.5 cps.

Viewtext – the majority of on-line systems offer only standard text features but a viewtext system is capable of producing colour and graphical displays. Unfortunately these tend to be slow.

Bulletin Board – A public, and usually free, system run by comms addicts.

THE PHOENIX IS RISING

For those STers who are interested in some good old-fashioned games then the Phoenix board is one of the best to try. It offers several on-line games in a fashion similar to Micronet's *Shades* but without the same style. You have to be bordering on the criminally insane to want to play this type of game on a bulletin board – the 'phone costs can slip into galactic proportions after just a short burst of play. That might be justifiable if the game actually offered something half decent but the days of text-based adventures have long since died and that's all that's on offer here. Power

Struggle, *Trade Wars* and *Master of the Universe* make up the adventure/strategy games but in addition there's some on-line gambling. Before any Mary Whitehouse sympathisers get their claws out, there's no money involved.

A little while ago there was *Madame Fifi's Whorehouse* to be found in this adventure games section and that at least offered a more appealing challenge but

it's sadly fallen foul of all the porno board hysteria and disappeared into that big black hole that's hoovering up all the smut – BBs will soon be cleaner than Neighbours.

The Phoenix board has been going for longer than most and one of its recognised strengths is the exhaustive listing of bulletin boards. This is more than just a long list of names – you can look for a specific board or search for

any new boards to have come on-line. The system leads you to believe that the list consists of every bulletin board in the country but I managed to spot a few that went unmentioned.

On top of these features are the usual boring messaging sections, news of the BB scene and downloadable software. The ST is catered for quite admirably in this area with specific ST games and utilities sections.

The Phoenix board is on 0249 817704, the bulletin board supports all the popular communication protocols including V21, V22 and V23

DOWN TO BASICS

This month a new series begins on programming in BASIC and the series opens with an introduction to the GFA BASIC which you'll find sitting on your cover disk. Also on the cover are some demo programs to show you what GFA BASIC can do.

Everyone single ST owner has something in common, you all have ST BASIC. Since everyone has ST BASIC why should you bother to use another BASIC? The main reason for the changeover is that ST BASIC is just an interpreter whereas GFA BASIC can be compiled. Admittedly the cover disk only has the interpreter, but you can get hold of the compiler cheaply from the special offer pages in this very issue.

What difference does a compiler make you ask? Well it's very simple really! With an interpreter you have to load it every time you want to run a program, whereas with a compiled program you just double click on the program itself and away you go.

USING THE EDITOR

When you're typing in your GFA BASIC programs the lines are syntax checked when you press the <Return> key. If your ST beeps at

you and prints a syntax error message then you'll have to correct the line before you can type in another. Common syntax errors are caused by not closing brackets properly, using too few or too many parameters for a command or misspelling a command word.

YOUR FIRST PROGRAM

Ok, so you've got GFA BASIC up and running, now what? Write a program of course. We'll start with something simple, a FOR/NEXT loop that calculates the square of a number and prints the number and it's square on the screen. First we'll type in the program and then explain what each line does.

```
FOR number=1 TO 10
square=number*number
PRINT number,
PRINT square
NEXT number
```

The first line begins the loop and sets the value of the variable

number to be equal to 1.

It also tells the computer that it must do all of the instructions between the command FOR and the command NEXT 10 times.

In the second line the variable number is multiplied by itself and stored in the variable square.

Line three tells the computer to print the variable number to the screen. The comma at the end of the line forces the computer to print at the next tab position.

On the fourth line the computer is instructed to print the variable square. Note that there's no comma at the end of the line because this time we want the computer to print the next thing on a new line.

Finally there's the last line which ends the loop. Here the variable number has one added to it and a comparison is made with

10. If number is greater than 10 then the loop is exited and the program ends, otherwise the program continues running from the second line and a new value for square is calculated.

Now all you have to do is run the program by clicking on RUN at the top of the editing screen. Before you do run it though it's advisable to save the program. Any run time errors will cause the program to stop executing and an alert box will appear with an error message to describe what's wrong with the program. When you return to the editor mode the cursor will be positioned at the start of the line that produced the error.

When you do run the program two columns of numbers will be displayed: the left column shows the number and the right hand one is the square of the left column. An alert box will appear after the program has run, click on "Return" to go back to the editor. There it is, your first program, admittedly a very simple one, but it's a start.

To get a bit more of an idea of the special features available to you in GFA BASIC, load in some of the demo programs from the cover disk.

NEXT MONTH

In the second issue of ST Format there'll be a guide to graphics programming using GFA BASIC and on the cover will be more demo programs to illustrate the article. In future episodes music and delving deeply into the ST's operating system will be covered to allow you to use the full potential of GFA BASIC.

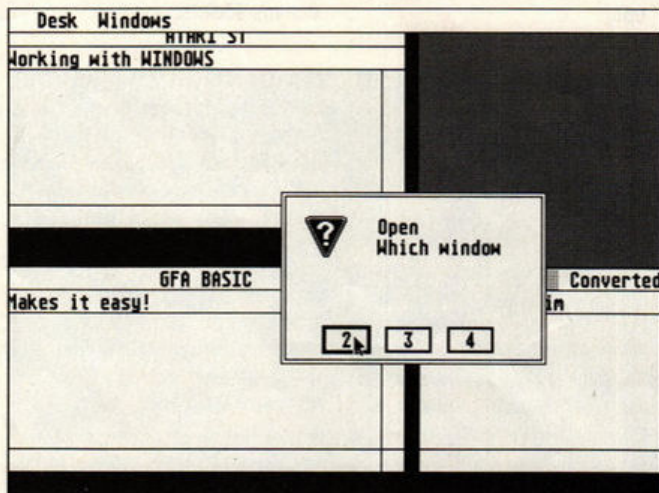
ON THE DISK

On the cover disk this month you'll find a folder called BASIC.GFA on the A side of the disk. Inside this folder are two programs: GFABASIC.PRG and GFAMAN.PRG. If you've got a printer then it would be a good idea to get a print out of the manual before you start. To do this double click on the file GFAMAN.PRG and press P to get a print out when prompted. If you haven't got a printer or want

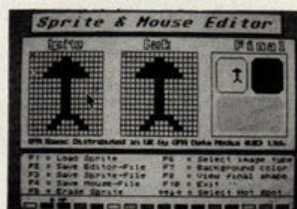
a more detailed instruction manual then see the special offer pages.

Before you start using GFA BASIC it's a good idea to copy it to another disk. Copy GFABASIC.PRG, GFAMAN.PRG and the folder DEMPROGS to a disk with a minimum of 160K free. If you have a double sided drive then put in the cover disk again and double click on the program GOTO_B.PRG and then copy the files out of the folder DEMPROGS into the same DEMPROGS folder on your new GFA BASIC disk. DEMPROGS are some demo programs to show some of the things that GFA BASIC can do.

Now you're ready to start playing with GFA BASIC so put in the disk that you copied the program to and double click on GFABASIC.PRG.



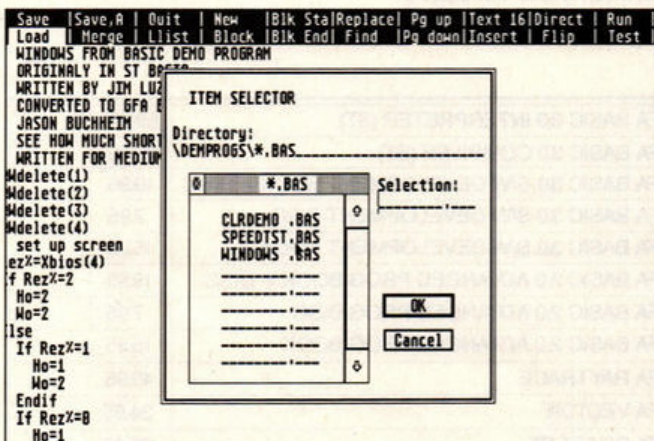
■ One of the demo programs on this month's cover disk is an example of how to use windows from GFA BASIC. Windows can be opened and closed from either the pull down menus or by clicking on their top left hand corner.



■ One of the programs on the disk is a simple mouse pointer editor.

EDIT COMMANDS

LEFT ARROW	Cursor moves left one character
RIGHT ARROW	Cursor moves right one character
CONTROL-LEFT ARROW	Cursor moves to beginning of line
CONTROL-RIGHT ARROW	Cursor moves to end of line
TAB	Cursor moves right one Tab position
CONTROL-TAB	Cursor moves left one Tab position
DOWN ARROW	Cursor moves down one line
CONTROL-DOWN ARROW	Cursor moves down one page
PG DOWN (F7)	Cursor moves down one page
RETURN	Cursor moves down one line
UP ARROW	Cursor moves up one line
CONTROL-UP ARROW	Cursor moves up one page
PG UP (SH F7)	Cursor moves up one page
HOME	Cursor moves to top of page
CONTROL-HOME	Cursor moves to start of program
CONTROL-Z	Cursor moves to end of program
F8	Toggle insert/overwrite
BACKSPACE	Cursor deletes back one space
DELETE	Character under cursor is deleted
INSERT (F8)	Insert line
CONTROL-DELETE	Delete line
UNDO	Undo a line correction
FIND (F6)	Find search string
REPLACE (SHIFT-F6)	Find and replace
CONTROL-F	Find
CONTROL-R	Replace
BLK STA (SHIFT-F5)	Block start
BLK END (F5)	Block end
BLOCK (F4)	Select block functions:
C	Copy block
M	Move block
W	Save block
L	Lprint block
S	Move cursor to start of block
E	Move cursor to end of block
CONTROL-D	Delete block
LOAD (F1)	Load program
SAVE (SHIFT-F1)	Save program
MERGE (F2)	Merge a program
SAVE,A (SHIFT-F2)	Save in ASCII format (for merge etc)
LLIST (F3)	List program to printer
QUIT (SHIFT-F3)	Exit GFA BASIC
NEW (SHIFT-F4)	Delete all program
FLIP (F9)	Change to display screen
DIRECT (SHIFT-F9)	Change to direct mode
TEST (F10)	Check loops etc
RUN (SHIFT-F10)	Run program
TEXT 16 (SHIFT-F8)	Swap between 16/8 pixels for text (mono only)



■ Loading and saving of files is done through file selector boxes and they are just a easy to use in your own programs.

TUTORIAL

SPOT THE DIFFERENCE

There are a couple of major differences between GFA BASIC and ST BASIC: multi-statement lines and line numbers. With ST BASIC you can use multi-statement lines like:

```
FOR n=1 TO 100:PRINT n:NEXT n.
```

but, GFA BASIC only uses single statement lines. The above example in GFA BASIC would have to be broken up so that it reads as follows:

```
FOR n=1 TO 100
PRINT n
NEXT n
```

The other difference is that there are no line numbers in GFA BASIC, so lines like GOTO 100 and GOSUB 2000 are replaced by GOTO LABEL1 and GOSUB SUBROUT2 respectively. The corresponding lines in the program would also have to be changed. Line 100 would have to be replaced by LABEL1: and line 2000 by PROCEDURE SUBROUT2. This is easier to illustrate with an example.

ST BASIC

```
10 GOSUB 2000
20 GOTO 100
30 END

100 REM main program

200 REM end of main program

2000 REM the subroutine

2100 RETURN
```

GFA BASIC

```
GOSUB SUBROUT2
GOTO LABEL1
END

LABEL1:
REM main program

REM end of main program

PROCEDURE SUBROUT2

RETURN
```

CONVERSION

If you have an existing ST BASIC program that you want to convert to GFA BASIC then it shouldn't take long. You'll need to make some changes to your ST BASIC program and they will be easiest to do with a wordprocessor.

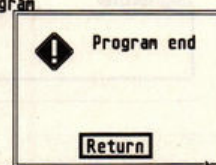
First of all you'll need to break up any multi-statement lines in your ST BASIC program and put them onto separate lines. Next you should kill all line numbers and replace important ones, the start of a subroutine for example, with labels which can be a mixture of letters and numbers. Save the program to disk with the extension .LST, eg PROGRAM.LST.

Now load up GFA BASIC and click on MERGE at the top of the screen. A file select box will appear, just click on the filename of your converted ST BASIC program and then click on OK to load it.

Your program may now run perfectly, but if it doesn't then you'll have to keep trying it until you've made all the necessary changes. Once you've done all the changes then just click on SAVE at the top of the screen and type in the filename that you want to save your program under, use the extension .BAS, eg PROGRAM.BAS.

AN INTEGER VARIABLE INCREMENTED 100000 TIMES IN A FOR-NEXT LOOP:
Time is now 8
Time is now 3.97 secs

AN INTEGER VARIABLE INCREMENTED 100000 TIMES IN A REPEAT-UNTIL LOOP:
Time is now 8
Time is now 22.345 secs
Press Return to end the program



■ When a GFA BASIC program has run its course a program end box comes up and you just to click on it to go back to the editor.

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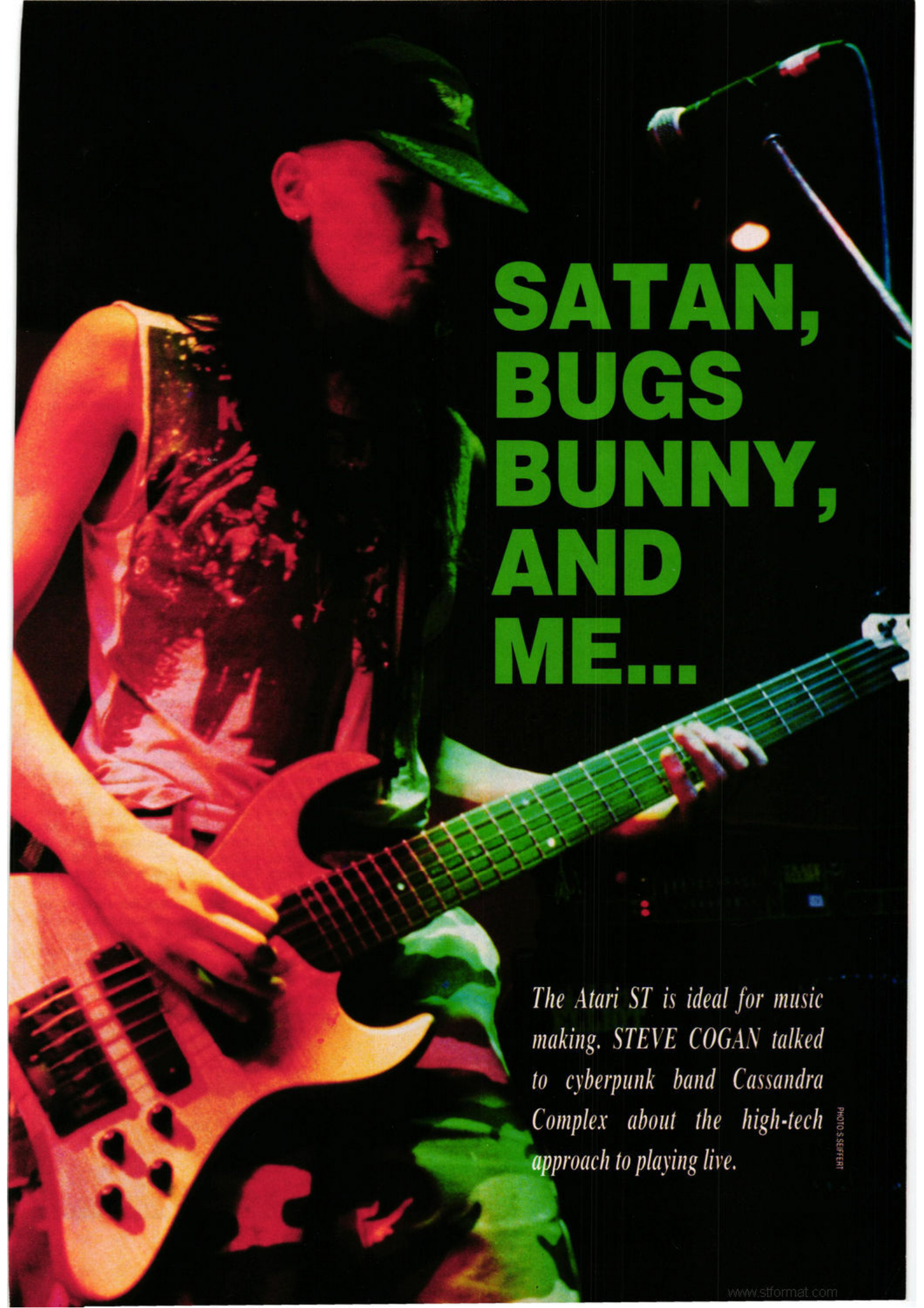
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A photograph of a musician, Steve Cogan, playing an electric guitar on stage. He is wearing a black baseball cap and a black t-shirt with a graphic design. The scene is lit with warm stage lights, and a microphone is visible in the upper right corner.

SATAN, BUGS BUNNY, AND ME...

The Atari ST is ideal for music making. STEVE COGAN talked to cyberpunk band Cassandra Complex about the high-tech approach to playing live.

PHOTO: S. SEFFERT



■ "A lot of people who write so-called computer music just end up with really boring intellectual exercises because there is no real spark, no life".

Cyberpunk is usually associated with science fiction stories such as Robocop which deal with anarchy and technology. The term has been applied to the band Cassandra Complex as they describe their music as "Electronic Body Music". The "punk" applies because many people could sit down and write music comparable to the Cassandra Complex with their STs, and the original idea of punk was that anyone with an instrument could write music.

It is just as well that they thought up a term to describe their music as it certainly doesn't fit into any single music label – it is a mix of rock, pop, metal, punk and many, many other styles. When playing live in their UK tour they asked the audience for suggestions for songs they should play: one fan wanted house but the nearest they had was "sort of garden shed", well... With so many different styles of music you are bound to find a song you'll like on an album, in fact they change so often the band admit they amaze even themselves.

SEEMS LIKE A NICE BOY

There are currently four members of the band – Rodney Orpheus who is a the singer, instrumentalist, and all-round guru of the band. Rodney is very keen on role-playing games and is quite an expert on *Star Trek* and seems to know the details of all the planets in the Federation! He is also the only original member of the band from when it was formed in the early 80s.

John Galvin is the bass player and when not touring with the band is a DJ at a Leeds disco. His interests include thrash metal, big boots and "being nice"! On keyboards is Juergen Jansen, the band's German member who originally sold T-shirts at their gigs and then was asked to join the band.

The latest member of the band is Patrick Gordon who plays what he calls a "complexophone" but is in fact a modified Casio DH-800 Digital Horn. He is also a well-known studio engineer, so he understands what all those funny coloured knobs do.

ROCK ON EC

Cassandra Complex describe themselves as a European band and feature

the European flag on the front of many of their albums, they have also brought the flag onto the stage. Their view is that many of the young people in Europe will grow up to feel like Europeans. They have toured the continent extensively and played in England in May and June.

Though they seem to enjoy far more success on the continent than in the UK, this has been put down to the fact that European bands have always been far ahead of America and the UK in the use of technology in music.

Their fifth and latest album "Satan, Bugs Bunny, and Me..." has been quite a success in the UK and has been widely acclaimed in UK music journals. All their music is available on Compact Disc with which they are head-over-heels in love. After their present tour they will be taking six months or so to finish their next album, titled "Cyberpunk".

RO=Rodney Orpheus
PG=Patrick Gordon
SC=Steve Cogan

RO – As you can probably gather we are real "pros" at this by now, we do so many hundreds of interviews.

PG – We have been known to interview ourselves.

RO – That's true actually, some people just don't bother turning up and send their tape recorder along.

PG – Or the TV camera crew who get a really good idea and decide not to ask you any questions and let you talk for two minutes.

RO – Or the interviewer can't get a word in edgewise and we keep on talking for an hour.

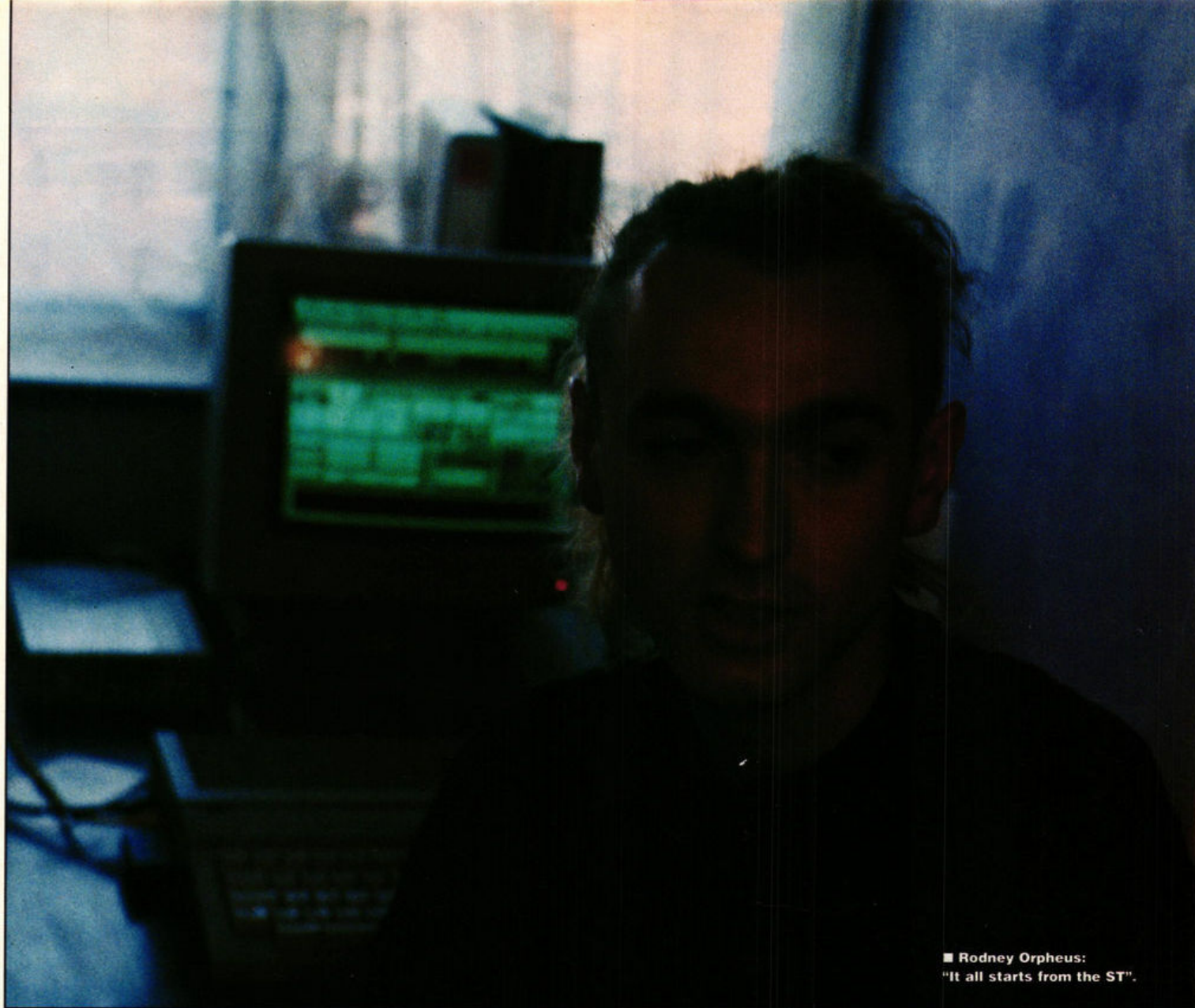
SC – Anyway onto the interview, and where does it all start from?

RO – It all starts from the Atari ST, of course, which is where everything starts isn't it? The thing about music software is that something like *PRO-24* is brilliant but it's really expensive, something like £250 and the new Steinberg one, *Q-bit*, costs around £500 which is a lot of money.

But if you think that a 24-track studio or any decent studio these days will start at about £20 an hour, maybe up to £100 an hour, and if you save a week's work by doing it on the Atari first, then you have already saved the price of the software and the computer into the bar-

TOTALLY RELIABLE

RO – "Amazingly enough we didn't have any problems with the STs when we were on tour, they were incredibly reliable. We played a concert in Munich and the heating was faulty in the venue, there were just under a thousand people and the place was packed. The gig was being filmed for German TV so there were huge lights on the audience and on us – really, really strong lights – the heating was full on all the time, it was a nightmare. It was so hot all the equipment kept breaking down, the guitars wouldn't work – there was so much humidity in the air that it stopped the electronics working, the bass amplifier went completely crazy. We had to stop half way through and go out in the rain trying to cool down. The only things that kept working all the way through were the Ataris."



■ Rodney Orpheus:
"It all starts from the ST".

gain. Most studios now have Atari STs and they have got PRO-24, it's a standard thing. So when we go to Woodlands, where we normally record, or any other studio we just bring the sound disks along, put them in the computer and away we go. Then we can afford to spend a lot of time in pre-production, writing the songs and structuring them, we can record all the drum parts, record all the keyboard parts, we even record all the horn parts and the brass parts because Patrick has a MIDI saxophone system.

SC – So it's better to do it here rather than sitting in a studio and waiting for inspiration and wasting money.

RO – Yeah exactly, that's the other thing if you're in a studio you're always watching the clock because if you go to the toilet it costs you £5! So quite often you can end up with something you're not happy with because you don't have the time to work on it and haven't got the money to spend on it. But the thing about having a computer system, having a home system, is that even for a very small amount of money you can get yourself a really, really, good system. You CAN make your own music, you can

do the whole thing at home, you could do the whole thing on PRO-24 and just mix down to a cassette player if you like and the results you will get will be as good as even the best studios could get 20 years ago.

If you look at the recording technology we had in the 60s or even the 70s it's nothing compared to what kids at home have now.

SC – It's also ten times less space as well.

RO – Yeah right, that's the other advantage it takes up hardly any space. If we were to have a 24-track tape recorder in here we wouldn't be able to fit in most of the equipment.

The thing about using computers is that it can often get very intellectual, you can sit for hours over a display saying "Should we move that note back two clocks?" or "Should that be transposed up another semitone?", or whatever. That's good in a way because you can really make things perfect for yourself. We're real perfectionists anyway – well I am. I can sit for hours gazing at something. But at the same time a lot of people who write so-called computer music just end up with really boring intellectual

exercises because there is no real spark, no life.

We also have an Akai ME10D MIDI delay unit that doesn't work on audio signals like a normal echo unit, it echoes MIDI signals which is quite a cheap way of getting MIDI echoes for the sequencers, you just connect it between the sequencer and the synthesizer, and it will just "double up" any MIDI notes you send. Again it is convenience more than anything else.

SC – More "hi-tech"?

RO – Yeah, it's hi-tech convenience – that's the thing. We're really serious musicians who enjoy playing music, that's why we do it. We play music because it's the most enjoyable thing we can think of and we don't want to spend hours wrestling with equipment. You can make great music without all this hi-tech, the first couple of Cassandra Complex records were made with a Yamaha CX5 which was a 32K MSX computer.

SC – With tape recorder?

RO – Yes, with a tape recorder, and with a really cheap Yamaha sound chip built into the computer. All our early sequencer stuff was done purely with the CX5 and nothing else.

COMPLEX ON VINYL

Albums – Grenade, Hello America, Feel the Width (Live), Theomania, Satan, Bugs Bunny and Me. 12" singles – March, Moscow Idaho, Datakill, Something Came Over Me, 30 Minutes of Death (Including Gunship which was inspired by a 3-day marathon by Rodney Orpheus) and Penny Century (inspired by the strip in the comic "Love & Rockets").

Their records should be available in most independent music shops on CD, record and tape.



■ Patrick Gordon and his 'complexophone'.

PG – I use a Casio Digital horn which you'll see me prancing about with. We've modified it somewhat because it looked stupid – when you get it the way you have to hold it to play it is really uncomfortable as well. So what I did was put a tube in the mouthpiece to let me hold it lower down. It's a very basic MIDI controller but it's the first cheap one that's come on the market with breath control so you get volume changes if your synth accepts them. The unusual thing about it being a saxophone is the fact that the air and the notes aren't connected, they are just switches.

RO – The most important thing is that it's really, really cheap. It's £99 new, you can get old models for as little as £25 second-hand. For a MIDI controller it's cheap, you've got internal sounds and an internal drum machine but they are rubbish, but as a MIDI controller it's great. When you play a sound from a keyboard and then play the same sound using the horn it sounds completely different because you get a different expression and you're playing a different way. It's dead easy to learn as well, you can change the way it works, it's set up to play like a recorder but it can play like a trumpet as well – so anyone could learn how to play it really quickly, even Patrick!

PG – We don't ever use the sounds out of it because they are crap, we just rely on the sampler and the synth to provide the sounds.

RO – The interesting thing is that when people see him on stage they see what he's doing and think "oh he must be playing saxophone", sometimes he is because he's playing a saxophone sample or a synth sound like a saxophone, it could be a trumpet or even a whole brass section. We've got a sample of two trombone players and a couple of trumpet players playing so you can do all that. But some of the time he is actually playing guitar samples with "fuzz" guitar chords, or anything from orchestras to machine gun samples, you name it.

PG – That creates hassle for the audience because they aren't too sure what I'm doing, quite often we talk to the sound engineer afterwards and he'll say that people were telling him to turn the saxophone up because they couldn't hear it. I wasn't playing saxophone but was actually blasting their ears off.

RO – The other advantage of having a



■ Some of the synthesisers and effects units Cassandra Complex use to produce their unique sound.

MIDI saxophone is that all Patrick's stuff from the Casio can be recorded into the ST and PRO-24. When we were in the studio before and we had real live brass players with real live trumpets it used to take ages because brass instruments go out of tune really easily. All the time we were using tuners and trying to make sure that it was alright. But with his Casio and sampler together he can get a perfect sound every time just by plugging it in and turning it on.

PG – Going back to PRO-24 it means that I can do all my bits before going to the studio.

RO – So we don't spend a couple of days recording trumpet parts. If there is anyone looking for a cheap MIDI setup, the cheapest one you can get is a Casio MIDI saxophone and a Yamaha TX81Z expander which have just come down in price to around £300 or so. Live we don't use the PRO-24 because it crashes a lot. If you put desk accessories on PRO-24 you can just forget trying to run it because every time you access them it just locks up completely. Even though PRO-24 is the standard, everyone we know with PRO-24 has problems with crashing, but it really teaches you to save your work. On stage we use the simplest piece of software we could find which is Hybrid Arts EZ-Track which is only about £50. That basically just records and plays back which is just what we want. We have two STs, one here and one in Germany and Juergen works on songs at home and then just sends the disks over, even though we're on opposite sides of the Channel we can keep on working and recording. We are thinking of sending the files via the phone line in the near future which should be interesting. ■

STOP DEAD

RO – "The very first gig we did we had a complete nightmare with EZ-Track because the songs kept stopping half way through and we couldn't figure out why. Then we realised that it was because the vibrations of the sound were bouncing the mouse along the keyboard stand and the pointer was making the menus drop down and every time a menu drops down on EZ-Track it stops! We thought, oh God what are we going to do now? One good function on EZ-Track is that you can turn the menus off so it acts like a Macintosh. Once we had turned it on we had no more problems."

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IT'S HIGH-RES

Your ST is capable of high-res. output to a kind of standard which makes even the Apple Macintosh look a very humble machine. Admittedly you need to purchase a special monitor to obtain these kind of results but for desktop publishing or serious wordprocessing, there's no better alternative. However, high-res monitors contain their own problems.

M. Bez from Stockport has suffered with an ST which continually resets itself when the high-res monitor lead is adjusted. High-res leads have two pins linked together which let your ST know that a high-res monitor is connected. In order to provide high-res output, the ST must be reset. If this lead is plugged into your ST while switched on, then your machine will immediately reset itself. Problems with an ST which insists on resetting itself often seem to be related to this. A faulty wire somewhere in the cable may well be causing the connection to make and break.

DEVIOUS DEVPAC

M.J. Langley from West Sussex is having trouble loading resource files using Devpac 2 and displaying dialogue boxes from assembler.

On the right is an assembly language routine to load in a resource file from disk. The pathname and filename of the resource file are specified with the text at 'FILE' and MUST be terminated with a zero or an error will occur. The example file takes the file 'DOCUMENT.RSC' from the folder 'FOLDER' and drive 'A'.

To find out how large a buffer you will need for the resource file uses 'SHOWINFO' from the

This month MARK HIGHAM sorts through tips on everything from Devpac to DIY, not forgetting the obligatory STOS tips.

```

LENGTH      EQU 5000
LOADRES
OPEN MOVE.W #0, -(SP)
      MOVE.L #FILE, -(SP)
      MOVE.W #61, -(SP)
      TRAP #1
      MOVE.W D0, (HANDLE)
      ADD.L #8, SP
READ MOVE.L #BUFFER, -(SP)
      MOVE.L #LENGTH, -(SP)
      MOVE.W (HANDLE), -(SP)
      MOVE.W #63, -(SP)
      TRAP #1
      ADD.L #12, SP
CLOSE      MOVE.W (HANDLE), -(SP)
      MOVE.W #62, -(SP)
      TRAP #1
      ADD.L #4, SP
      MOVE.W #0, -(SP)
      TRAP #1
      ADD.L #2, SP
      RTS
HANDLE      DC.W 0
FILE DC.B "A:\FOLDER\DOCUMENT.RSC", 0
BUFFER      DS.B LENGTH
    
```

■ Loading a resource file from disk.

Desktop and make the variable 'LENGTH' be equal to the length shown by the Desktop.

Dialogue boxes take a lot more explanation but since you have Devpac 2 life is a lot easier. On the Devpac 2 disk there's a file by the name of 'DESKACC.S' which shows how to make desktop accessories. Included in the assembly listing is some code which shows how to use dialogue boxes.

VERBS STAC UP

Robert Stewart from Belfast is a STAC fan and points out that you can add additional directions to your adventures by following the instructions below. Here is an example which uses JUMP.

1: Load STAC and your adventure file.

2: Select VERBS on the main menu. Press insert and enter the appropriate verb number, then the verb (JUMP). Repeat for any

abbreviations, keeping the verb number the same.

3: Return to the main menu and then enter the room description menu. Move down to the exits from that room and enter your verb (JUMP in this case) followed by the room that the verb will take you to when typed in.

The advantages of this system are enormous, it's pretty limited when using JUMP as a verb, but southwest, northwest, forwards, fore, aft and all kinds of others can be used without the need for any crazy special conditions.

HELP FOR STOS USERS

Need some memory after loading those accessories, but willing to sacrifice a few evenings to do a very boring task?

After decompacting the accessories, copy those which you use regularly onto another disk, use the primary decompacted files as a backup disk. Then LOAD those accessories, NB, do not ACCLOAD, and type KEY (2)="SEARCH" and press RETURN. Then type SEARCH "REM" and press RETURN. A line will pop up with a REM statement in it, delete the whole line.

Press the function key f2 and another REM statement will appear, delete it also. Keep pressing f2 and deleting the statements until no more appear after pressing f2. Finally type SEARCH "REM" and press RETURN once more. If nothing appears all the statements are gone, SAVE this new accessory on the second disk and repeat the procedure until you die of internal boredom haemorrhages.

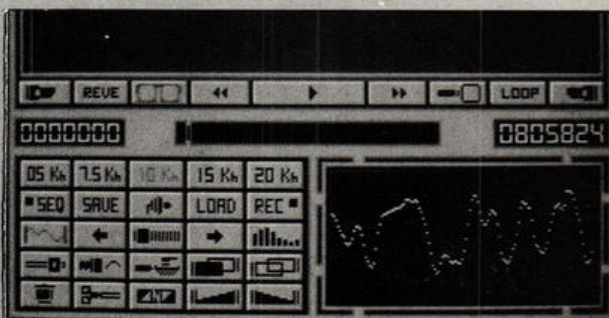
NOTE: you won't feel a thing!

PLAYBACK WITH PROSOUND

Tony Loton from Staffs has been using our DIY sound sampler to create his own sounds but is having some trouble playing the music in his own programs. There are several ways around this problem. The first is to buy a package such as Prosound or

Master Sound, both of which contain a small program that can be used in your programs to play the effects. This program is not copyrighted so you could obtain it from a friend who has the package. Alternatively, you could write the software yourself.

■ Right: Use Master Sound samples from BASIC programs



SLICK STOS SHOOT-EM-UPS

If you've ever tried to write a vertically scrolling shoot-em-up in STOS using the scroll instruction, you will probably have noticed that while the physical screen scrolls perfectly, the background remains stationary. This of course causes



serious problems when sprites are included in your programs, as the background shows through.

The way to overcome this, according to Shaun Macey from Leeds, is to use a screen-flipping technique as illustrated below, where the background is

copied to the physical screen, having first been "scrolled" by copying the bottom line to the top and then shifting everything down by one line.

However, the problems do not end here! The sprites are normally moved around the screen using interrupts (every 1/50th of a second), and if these interrupts do not coincide exactly with the screen-flip, you will notice "blurring" of the sprites, and they may also disappear from the screen completely. The solution to this problem is to use the UPDATE and UPDATE OFF commands. First turn off the sprite updates, then scroll the background. If the background and physical screens are now flipped, and the updates are turned back on at an instant coinciding with the vertical Blank Interrupt, you should have super-smooth scrolling with no holes in the background!

```
10 REM STOS VERTICALLY SCROLLING DEMO
20 MODE 0
30 CURS OFF
40 FLASH OFF
50 HIDE
60 CLS PHYSIC
70 CLS BACK
80 REM LOAD A SPRITE FILE INTO BANK 1
90 LOAD "ICON.MBK",1
100 REM RESERVE SCREEN SPACE
110 RESERVE AS SCREEN 5
120 REM LOAD SCREEN INTO BANK 5
130 LOAD "\SCREEN.PIL",5
140 GET PALETTE (5)
150 REM SPRITE DISPLAY COMMANDS AND MOVEMENT/ANIMATION STRINGS GO HERE
160 MOVE ON : ANIM ON
170 REM
180 REM SCREEN FLIP ROUTINE
190 LOGIC=BACK
200 SCREEN COPY 5 TO LOGIC
210 SCREEN COPY 5 TO PHYSIC
220 REM START OF SCROLLING LOOP
230 FOR Y=0 TO 199 STEP 1
240 UPDATE OFF
250 SCREEN COPY 5,0,199-Y,320,200 TO LOGIC,0,0
260 SCREEN COPY 5,0,0,320,199-Y TO LOGIC,0,Y+1
270 REM UPDATE SPRITES
280 UPDATE
290 REM FLIP SCREENS
300 SCREEN SWAP
310 REM WAIT FOR VERTICAL BLANK
320 WAIT VBL
330 NEXT Y
340 GOTO 230
```

■ STOS vertical scrolling demo.

CATCHING A VIRUS

Gary Dunne from London has a suspicion that he may have a virus present on some of his disks. Having written a short program he tried to save it and repeatedly received the 'DATA may be damaged' message, then he could not load anything, getting the same message.

He used Diskmech to find that sector seven on track 0 was damaged. This has happened despite using Virus Die (ST Amiga Format cover disk 1).

It looks as if the problem is more to do with his disks than any virus. A disk can become corrupted after considerable use or if it has been exposed to sources of high magnetism. It is generally not a good idea to store disks near to your monitor which gives out high magnetic fields, nor is it wise to leave disks in direct sunlight. Reformatting the disk in question might work but it would be safer to throw it away and use better quality disks in future. Any of the non-standard disk formats which offer in excess of nine sectors per track are particularly vulnerable to damage. It is best to steer clear of 10-sector formats altogether.

LOSING YOUR DESKTOP

After exiting from some programs your customised Desktop is lost and the system returns the standard Atari Desktop, with only two disk icons, the trash icon and nothing else, noticed Dave Whitely from London. If, like me, you enjoy using RAM disks and therefore customise the Desktop, the loss of the RAM disk icon is a real pain.

Re-setting obviously would lose the data in the RAM disk and trying to remember another piece of software which calls DESKTOP.INF after you quit from it, is a slow and annoying process.

Save time, click on the DESKTOP.INF (your new improved version of course!) icon and when the report box asks you for your intention print the file to the screen. When DESKTOP.INF has finished printing to the screen press the Return key. You should find that you are returned to the customised Desktop with all of the choices you need.

The whole process takes only three or four seconds.

DODGEY SELECTIONS

Chris Rallo, from Lancashire, found that when running hi-res programs with the Monoware program from the ST Amiga Format disk on a colour monitor the file selector did not work correctly, that is the "selections" remained as blank lines and even when highlighted the filename did not appear in the selection box. This made applications difficult to use to say the least!

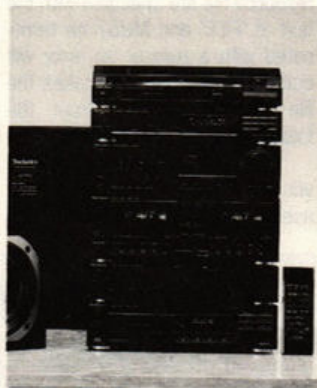
The solution was to make an AUTO folder on a start-up disk and copy the mono emulator into it first followed by the excellent FSEL file selector program, (also from an ST Amiga Format disk) which works perfectly in hi-res. Boot up from this disk and then run the hi-res program from that. I find it easier to set up the hi-res Desktop to "show as text" as the filenames are easier to read as text than icons.

SOUNDS GOOD

Sound can be taken from the monitor socket on the back of your ST through your hi-fi. Darryl Bandell from London explains:

Strip a piece of wire so it's bare at each end. Connect one end to the top right-hand hole of your monitor socket and the other end of your wire to the central pin on the aux. or microphone socket of your hi-fi. Now connect a ground wire from pin 13, the one on it's own at the bottom of the monitor port, to ground on the aux. socket.

Now when you turn on your ST you get sound from your hi-fi speakers and you can control the volume and graphic equalisers if you have them. Some hi-fis offer a tape 2 input which can be used instead.



WIN LOADSA DOSH

If you're having trouble with your ST or if you have any hints or tips which other ST owners will drool over then send them immediately to: Desktop, ST Format, 4 Queen Street, Bath, BA1 1EJ. Each month we give away £30 for our favourite tip so if you're looking for some extra dosh, get writing.



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QUESTIONS

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- a) Captures sound from a microphone.
- b) Goes busking outside of Argos.
- c) Takes bursts of sound and plays them in a programmed order.

Why is sampling on a 520ST impractical for serious use?

- a) Memory limitations mean that samples are too small.
- b) Unlike the 1040 and Mega STs, the 520 cannot accept sound inputs.
- c) Vibrations from the transformer cause a gargling effect.

What is seppuka?

- a) The dying scream from an Australian Neighbours' fan.
- b) A method of Japanese self-torture.
- c) Russian for a plate of chips and beans.

RULES

1. Competition entries must be received by August 10th if you want to participate. Anything to appear on the doormat after this date will be vaporised.
2. Employees of Future Publishing and Software Horizons may not enter and if they use any pseudonyms then we'll track them down and exterminate them.
3. The editor's decision is final and no correspondence will be entered into. If anyone does complain they'll be subjected to the monotonous tones of the Editor.

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STRICT FATHER

I like very much your magazine. My father doesn't let me play any other games except if this is a "Format Gold". It will be very nice if you can write me all the Formats Gold from the issues 1 to 8.

I'm sorry for the handwriting faults because nobody can help me with my English!

No problem with the handwriting, but in this country it's normal to put your name and address on the letter! Anyway the ST Format Golds for the first year of ST Amiga Format were:

- Issue 1 Virus
- Issue 2 Captain Blood Corruption



■ **Virus: The very first Format Gold.**

- Issue 3 Space Harrier Whirligig
 - Issue 4 Starglider 2 Federation of Free Traders
 - Issue 5 Menace
 - Issue 6 Rocket Ranger Powerdrome
 - Issue 7 R-Type Thunderblade
 - Issue 8 Baal Purple Saturn Day
 - Issue 9 War in Middle Earth
 - Issue 10 Populous Ultima V
 - Issue 11 Archipelagos
 - Issue 12 Darkside
 - Issue 13 Forgotten Worlds Weird Dreams
- Plenty to choose from there.

TOSS A COIN

I am considering buying an Atari 520ST or an Amiga 500 and want to know which is the better of the two in terms of value for money, software availability, graphics performance, sound and the expandability. I know there is about £80-£90 difference between

them, but what extras are you paying for?

Adrian Stretton
Hinckley, Leicestershire

The ST marginally has the edge over the Amiga in terms of software availability, especially on the serious side. Expansion-wise there's nothing to choose; it's slightly easier to do on the Amiga, but peripherals like hard drives tend to be a bit cheaper on the ST. The Amiga does have the edge in graphics and sound, but just wait for the new ST-E (see news pages).

DISK DOCTORING

Does anyone know if it is possible to read Amiga files on an ST (with double-sided drives, of course)? I have some experience with machine code – or if it is too complicated, is there any PD software to do the job? (Using a comms program or any such thing is not really feasible – there aren't any Amiga owners in easy reach!)

Also, is there any way to get printout from my ST via my dad's PCW8512's printer? Any help would be received with jubilation.

Uditha DeSilva,
Cardiff

I don't know of any way to read Amiga disks on an ST, although it's easy enough the other way around.

I doubt you'll be able to use the PCW8512 printer – if memory serves the PCW range uses the computer's memory as a



■ **The PCW's printer won't interface to an ST.**

print buffer and drives the printer in bit graphics mode directly from the main processor, so the printer itself is nothing more than the print head and a carriage mechanism, no electronics at all.

EMBARRASSED

I wish to register my objection to the cover of the June issue. In future, as before, have covers that look as if they are computer magazines, and not something that appears to have strayed into the wrong section.

There must be other mothers, buying for their children, who were a bit embarrassed to be seen carrying this issue through the shop.

Mrs Anne Roughton
Westcliff-on-Sea, Essex

HACKING HELP

I am new to the world of computers. At the present I am unemployed and have been wondering if it is possible for me to tap into the Job Centre's computer, which would save me going into the Job Centre about 4-5 times a day, as this is the only way I can see nearly all the jobs on offer, as I can't afford to miss anything. Could you offer me any help?

As far as I know the computer prints out job vacancies all day long, every day and they are printed on a sheet of paper. As far as I am aware it might be linked to a main computer in Birmingham, covering the East Midlands area.

If you could tell me what things I need to find out and what equipment I need and if it could be done fairly cheaply, if it is indeed possible.

M Borghisani
Nottingham, Notts

I'm not sure the DoE would be particularly impressed with you hacking into their mainframe somehow. Even if they agreed, the modem and comms software you'd need, as well as the phone bill, would cost more than a few weeks sup ben.

SOUND IDEA

May I take this opportunity to praise ST Amiga Format on the May issue hardware project. A full sound sampler at that price wonderful. On top of that for ST owners, like myself, we had the software as well.

There is just one big problem though. Let me explain. First I record a sound, play it forwards, backwards, fast, slow, make it st-

ST FORMAT LETTERS

stu-stutter and then what? This is a question I was forced to ask myself. Then it hit me. I knew what was missing. The ability to pay back your masterpieces inside your own programs.

So will the people who brought us the hardware, you, please give us the chance to play back the sounds in our own BASIC or machine code programs.

And how do you do this you may ask? Well, was it not you who gave us Devpac. Why not supply us with a piece of Devpac source code which can be called up from within BASIC or used in a machine code program to play back those wonderful sounds.

I know we can count on you.

G I Dandridge
Brentwood, Essex

Well then, anyone out there feel up to the task? Suitably compact and elegant programs would of course be good candidates for the cover disk with all the financial reward that involves. Get programming.

WHEN IN ROM

Could you please tell me whether or not it would be possible for me to put some of my utility programs onto ROM and be able to call them up from the Desktop.

I have an Atari 520STFM and if this is possible what is the best way to do it and what software will I require?

J Winnard
Middlesborough, Cleveland

Yes you can do it in theory, but the practice is a bit technical. You can create your own ROMs with a PROM programmer, a piece of hardware which writes to ROMs. The ST could access the ROMs via the cartridge port, a suitable piece of hardware is detailed in the news this month. But wouldn't it be much easier to install a RAM disk and copy your utilities to that?

WAR BREAKS OUT

Recently my so-called friends (Amiga owners) and I (ST owner) have been arguing over rumours of a new and improved ST with four channels of stereo sound, 4,096 colours and a built-in blitter. Is this true? Can we actually get back at Amiga owners? So please could you give me an answer before my head explodes, which would be horrendous.

Paul Coombs
Abercynon, South Wales

The rumours are all true (see page 13).

Where there's life

Ever since trading my trusty Speccy in for an ST, I have been appalled by the grossly inflated prices for software. Lashing out £25 for a decent game seems pretty idiotic to me. I imagine the software companies blame the high prices on the effects of piracy. I would say that 'casual copying' does harm the software industry, but the easiest way to combat this is to lower the prices and allow less affluent users to buy more units (how much piracy is there in the budget range - especially in the eight-bit market?).

The way to beat the large pirates (usually abroad) is to cut the prices still more and make the software more readily available (legally), this will greatly reduce the pirates profit margin. Either way dropping prices will lead to more units being sold and more users happy with their original software.

Also I'm getting concerned about the advent of these 'biocomputers'. What happens if the thing dies on you? What happens if it gets sick (you can give it a virus just by sneezing on it)? What happens when it hangs late at night with the message 'Not tonight darling, I've got a headache'? I'd like these questions answered before I rush out and get my quivering Pyrex bowl!

Peter Bennett
Reading, Berks

But look on the bright side of biocomputing; put your megabyte biomicro out to stud and you could breed hundreds of cute little games consoles.

PRECOCIOUS OR WHAT?

I am stuck on *Leisure Suit Larry Goes Looking For Love (In Several Wrong Places)*.

On the beach there are two KGB men and I can't get through the two KGB men. Can you please

help me with any game tips?

Ben Fowler, aged 8,
Stevenage, Herts

Do your parents know you're playing an 'adult' game like Leisure Suit Larry?

The rights and wrongs of poor software

I would like to reply to Brian Watson's letter, about the ST version of *Menace*. If he thought that the game was crap for the ST then why did he convert it to the ST in the first place? Was it, as I expect, to get more money out of an unsuspecting public?

We all know that there are great differences between the ST and Amiga when it comes to colours on screen, sound etc. Lots of games are brought out for just one of the machines, so why did DMA Design bring out a game that in Mr Watson's own words is crap? In future I suggest DMA try not to be so money-grabbing and stop trying to do ST owners out of money (games cost too much as it is).

Ray Watson
Barnsley, South Yorkshire

Well, you did ask (in the June issue) whether anyone disagreed with Brian Watson (about *Menace* and the ST in general) and now that you come to mention it - note the skillful way in which I'm passing the blame onto you here - I do disagree! I agree with the two Bryans that *Menace* on the ST is a heap of ...er, it's not very good (unlike the Amiga one which happens to be my fave game). I don't think Bryan Stevens sticking disks into anybody's orifices is going to do a lot of good though

(unless of course you're into that sort of thing) but a change of attitude on Brian Watson's part might. A lot of what he said about the ST isn't strictly true and it seems to me that he hasn't really tried to delve into the ST at all. Is it also possible, Brian, that you are not really a games programmer but more of a business software person?

I'm not having a go at Brian, he can obviously code, but some of the things he said have to be put right. First of all, the ST can have more than 16 colours on screen in a game using the timer b interrupt in very much the same way as you would use the copper on the Amiga for palette splitting. The main difficulty on the ST is, as Brian said, the horizontal scrolling. It is difficult but there are many ways round it (all of them memory guzzling but c'est la vie as Esther would say). I'm not going to tell you what they are as I think all programmers should work these things out for themselves, suffice to say that scrolling the screen on *Menace* should have taken around 3/4 of a frame.

Some of you may be wondering how I know these things, am I making it all up? Sure am! - just kidding, I've been programming the ST for about eighteen months. I wrote *Baal* on the ST (and the Amiga, but we don't talk about that), I'm working on three projects at

the moment, firstly the ST version of *Blood Money*, the one Brian said would be impossible to do. Sorry Brian but I'm afraid it looks and plays identical to the Amiga version, it will run one frame slower but because I've emulated the Amiga's hardware sprites you can hardly tell the difference. Just to prove you can scroll on the ST, one of the other projects is a full screen horizontal scrolling shoot-em-up with four levels of parallax scrolling and the whole game runs in just a single frame.

So, Bryan Stevens, don't sell your ST just yet, and don't be too hard on Brian Watson either. If he sits down and works things out he'll get it right. It took me a week to work out the fastest way of scrolling *Blood Money* before I started to code the routine (a programmer's life isn't all glamour you know), but if you want to ram a couple of disks somewhere involving surgery, try the guys who wrote Amiga DROS, I hate it, I hate, I hate it....

Wayne J Smithson
Leeds, West Yorkshire

I own a 520 ST with single-sided drive (soon to be upgraded), and I have a friend who owns an Amiga. Every game which I've viewed on my ST including classics like *Captain Blood*, *Starglider 2*, *Carrier Command* etc, seem to be better than its Amiga counterpart.

FEWER DEMOS PLEASE

I'm not complaining about product demos being on your cover disks, but I do think that they have gone a bit far recently, and are turning the cover disk into little more than merely advertising space for a company which just wants to sell its product.

The worst offenders have been disks like the ones with *Powerdrome* and *Zak McKracken* which take up over half the space which would not please those who buy the magazine for its varied coverage of all aspects of computing and not just games (the games players wouldn't think much of them either, as they couldn't even play them).

At least the *Flair Paint* demo wasn't a game, but in the 'instructions' on how to use the program, all you said was that "Flair Paint is quite simply the best paint package yet to see the light of day on the ST", (which Database could have written themselves), and there weren't any instructions at all. "The best way to get the hang of it is to experiment" is not really enough, and if it wasn't for an *ST World* magazine review I would have been pretty lost.

So how about cutting down on all the bull (*Flair Paint* may be wonderful for mono art, what with



■ Zak McKracken: The worst offender.

its 300 DPI editing and GDOS etc, but compared to *Degas Elite* for colour it is just about useless), and remember that many magazines have cover disks with game demos on them occasionally, and at a cheaper price as well.

Jonathan Tranter
Wolverhampton, West Midlands

We have always thought that the usable demos were very popular, but what do you think? It's your magazine (That's your cliché quota filled for this month Stuart - Ed.), so tell us what you want!

WHAT'S UP, NO DOC?

Congratulations on maintaining such a high standard in freebies in your most excellent magazine. I do so love the *Flair Paint* program now that I have found the paint brush. The Tutch Tipping Tooter is a joy to behold and even if I can't see a use for the *Track It* utility, it does seem to do its job well. I do,

however, have one overriding complaint and that is the *ZapST* documentation, or rather the lack of it. Here it is in all its glory:

ZapST 2.14 By Robin Hughes April 1989 For ST-AMIGA FORMAT.
end of file.

Now that's what I call comprehensive documentation. And it looks to be such an excellent tool too.

Anthony Allsop
Mansfield, Notts

The person responsible for the documentation has now been demoted to Amiga Format.

PROBLEM SOLVED

In reply to the letter from Barry Prescott in *ST Amiga Format* Issue 12, would like to thank Barry for bringing the disk numbering problem to my attention. The fault lay in my call to the C function which creates a prototype boot sector. In order to produce a random serial number a number larger than 0x1000000 must be used in the call. Unfortunately I overlooked this is in *DosAcc* 1.5. This has now been fixed and version 2.3 does not suffer from this problem.

I thought several times before providing extended formatting in *DosAcc* because I expected to

have problems with disk corruption or damaged drives. The final decision was really made by the people who test my programs for me. They were enthusiastic about it and had no problems in using it so it was included in the version I released, although I refused to go any further than 10 sectors and 82 tracks.

In case anybody is wondering what has been changed since version 1.5, it now has icons on the main menu including one for rebooting the computer, eight user-defined buttons on the printer menu, shortcomings in the printer control have been sorted out, a drive selector has been put onto the files menu, it can now dump a text file to the printer, it is no longer possible to select the counter on the file display, a file can now be 'touched' with the current date and time, and the colour resource file now looks better in monochrome than it did.

DosAcc is an ongoing development and I am always interested in suggestions or moans. If anybody wants a copy of *DosAcc* 2.3 send me a disk and an SAE - unless *ST Format* want to put it on the cover disk again!

Les Kneeling,
39 Francis Avenue.
Ilford, Essex

Starglider 2 runs over 10% faster, *Carrier Command* is (as the programmers themselves put it) 'a shade faster on the ST'. *Captain Blood* is faster in the travelling-through-the-canyons sequence, and so on. Obviously the Amiga's blitter (which is the only real advantage that the Amiga has over the ST) is unusable in flight simulation type games, and the ST's one million cycles per second faster clock speed comes as the clear advantage in this field.

Coming back to the *Menace* situation, I'd have to say that Brian Watson obviously is not a born ST programmer, and doesn't know how to program it properly. Just take a look at Steve Bak's works on the ST. Let's take the ST version of *Starray* which is a lot better than the Amiga version, with more layers of parallax, faster speed, super smooth scrolling and improved background graphics and status panel (my friend's got the Amiga version by the way). The ST version also has the option of music during play, incredible sound effects and all these extras on a half megabyte ST. On double sided or one megabyte it's probably even better with a sampled starting soundtrack as well. Why do I mention *Starray* and Steve Bak? Because he spends so much time developing his scrolling shoot 'em ups, and so they are always good. He knows how to program an ST (possibly the best ST programmer around due to his exten-

sive programming knowledge of this computer).

The moral of all this: "Only program a computer you can program otherwise you'll end up with a game only worth laughing at!"

N. Nicou
London

I haven't played *Menace* on the ST, but if I met Brian Watson I'd certainly do something nasty to him. I couldn't believe his reply letter you published, is he arrogant or what? For him to expect his customers to fork out £20 for something he the programmer admits is crap shows his total disrespect for his customers. No excuses can justify his actions, people like him are giving the software industry a bad name.

I noted his (feeble) excuse is that the ST is an awful machine to program, this reminded me of the old saying "A bad workman always blames his tools". Come on Brian, open your eyes. There are some great games on the ST, & some real bums on the Amiga.

Seriously, I would like to take some action over events like this. I think for a start, your readers could boycott all programs by Brian and his team at DMA. Once they realise they don't eat without our support, they will use their integrity (if they have any), and only release programs they would buy themselves.

Some companies only release games on the Amiga, with no ST version planned. They are acting out of respect for the consumer, not sheer greed.

Secondly, I'd like a list of 'Drossware' regularly published, with all entries being voted on by the games players, not just reviewers. I don't mind getting the ball rolling, I'd definitely put *Afterburner* very near the top of the list.

Before I disappear to stick pins into a clay effigy of Brian Youknowhisname (just kidding), a word of warning to all software houses. I feel I speak for the silent masses by saying "Stop messing us about, we pay your wages". We want good games at a realistic price, if you deliver we will buy it!

D C Derrick
Cheddar, Somerset

Drossware, eh? The quality of the software is of course the flip side to the old games pricing argument. Are games really worth the money? Are come lousy conversions just done to reap in the cash?

Do we, the computer magazines, have our own contribution to admit to - after all the software houses pay our wages through ads, so how objective are magazine reviews? Here at ST Format we try to be fair and unbiased, but the potential loss of advertising revenue inevitably weighs heavy on your mind nevertheless.

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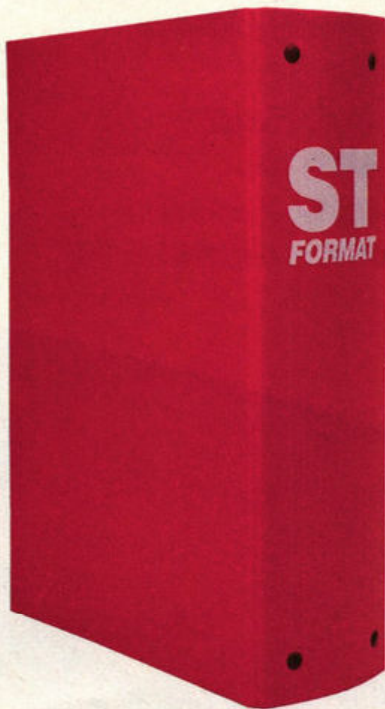
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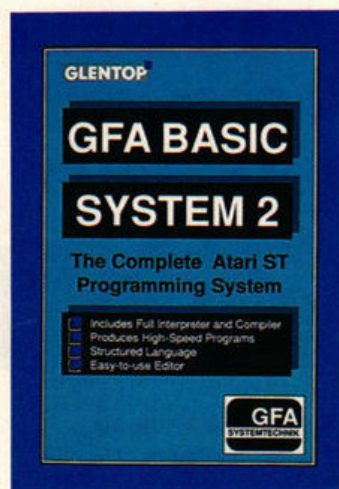
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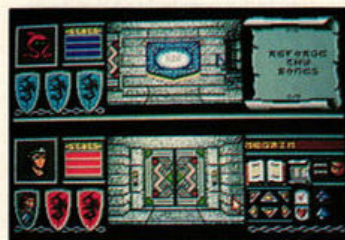
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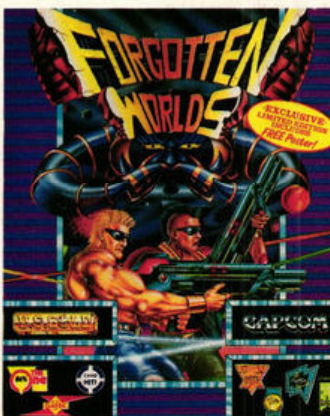
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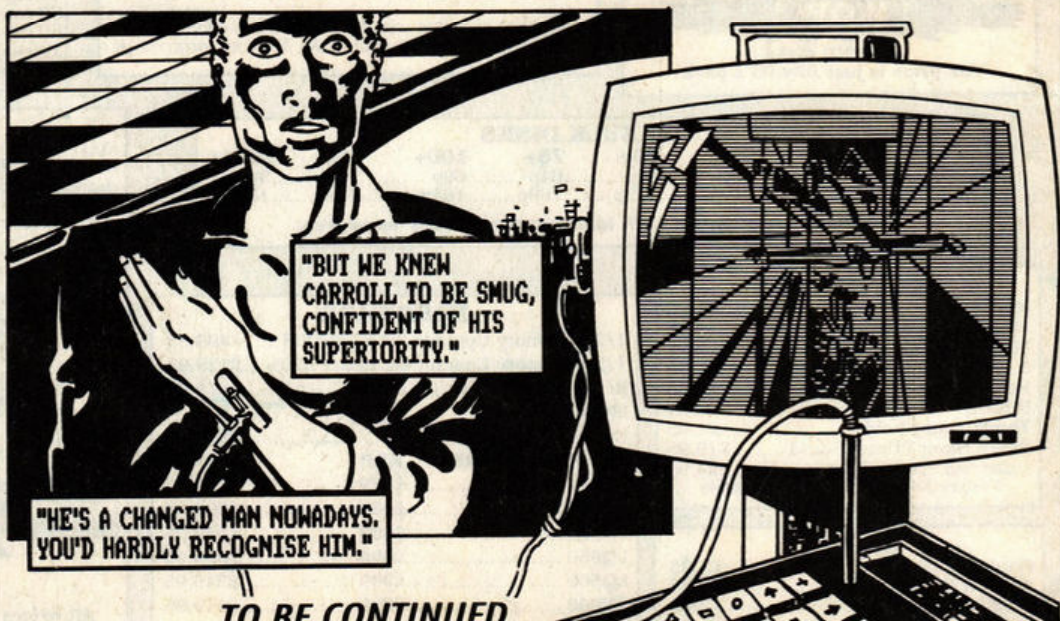


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