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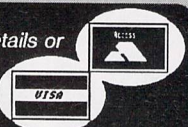
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FEATURES



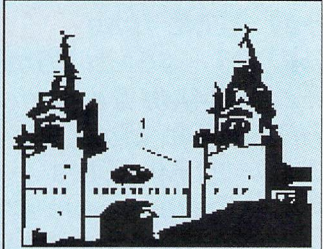
THE GREAT PRETENDER.....17

Is it a bird? Is it a plane? No, it's a flight simulator. Britannia Airways lets Wing Commander Butters loose with the controls of a Boeing 767 – well nearly. Interested? Just read on...

Desk File Edit Layout

LOWBURY PARISH NEWS

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WEDDING FOR

QUILLS AWAY.....65

Make your quill a thing of the past. It's hard to believe, but after you've read this DTP feature your life will be totally transformed. Well, your creative tendencies are sure to be roused at least

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There comes a sad time in every user's life when the memory in their ST just isn't enough. Well despair no more, Evesham Micros comes to the rescue with its solderless RAM upgrade board

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Can an upgrade really be cheap and easy? The answer's 'yes' if you have a second disk drive, which is now within the grasp of the masses. It's a case of plug in and go

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bound to be a winner. And with that aerodynamic shape and low price how can it possibly fail?

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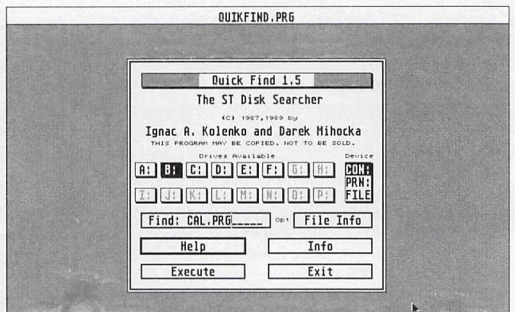
Enhancement, not creation, is the object of this graphics package. And it works. So go on be a devil and add more life to your DTP than it's ever seen before. Can you cope with the excitement?



USERDISK February...27



DEFENDER. GOING FROM ARCADE
SMASH HIT DIRECT TO COVERDISK



YOU'LL HAVE TO BE VERY, VERY
QUICK TO CATCH THEM...

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The world of computing is your oyster. It's all happening in France, Germany and the USA, and we were there so that you could be too

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Waiter, bring me the menu. Discover everything you ever wanted to know about the final two menus on the ST. Continuing our series for absolute beginners on using the ST...

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Who ever heard of anyone being earthed by their ankles? We did and we've got the photo to prove it

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MIDI and Music doubles its size bringing you the deal filing cabinet for your music...Meet the new girl in the class in **Education**. Null modem – that sounds painful! Fielding Mellish investigates in **Communications**...Take a second look through Windows 3 in **Emulation**... Cyclops is back and happy – at last – in **Adventures**. Be guided through Calamus with **Desktop Publishing**

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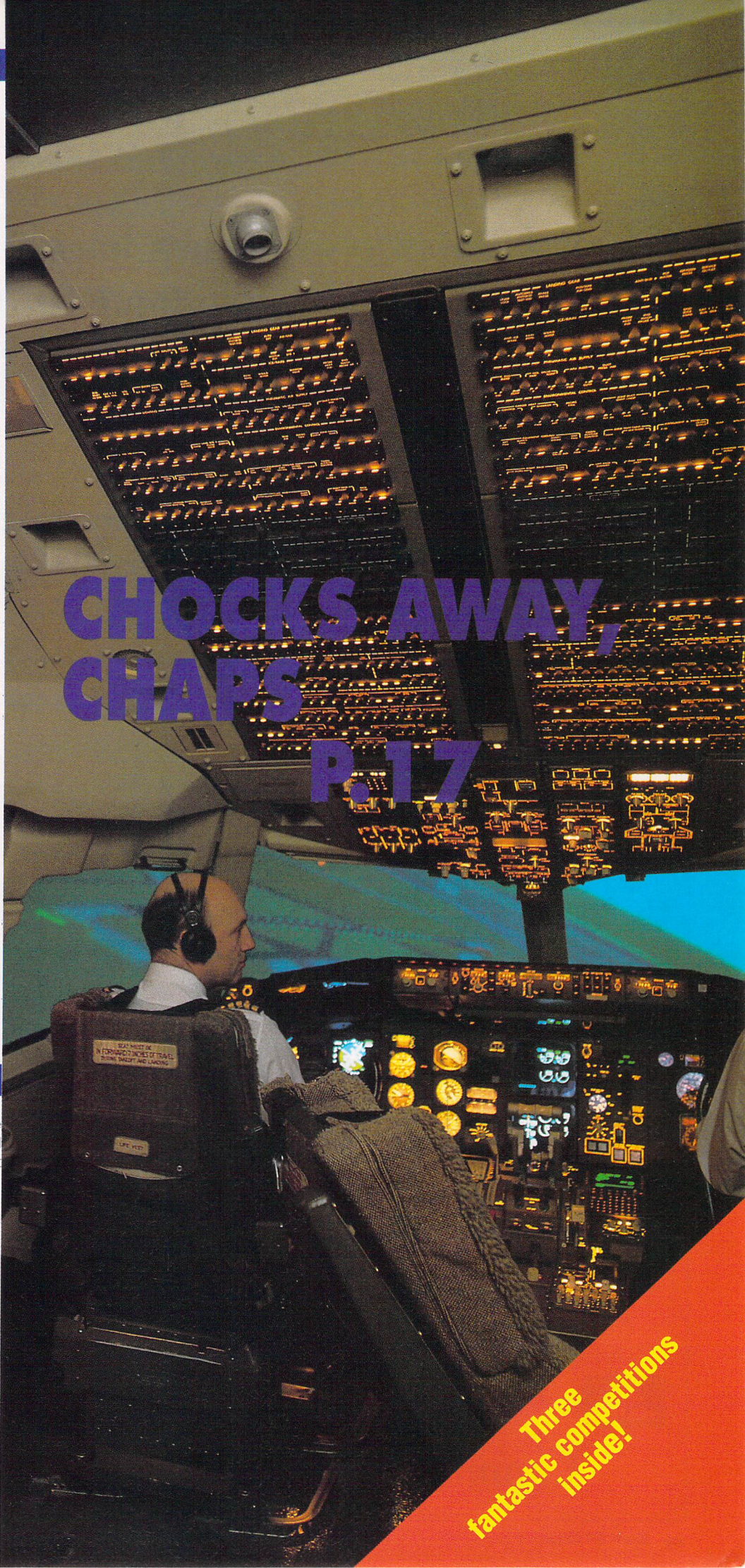
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CHOCKS AWAY, CHAPS P.17

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TT AVAILABLE NOW	

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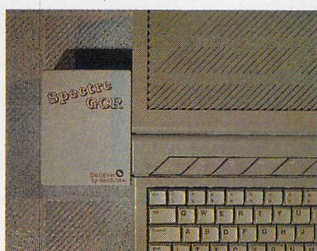
TT SELLING WELL— DESPITE PROBLEMS



Mike Dale of Signa Publishing says his customers are "thrilled to bits" with the new machine

Only weeks after its UK release, problems with incompatibility between the new Atari TT and all STs have been discovered. In the last 12 months the machine has undergone several changes to its specification, including an enhanced cartridge board, which have caused the problems.

It is reported that Atari has



Problems with the cartridge port led to Spectre GCR's software being rewritten

changed the port address on the TT and so cartridges using a specific address won't work. The adjustments have led to some difficulties, say manufacturers of cartridges, most of whom have created separate versions of their software for the new micro.

One such manufacturer is Expressworks (0252 726255), which found the ST version of its leading computer aided design package, DynaCADD, is not compatible with the TT.

The company has since developed a separate cartridge for the TT, which will sell for the same price as the ST version. Owners of STs who are planning to upgrade to the faster computer are advised to contact Expressworks so that they may swap their cartridges.

The Apple Macintosh emulator Spectre GCR, which is available in the UK from HiSoft, has also been made compatible. The firm believes that a simple change to the software is enough to make the emulator fully compatible with the TT, and it was shown working at the Las Vegas Comdex Show.

It's in the area of music and MIDI software however, that serious difficulties could arise. Many music packages rely on the ST's cartridge port and the future of these on the TT is now uncertain.

Evenlode Soundworks, one of the largest music software distributors in the UK, says that unless there is a great demand for the packages on the TT, they won't be selling converted software. And other companies are

expected to take a similar line.

Atari spokesman Peter Walker said that the two machines were never built to be compatible. He said that because the ST and TT run at different speeds there is simply no way of making the two machines compatible.

The problem, however, is unlikely to be a major worry for Atari. The new computer is pitched at the desktop publishing market, which does not make use of the port, and the number of musicians expected to opt for the TT rather than the much cheaper ST is very low.

Signa Publishing (0252 341600), a company well known for its quality products such as the desktop publishing package Calamus, is the sole distributor for the first batch of TTs. The company took delivery of them recently and reported that within weeks had shifted "quite a few".

Mike Dale, head of Signa Publishing, reported that customers were mainly small businesses interested in using the computer for desktop publishing but that several had expressed an interest in using the machine for leisure software.

Feedback from Signa's customers indicates that the TT is doing well in day-to-day use. Dale reported they were "thrilled to bits" and that the only negative comment was that the sound was a little noisy.

Many of those who are buying the TT from Signa already have copies of Calamus, which gives a firm indication that several are upgrading from the ST.



The TT is now on sale and is selling well - mostly to small businesses. Signa Publishing is at present the only distributor

CONSOLE RUMOURS CONTINUE

Rumours continue to circulate regarding the Atari games console, code-named Panther. A recent report in the industry newspaper *Computer Trade Weekly* claimed that despite early reports the machine, which has been under development for more than a year, will not be ST compatible.

Atari is believed to be aiming the console at the top end of the market, and recent

reports suggest that it will have considerably better sound and graphics capabilities than Commodore's Amiga.

A sneak preview of an early version of the console will be given to a select few, behind closed doors at the Computer Entertainment Show to be held in Las Vegas shortly. 'USER's sources indicate that an on-sale date at some time next autumn is most likely. In

December, several software houses confirmed to 'USER that they had already received pre-production models of the console, although the latest official report says they have yet to appear.

The price is still to be fixed and Atari continues to claim that it doesn't know anything about Panther. No doubt the industry speculation will continue for many months.

USER TO VOTE



ATARI ST USER has been named the official UK sponsor for the prestigious European Computer Leisure Awards to be held later this year. The magazine will be responsible for nominating entries in categories involving the ST on behalf of the UK.

The winners will be announced at a ceremony to be held at one of London's leading nightclubs on the opening day of the European Computer Trade Show, where a senior journalist from 'USER will join representatives from other top European computer titles on the panel of judges.

The editorial team of 'USER will nominate entries based on what's happening in the UK in a total of five non-games/technical excellence categories including best art package, best music package, best home education package, best home productivity package and the most innovative peripheral of the year.

The April trade show is set to become the launching ground for many new products, following last year's event which saw nearly 100 new products released. This year's show theme will be multimedia, with one hall dedicated to the latest developments in the entertainment sector from around the globe.

Michael Meakin, head of show organiser Blenheim Database Exhibitions said, "We are delighted that Atari ST User has decided to



Last year's trade show saw 100 new products and the April event is set to be another launch pad

join us as the official UK sponsor in its market sector for the second annual awards.

"As the premier magazine in its field in the UK, its presence adds much to the credibility of the awards which are now accepted as the

definitive accolades for the computer entertainment industry in Europe."

The European Computer Trade Show is to be held at London's Business Design Centre between April 14 and 16, 1991.

ATARI PROFITS UP

Atari recently announced net profits of \$6 million for the first nine months of last year. During the same period in 1989, the computer giant recorded a loss of \$1.8 million and so it appears that the company has overcome the problems it encountered when it bought the troubled Federated Stores chain.

Sales for the months up to September 1990 had increased by only \$6.6 million compared to the previous year, rising from \$253 million to a new figure of \$259.6 million.



The ST was responsible for much of Atari's success last year, Will it be the TT in 1991?

GO FASTER CARD

Increasing the speed of the ST is the aim of many who use their computers mostly for 'serious' applications, such as desktop publishing or computer aided design. One new product to come from a leading distributor of ST products, Silica Systems (081-309 1111), is AdSpeed.

From the American company ICD, this is an accelerator card that boosts the speed of the ST from 8MHz up to 16MHz.

The company says that the board will work with any machine from the 520ST up, including Stacy, and is available immediately.

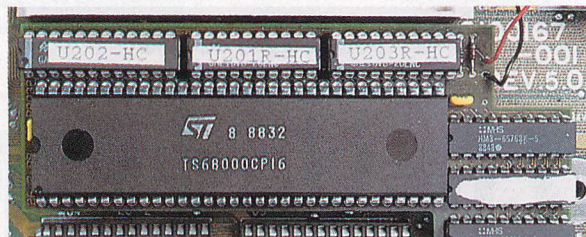
To ensure full compatibility with existing ST software the card has an 8MHz mode, which lowers the machine's speed without the user

needing to reboot. AdSpeed has a 32K RAM cache which is separated into 16K of data/instruction cache and 16K of cache tag memory. All reading and writing is done through the cache to save even more time.

As a replacement for the ST's original 68000 CPU board, the card doesn't use jumper wires. Interested parties who don't wish to fit the

new processor themselves can have the board fitted by Silica Systems, for a small extra cost.

Expect AdSpeed to cost £99.95. In the same range from ICD comes AdRAM – you guessed correctly – a RAM board. It's currently in the final stage of development and is expected to be on sale at any time now. The price is yet to be finalised.



ICD's AdSpeed is set to compete against existing acceleration products such as Hypercache, pictured above

DO YOU KNOW SOMETHING WE DON'T?

Although 'USER has scores of contacts in the ST world, we still need your help.

The magazine will pay for leads and tip offs used in these pages. If you have some

really hot news, ring John Butters on the newsdesk now, on 0625 878888.

Of course, all information supplied will be treated in the strictest of confidence.



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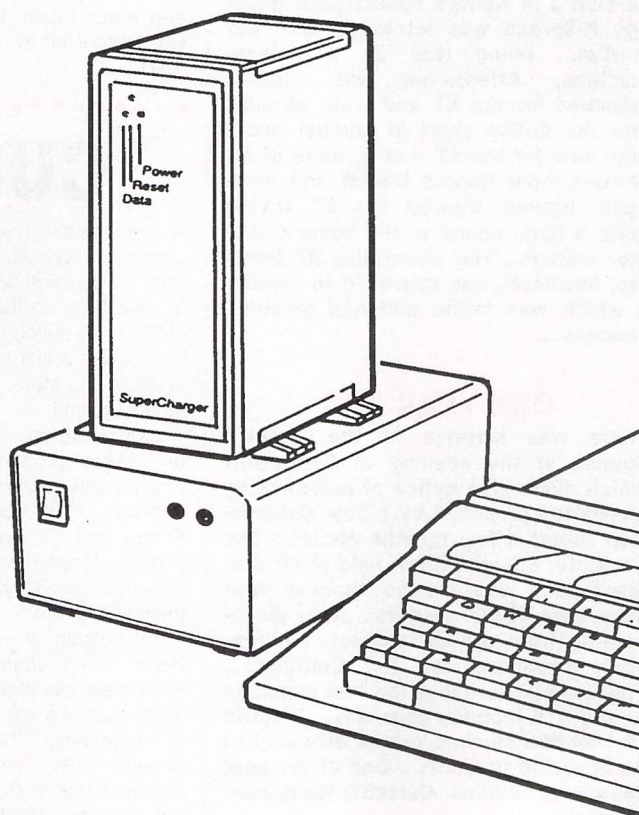
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Archive

Can you remember what happened on the ST scene this month, all those years ago? Well here's the full story...

FOUR YEARS AGO

A re-housed version of the ST - with a few extras - was unveiled at the Consumer Electronics Show. The Mega ST became available as a one megabyte, two megabyte and four megabyte machine... Also at the show was the Atari laser printer and the third party companies included Microsoft which was showing Write... ST prices fell by as much as 25 per cent... Robtek reduced prices on many of its ST products and launched others including a cartridge expander which enabled up to three cartridges to be plugged into the port at once...

THREE YEARS AGO

Atari announced record sales figures in the third quarter of its financial year... What was described as a budget-priced hard drive was released by Silicon Systems. The 20 megabyte unit cost £549... The Abaq (later called ATW) supermicro based on the Inmos transputer chip was shown as a prototype at the Comdex Show in Las Vegas... The introduction of TOS 1.09 caused a compatibility scare... Atari pulled out of the Federation Against Software Theft, apparently because the firm is mainly a hardware manufacturer...

TWO YEARS AGO

Version 3 of Kuma's spreadsheet package K-Spread was let loose onto the market... Doing well as a coin-op machine, Afterburner was finally launched for the ST and went straight into the Gallup chart at number one... Also new for the ST was a range of A3 plotters from Roland Digital and once again figures showed the ST taking quite a large chunk of the home computer market... The alternative ST Desktop, NeoDesk, was upgraded to version 2 which was faster and had graphics changes...

ONE YEAR AGO

There was surprise at the Queen's Speech at the opening of Parliament which didn't give notice of anti-hacking legislation proposed by a Law Commission report a few months earlier... The Computer Shopper Show held at Alexandra Palace was a huge success with more than 30,000 visitors... After disappearing from the UK market, Calligrapher reappeared on the Continent... Frontier Software was the first company to sell STE memory upgrades... Electric Distribution slashed prices on many of its imported products... One of the best shareware utilities, QuickST, went commercial...

LYNX PRICE FALLS

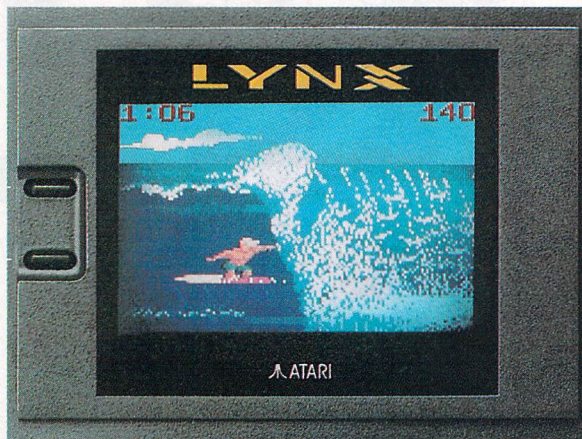
The price of the Atari hand-held games computer, Lynx, has been slashed by £50. The computer giant has recently spent more than £2 million on support for the machine, which continues to include nationwide television advertising.

The company says the price drop is the result of lower than expected sales in the High Street this year, which resulted in Lynx failing to meet stiff targets. Atari attributes this to the current slow-down in spending caused by continuing high interest rates.

"As we are committed to a market strategy which calls for an installed base of 100,000 Lynx systems, we

have elected to make an increased investment in the product in the form of a price

drop," said Peter Staddon, marketing manager for Atari at the Slough office.



Lower than expected sales have led to a price reduction of £50 for Atari's hand-held games computer, Lynx

ANOTHER FAIR PLANNED

As the third 16-bit Computer Fair got underway, Westminster Exhibitions (081-549 3444) was already preparing for the fourth event. To be held at Hammersmith's Novotel Hotel in mid-July, the show will continue to be an ideal event for ST users wanting to try out the latest goodies for their computer before parting with money. The event will take place between July 11 and 14, 1991.

But before that, the same firm will be holding a show for computer musicians. Scheduled for late April, the second MIDI Music Show already has confirmed bookings from top manufacturers such as Yamaha, Roland and Korg. Again, the venue is the Novotel Hotel and it will run between April 26 and 28, 1991.

EVESHAM MICROS MOVE

At the beginning of 1990, Evesham Micros (0386 763500) moved its workshop and administration into new premises in the Worcestershire town of Evesham. This complemented three retail showrooms the firm was already operating, one of which was on Bridge Street in Evesham. Best known for its popular range of replacement disk drives and memory upgrades, Evesham found itself quickly outgrowing the old premises.

Work on expanding the St Richards Road head office is now complete. As a result, the Bridge Street showroom has been closed and the operation moved to the new extension. Director of Evesham Micros, Richard Austin, said that the new premises offer more office and customer car parking space.

CURRYS TO SELL ST

Another leading High Street chain has given Atari a boost with its decision to put the ST and Lynx on the shelves at 200 of its outlets. Currys is the second major chainstore to decide to stock the ST in recent months.

John Menzies went back to Atari products only months after dropping them in favour of the Commodore Amiga and it's hoped that Currys' decision will further enhance the ST's position in the marketplace.

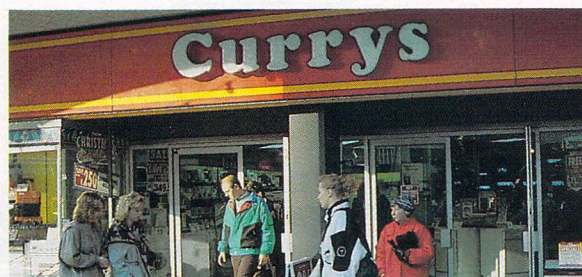
The electrical store has been selling various home computers since September 1990, stocking the Amiga at its branches. The ST is already being stocked at Dixons, which is Currys' parent company. The Discovery

Pack has been delivered to 100 of Currys' city superstores and will be followed shortly by its introduction to 100 High Street branches throughout the country.

Dixon's buying director, Alan Dickinson, told 'USER' that many people walk into the shops and ask specifically for the Atari ST, and so

the decision was made to stock the machine rather than redirect customers to Dixons.

No firm decision has been made to continue stocking the Discovery Pack throughout the coming summer, but he was confident it would continue to be stocked at their superstores.



Yet another High Street chain takes the ST

SHOPPER SHOW A HUGE SUCCESS



ProFlight, a very realistic simulator, was a huge success on the HiSoft stand



ATonce, the PC emulator, went down well. It was available from Silica Systems

The second Computer Shopper Show, again organised by Blenheim Database (0625 879970) built on the success of 1989's event. Nearly 250 exhibitors set up stands at the Wembley Conference Centre for the four day event in mid-December. The final count revealed that 40,000 visitors braved freezing fog, sleet, snow and rain to pack into the show's three exhibition halls.

Most types of home computer were represented at the show with an imposing presence of Atari-dedicated firms, including that leading distributor of the ST, Silica Systems. They gave away £5,000 worth of prizes during the exhibition in a series of lucky dips worth £200 a time.

With one of the largest stands at the show, Silica had all of its latest ST products on display. ATonce from the German company Vortex was a huge success and the already popular MegaPaint paint package was being shifted in large numbers.

New to the UK is the Dutch software house, Compo Software, which was making its first appearance at a show. On its stand were many of the company's new products including PC emulator, AT-Speed, its word processors That's Write and Write ON, That's Pixel

the art package, and a replacement mouse, with the predictable name, That's a Mouse.

And for the serious user, a stroll to the HiSoft stand was worthwhile. On show there were WordFlair, the firm's new document processor and the latest serious flight simulator, ProFlight, ready to be taken up to Mach 2. It's based on the British Aerospace Tornado which is one of the most advanced military fighters around.

Included in the products on the Kuma Computers stand was K-Spread 4, the latest version of its highly successful spreadsheet. New from Kuma was a clip-art library, which consists of 13 disks at £29.95 each.

Images are supplied in .IMG and .MAC file formats and there is a conversion program which produces Degas, Degas Elite and Neochrome formats.

Condor Computer was showing Supercharger, version 1.4. An emulator of IBM PCs, Supercharger plugs into the DMA port of any ST or TT to run applications at 8MHz and costs £299. Other hardware can also be connected to Supercharger, including SCplus 286/386 which turns the ST into a 286 or 286SX, but remaining fully AT-compatible.

The latest sound samplers Replay 8 and Master Sound 2 were on Microdeal's stand. Replay 8 has many features from the firm's more expensive Replay Professional package but has a much lower price tag, retailing at only £79.95.

IN THE PUBLIC DOMAIN

The public domain section of the industry was well represented. The South West Software Library had its entire collection of 1,300 disks and the library's brand new catalogue was being given away. The only Atari TT on display was at the 16/32 PDL, and visitors were able to look at software running on the new computer.

Other 'serious' companies present with a collection of ST products were Arnor, Atari Workshop, Digita International, Electric Distribution, Frontier Software, GFA Data Media and Power Computing.

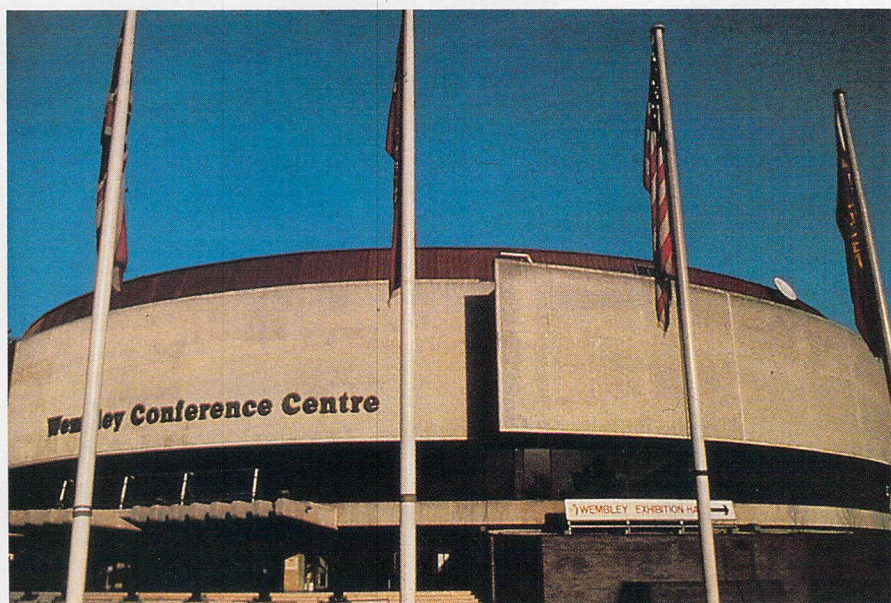
There were celebrity visits throughout the show. One was by Captain Tim Lancaster, the pilot of the British Airways BAC 1-11 who was sucked through the windscreen of his aircraft as it neared 17,000 feet last June. Tim had recovered fully from his ordeal and was at hand to show home flyers how to handle a military jet.

For many younger ST fanatics, a stop at the leisure stands was time well spent. Leading software houses such as Ocean and Arc, the software arm of Atari, showed off their latest shoot-em-ups, and many mail order companies had huge discounts on the best-selling games.

All in all, it was another hugely successful event organised by Blenheim Database that managed to cater for everybody's interests. The next Computer Shopper Show will take place between May 10 and 12, 1990 and is to be held at Alexandra Palace, London. ●



The main exhibition hall. There was much to interest the ST user - bargains and products



Visitors faced some of the worst weather for three years, but they still turned up in droves

Distinctly Digita

Cleverly written and always favourably reviewed in the press, Digita produces a range of powerful, low cost software for the home and business user.

DGCALC

The fastest and most powerful spreadsheet available in this price bracket, with 512 rows by 52 columns, giving you up to 26624 cells. As with all Digita products, the operation of the program is clearly thought out. Being either menu, mouse or command driven you'll be able to start using it within minutes – even if you've never used a spreadsheet before. Some of the features which make it such good value are the exporting of ASCII files for integration with other programs, adjustable column width and text overflow, programmable function keys (macros), and a unique windowing facility, so that you can look at different parts of a sheet at the same time.

£39.95

E-TYPE

Do you ever have to print names and addresses at awkward places on envelopes, or do you ever need to fill in tricky forms or invoices where the text has to be in exactly the right place? Usually you have to do it by hand, or get your trusty old typewriter out of the cupboard and dust it off. Well not anymore. The Emulated TYPEwriter transforms your computer and printer into a fully fledged typewriter, supporting bold, underline, italic and other type-styles. Because it can display and print text INSTANTLY you can line up your form, press Return and Space a few times to move to the correct place, and then start typing. Alternatively you can switch to line-by-line mode, which offers word-wrap, justification and proportional spacing, so that you can edit each line before it's printed.

£39.95

PERSONAL TAX PLANNER

Are you absolutely sure your taxman is doing his job correctly? Plan your own tax with ease, this menu-driven program will calculate your income tax liability (4 tax years included) and provide pertinent facts about your tax position. You can perform "what-if" calculation to discover ways to minimise your tax liability. In fact, the program will advise you on things such as, if you are a married man, whether it would be advantageous to have your wife's income taxed separately or not. At this price who knows, you will probably find that PTP will pay for itself in tax savings the first time you use it!

** STOP PRESS **
July '89 – PTP user receives tax refund of over £2,000!!

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DAY-BY-DAY

An excellent way to get organised. With it you'll be reminded of birthdays and other anniversaries, meetings and appointments, phone calls to make and so on. As with all Digita products, inputting information is simplicity itself and, once entered, you can search for keywords or for particular events such as birthdays to see when one is coming up. Includes month/week/day planner, automatic reminders for overdue appointments, month and week summary at a glance. For less than £30 this is the ideal way to make sure you never miss that important occasion again!

£29.95

HOME ACCOUNTS

Ideal for both home users and small business. Simple to use, this package will keep track of all your finances and cater for 10 types of income (e.g. Bank, credit card) and 60 types of expenditure (e.g. rates, mortgage, gas, food), with optional budgeting and forecasting. The program will handle Standing Orders and Direct Debits, and automatically warn if for example, Bank Credits are likely, or if you have exceeded your credit limit. With the comprehensive reporting and graphics facilities you can even produce your own monthly Bank/Credit card statements! Once you've used Home Accounts, you'll wonder how you ever managed without it.

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If you ever need to send out mailings or print labels, you know how fiddly and time-consuming it can be making sure all the labels are printed correctly. Well now all that's a thing of the past. Because Mailshot actually shows you the labels on screen, you can type names and addresses in exactly the correct place. But more than that, the labels are animated on screen as a continuous sheet, allowing you to scroll backwards and forwards, to search for particular keywords or to edit entries with the minimum of fuss. Facilities include searching, detection of duplicate labels, sorting (even surname!) 9 labels across, 999 copies of any label. This has to be the simplest and most effective method of creating a mailshot available.

£24.95

MAILSHOT PLUS

Advanced version of Mailshot for the business user with the following extra facilities:

- * integration with other software (using ASCII files)
- * column/tabulated summary (ideal for telephone lists, etc)
- * 4 extra memo lines per label (with defaults)
- * system for coding, dating and adding messages to each label
- * different layouts available for horizontal and vertical justification.

£49.95

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An excellent way to get organised. With it you'll be reminded of birthdays and other anniversaries, meetings and appointments, phone calls to make and so on. As with all Digita products, inputting information is simplicity itself and, once entered, you can search for keywords or for particular events such as birthdays to see when one is coming up. Includes month/week/day planner, automatic reminders for overdue appointments, month and week summary at a glance. For less than £30 this is the ideal way to make sure you never miss that important occasion again!

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FINAL ACCOUNTS

The program will take information prepared by Cashbook Controller and produce a complete set of accounts including:

- * Trial Balance
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- * Notes to the Accounts
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All reports may be produced at any time, with comparative/budget figures if required. The facility to produce these documents quickly, accurately, and regularly is of enormous help in running any business, large or small, since one shows the true profitability achieved, and the other the exact strength of the business in terms of assets and liabilities.

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CLASSIC INVADERS

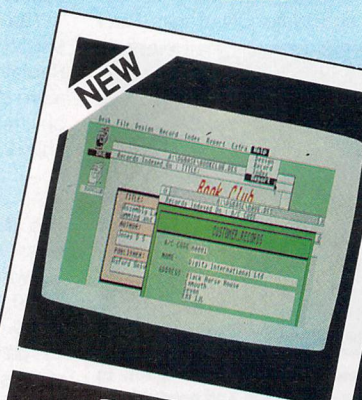
Escape from executive stress with the classic space invader game.

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DGBASE

If you're looking for fast access to stored data, and the ability to create customised reports, including office/personal records, labels and mail-merging, without the need for technical knowledge, then DGBase is for you. Designed and written specifically for the Atari ST, DGBase will fully utilise the facilities of your computer and GEM. This powerful, relational database offers access to 4 files simultaneously, full maths, integration with Digita's DGCALC and Mailshot Plus (and other programs using ASCII files). You can even change or add fields AFTER setting up your database. Simplicity itself, DGBase comes on one disc which includes on-line help and limited only by the capacity of your ST and your imagination!

£49.95

CASHBOOK

Use your computer as a powerful business tool and take the drudgery out of book keeping! In its simplest form, the program will replace your Cash and Petty Cash books BUT information includes: * Summary of VAT information to enable completion of VAT Return. * Monthly summaries and departmental analyses of sales and purchases. * Total debtors and creditors, sales, and overheads. * Income and expenditure analysis. * Journal routine for entering transfers between accounts. * 199 nominal account titles, most of which are user definable. * Observes accounting procedures and meets legal requirements, assuring correct approach to book keeping. * Full audit trail and integrates with Final Accounts.

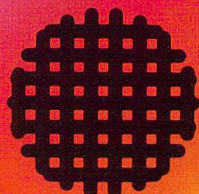
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2. INVOICE & STATEMENTS. This program will greatly reduce time and cost of preparing invoices and statements. Integrates with Stock Control.
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world news

**All the news that's fit to print from
around the globe. Hardware, software
and news of the TT...**

BIG PUSH FOR TT IN GERMANY



After years of rumours, several false starts and launches at the Düsseldorf

Atari Shows in 1989 and 1990, the fabled TT is finally with us.

At its current price of well over £2,000 it may be a bit over the top as a games machine. But for serious users of the ST, even if they can't at present afford the TT's price tag, the success of Atari's latest stab at the high-end sector of personal computing will be very important.

Quite simply, without significant sales of the TT, software houses will not bother to invest in further development of their existing range of ST products, let alone new ones exploiting the full power of the machine. It's surely no exaggeration to say that the TT will make or break Atari in the serious market.

The ST was – and still is, of course – hugely popular as a home and games computer, but its penetration of the business and professional sectors has remained very limited in most countries, especially the English-speaking world.

The real home of the 'serious ST' is Germany, Atari's biggest single market – now even bigger following reunification of East and West.

Given the large established user base there, the TT's future will be largely decided in Germany where Atari's ageing fleet of monochrome 1040s and Megs has come under growing

pressure from cheap IBM PC clones, the Apple Macintosh and even the Commodore Amiga.

It's good to see therefore, that Atari Deutschland has apparently decided to take the bull by the horns and launch a huge marketing offensive around the newly launched TT.

Existing Atari dealers and Atari DTP Centres have been upgraded to Atari System Centres, and can offer fully qualified user support. And full-page adverts are appearing in mass circulation glossies – albeit in black-and-white to match the monochrome mood of German ST owners.

Just look at this example from Der Spiegel, Germany's leading weekly news magazine. "Great news must be displayed prominently", shouts the headline, only to be followed by a sea of small print giving detailed technical specifications and suggested applications in the sciences, computer aided design, desktop publishing and MIDI.

There is also an interesting emphasis on the use of emulators to run a variety of alternative operating systems (including UNIX) and on the TT's built-in networking capabilities.

The slogan "... wir machen Spitzentechnologie preiswert" translates roughly into the more familiar "power without the price" under which the original ST was launched. Let's hope the German campaign is a great success – our own future supplies of first class software and hardware upgrades may depend on it.

GROSSE NEUIGKEITEN MUSS MAN GROSS BRINGEN.

Die meisten unter uns bräuen diese Artzeige nicht ganz zu ihren. Sie kennen bereits die wesentlichen Neugierkeiten und Möglichkeiten. Wie es kurz zu machen. Atari hat einen neuen Computer eingeführt, der in "multimedialem" Wandel arbeitet: als die meisten Computer auf dem Markt. Dazu ist dieser Neue zu sehen. Dazu ist die Idee der Idee, dass andere Computer ganz schön zu schaffen machen wird. Sowie die kurz Informationen für alle, die bereits wissen wollen, was sie sind. Jetzt folgen die Informationen für alle, die es ganz genau wissen wollen.

Von Atari TT ist die Rede. Das ist das neue Softwareprodukt mit dem MG 68030-Mikroprozessor. Er arbeitet im TT ausschließlich mit 32 MHz. Um nicht schneller arbeiten zu können, hat Atari den TT ebenfalls mit dem numerischen Koprosessor MI 68882 (32 MHz) ausgestattet. Anweisungen, die im Computer infortschritt und Wissenschaft einfließen, können damit wesentlich schneller arbeiten als bisher. Mathematik, DTP, CAD-Skizzen und alle anderen Profis werden jetzt auch bei der Manuskriptarbeit. Außerdem hat Atari den TT mit sogenannter Speicherkapazität ausgestattet. Mit 4 Megabytes an Speicher. Den TT auch mit 6 MB oder 8 MB haben. Jeder TT ist bis auf 25 MB erweiterbar. Der Atari TT ist mit einer 720-KB-Floppy und einer Festplatte von mindestens 40 MB ausgestattet. Das Floppy-Format ist MS-DOS-kompatibel, was in der Zukunft beim Datenaustausch profitiert wird. Außerdem hat Atari das TOS Betriebssystem zum TOS 2.0 weiterentwickelt und ebenfalls in ROM untergebracht. Ergänzt mit Emulationen, arbeitet der Atari TT auch unter vielen anderen Betriebssystemen wie UNIX. Sogar mit einem sehr

hochleistungsfähigen zur Verfügung. Dazu gehören auch die Grafikkarten 640 x 480 bis 16 Farben und die 256 x 960 mit hochauflösenden Monitoren bereich.

Bietet den vielseitigsten Anschlussmöglichkeiten für fast alle. Max. Joy Stick, eine Joystick und 2 serielle Schnittstellen mit der TT. Eine Reihe von Interfaces, die so wie keine andere für technische und wissenschaftliche Aufgaben prädestiniert.

Das MIDI-Interface als Standard für audiovisuelle Mediatechnik. Das MIDI-Interface für elektronische Musikinstrumente.

SCSI als internationaler Standard für Laserdrucker, CD-ROM, optische Platten usw. und

Atari für Netzwerkanschlüsse. Zusätzlich eine DMA-Schnittstelle für den Anschluss von ATAS optischer Peripherie und einer

SCSI-Cartridge-Schnittstelle für den Anschluss von Emulationen, Mediatechnik usw. Schließlich ist dieser neueste Atari mit allen ST-Computern kompatibel, was durch die Vielzahl an vorhandenen professioneller Software genutzt werden kann, wie z.B. DTP, CAD und MIDI. Genießen Sie die komfortablen Programme der exklusiven Atari TT. Atari gibt Calligra, Sigmap, Notepad, STAD, Script, NetShare, um nur einige zu nennen.

und noch etwas. Das wird auch alle immer interessieren. Der Atari TT wird zu einem Preis angeboten, der genau entspricht der Qualität und Leistung und das Design. Wir hoffen, dass Sie jetzt speziell in der Atari System Centren.

Für weitere Informationen: Atari Computer GmbH (06142) 20 91 29 oder 20 91 55

ATARI
MIT MACHER SYSTEMENTWICKLUNG PRODUKT



When translated, the headline reads "power without the price"

No More 'Out Of Memory' Headaches

With Frontier Software's XTRA-RAM, you can do away with those nasty 'Out Of Memory' messages which seem to come up just when you are in a hurry to finish your latest creation - whether it's a page of desktop published brilliance, a piece of superb artwork or a spreadsheet which contains all of the information which your bank manager has been demanding since last week.

• No Need To Send Your ST Away

Upgrading the RAM memory of your Atari ST (whether it's a 520ST, 520STM, 520STFM, 1040STF, 1040STFM, Mega 1ST or Mega 2ST) usually means sending your ST away or doing a large amount of delicate nerve-racking soldering yourself. Frontier's XTRA-RAM is installed by you, in your own home or office *without* the need for any soldering whatsoever (The XTRA-RAM even fits STs with surface-mounted MMU⁹⁰ or RAM chips)

• Easy To Install - No Soldering

The installation process takes around an hour (the XTRA-RAM simply plugs into two places inside your ST) and is carefully explained in a detailed 32 page manual which is written with the non-technical ST user in mind. If you have any problems during the installation process, Frontier's technical staff are always available on the phone to offer assistance.

• No Need To Stop At 1MB

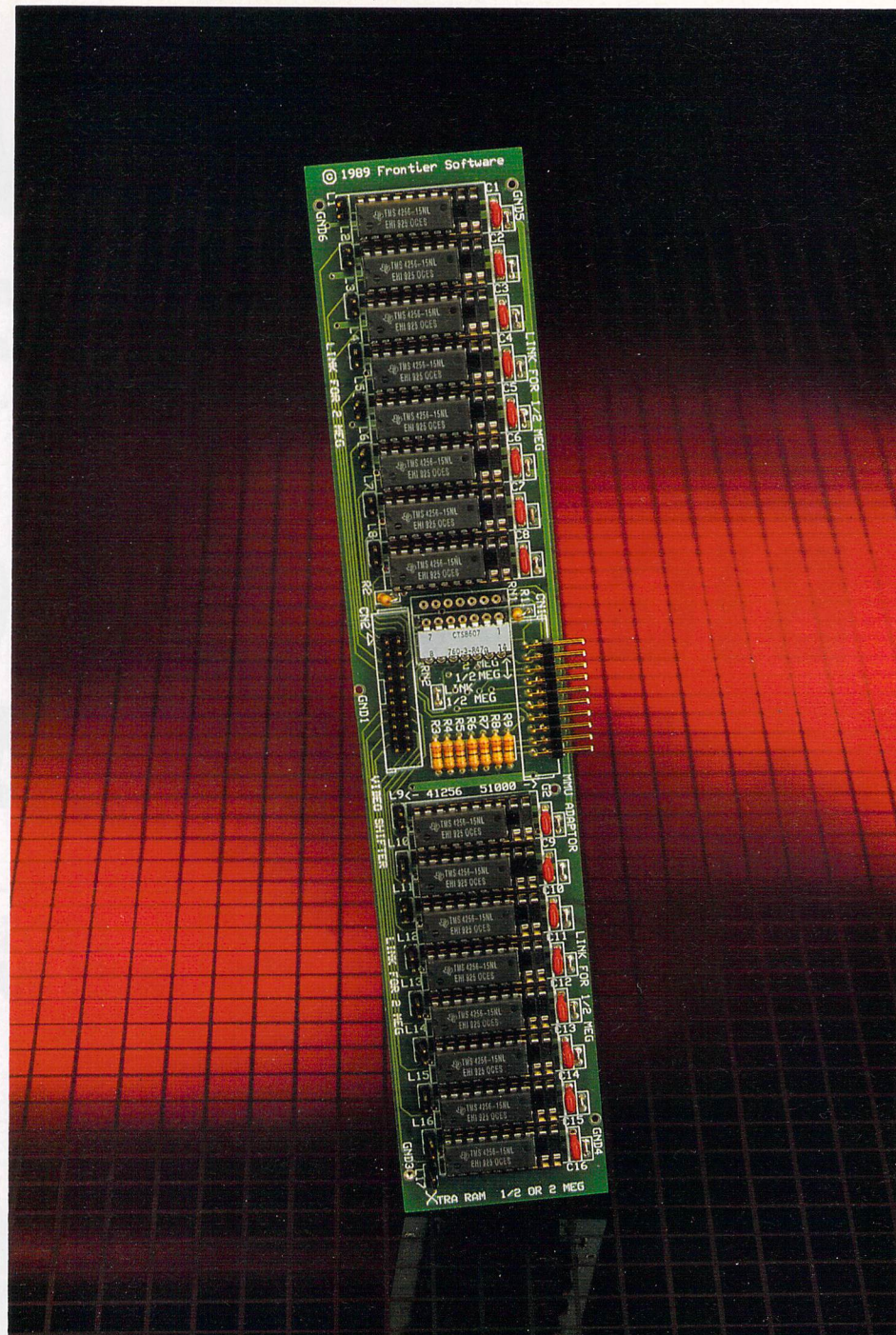
Most RAM upgrades leave you with your 1/2 MB ST upgraded to 1MB and that's it! If you need any extra memory at a later date you are expected to go out and buy a Mega ST - Not so with the XTRA-RAM. The XTRA-RAM has been designed to take two sizes of industry-standard RAM memory chips. With sixteen 256Kbit RAM chips the XTRA-RAM will upgrade your 1/2 MB Atari ST to 1MB, making it totally memory compatible with the 1040ST and Mega 1ST. When you decide that you need more memory you can change those sixteen RAM chips for sixteen 1Megabit chips (again with no soldering whatsoever) in around ten minutes and your ST will be expanded to 2 1/2 MB (520ST, 520STM, 520STFM, 1040STF, 1040STFM and Mega 1ST will be expanded to 2 1/2 MB, Mega 2ST will be expanded to 4MB).

• Totally Compatible

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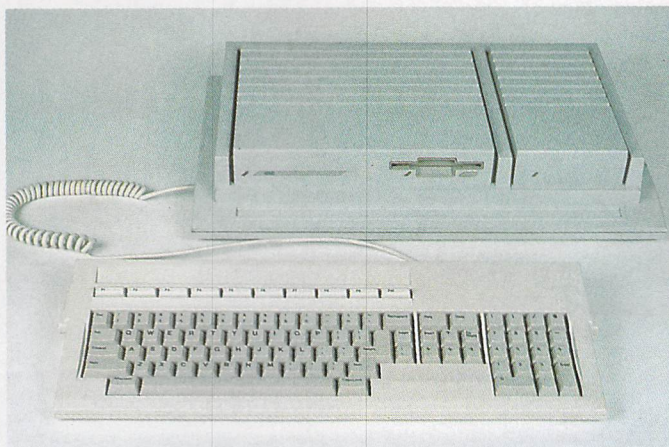


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STRONG ATARI PRESENCE AT COMDEX



The 32MHz version of the TT was shown for the first time in the US



This year, the Las Vegas Comdex Show proved a big launch pad for

Atari. The computer giant had probably its largest ever floor area at the exhibition, with the space being split between the firm's home and business-oriented products.

As reported in the news pages in last month's issue of 'USER', the Comdex Show saw the launch of Atari's new Mega STE.

For most visitors interested in Atari products the TT-like computer stole the show, but other products were also unveiled for the first time.

The 32MHz version of the TT was making its first public appearance in the States where, until Comdex, people had only been able to get a look at the older 16MHz version that never actually went on sale.

The TT also had the new Desktop which has made its way into the Mega STE and is expected to be put into the cheaper STEs in the near future.

Among other new products from the computer giant was its stereo monitor, the SC1435, which will eventually replace the old SC1224 monitor.

The picture is every bit as good as the smaller screen units that preceded it, but comfortably larger. From the outside, full adjustments can be made for picture size and centring. The

internal sound is indeed stereo, but reports from Comdex are suggesting that the amplifier and speakers are no better than the mono units.

This means that you need to use external amplifiers and speakers if you want the clean, loud, distortion-free sound that the STE is capable of producing.

Provided with a 14 inch screen, it's expected to remain in the same price bracket – around £300. In the States it's expected to retail at \$399.

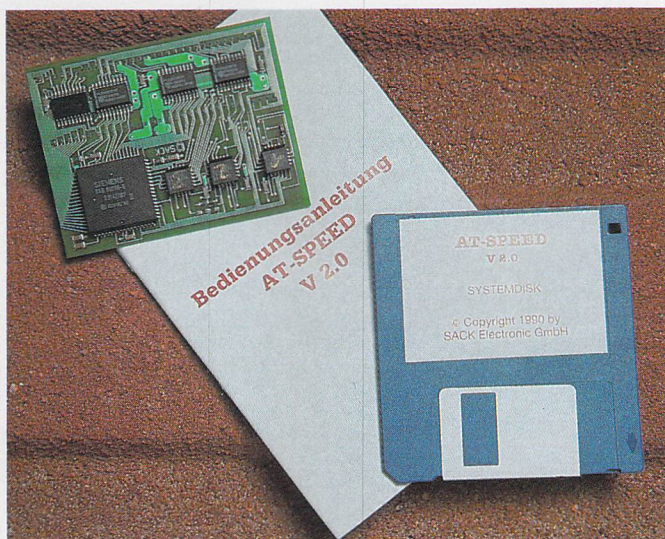
Among the 1,850 exhibitors at the show, those of particular interest included Gadgets By Small which was showing its Apple Macintosh emulator Spectre GCR, with version 3.0 of its accompanying software.

Goldleaf was exhibiting WordFlair 2 which includes an integrated spell checker and is due to sell for \$149.95 at any time now.

If an IBM PC emulator was on your shopping list then Talon had many for you to choose from. All are available in the UK and include PC-Speed, AT-Speed, ATonce and Supercharger.

St Louis-based SoftLogik had beta versions of its desktop publishing package, PageStream version 2, on show. Running in colour on the TT, SoftLogik was promising that the program would be on sale by January.

Let's hope that this year's Atari show in the UK has some of this new equipment on display.



Goldleaf had several emulators at Comdex, one of which was AT-Speed

GERMANY'S STAR



Star Micronics, the Japanese printer manufacturer, is aiming to further the success of its 9-pin printers in Germany.

The firm's new LC-20 model replaces the successful LC-10 and has a print speed of 180 characters per second.

The LC-20 printer, aimed at both small businesses and the home user, includes a paper park function, an automatic paper selection and provides a

total of four different typescripts. Retail price is DM548.

Higher up the Star range of printers is the LC-200, costing DM200 more than the LC-20. It prints in full colour at speeds up to 225 characters a second.

For those users who are seeking a quality 24-pin printer at a reasonable price, the LC24-200 is the one to buy.

Capable of up to 222 characters a second, the machine comes as either a mono or colour model. The monochrome printer costs DM1,000.

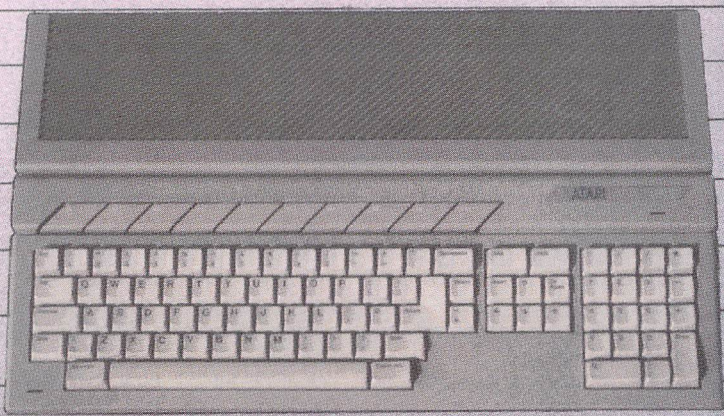
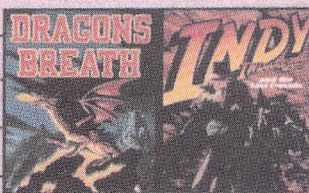


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MACH 1

Frequent Flyers



With his head in the clouds but his feet firmly on the ground, John Butters looks at the best in flight simulation on the ST



The outside of the flight simulator looks more like a large metal box than a piece of technology

Like most home computers, the ST has seen its fair share of flight simulators. But what role do flight simulators play in the world of real aviation?

Civil and military pilots spend a considerable amount of their time 'flying' with their feet and the 'plane' firmly on the ground. All go through rigorous classroom training in the first part of their flying careers, but long hours in the flight simulator are needed to complete their education.

The pilots of airlines all over the world are first taught how to handle aircraft in multi-million pound simulators. But after attaining that coveted left-hand seat in the cockpit, they must attend regular training sessions.

Externally, a simulator looks like nothing more than a large box on hydraulic arms – and that's very much what it is. But inside the box is an exact replica of the cockpit layout. With the aid of high-tech computers, the simulator is programmed to behave exactly like a real plane, so that pilots can practise flying without risking either lives or aircraft.

The whole effect is extremely realistic. Every switch of the flight deck is reproduced and flights can be simulated in all weather conditions and at all times of day.

AIRLINE WORLD

One of the most up-to-date simulators in the UK is housed at Luton Airport. Owned by the leading charter airline, Britannia Airways, and based on the Boeing 767, it's one of four training computers operated by the airline and was manufactured by Redifusion, which makes models for many types of airliner.

It was manufactured for the company in 1984 at a cost of £8 million – the real plane costs £50 million – and is in use almost 24 hours a day, either by airline staff or by third party operators.

Because it uses the most modern computing technology, and following lengthy tests and retests by the Civil Aviation Authority (CAA), the simulator was among the first in the country to receive certification to give

pilots zero flight time training in 1988.

Only a few years ago, after finishing with the Britannia Airways simulator and before being let loose on commercial flights, pilots had to go for further training on real aircraft at Shannon Airport in Ireland. Now, admittedly under extremely strict conditions, certain pilots are able to convert from other types of aircraft and go straight on to a fully-laden 767 heading for Palma.

By law, pilots must spend 16 hours a year in the simulator and complete four exercises, mainly involving flying with a single engine. When on such training the flight deck is manned as it would be on a flight, that is, with a captain and first officer, or co-pilot as they are often known.

Inside the simulator there is a bank of colour monitors beside scores of buttons. These are used by the instructor who challenges pilots' skills by throwing before them hazards such as engine fires or windshear – one of the most dangerous weather conditions for aircraft.

The cockpit controls are identical to those of a real Boeing 767 and the windows afford an eerily realistic 180-degree view which add to the total illusion. Different software packages are available for every part of the world, making it possible for pilots to fly normal routes such as Manchester to Orlando, without ever leaving Luton.

HOME FLYING

This is all very well – very expensive machines can train pilots – but what does all this have to do with a £300 pound Atari ST?

Well, the short answer is that flight has always been a fascinating subject – from Icarus and his waxy wings to the awesome Concorde – and the ST can provide anyone with a very convincing illusion of the experience of flight.

Ever since the introduction of home computers, software houses have done their best to reproduce flight simulators – most fashioned on the performance of a fast military jet.



The majority sold very well, triggering a flood of others on to the market.

Almost everything found in the 'real' simulators can be found on the home computer. Vital dials are usually reproduced at the bottom half of the screen and keyboard controls are used for the undercarriage, flaps and power.

Generally, home flight simulations are much like commercial simulations such as Britannia Airways' Boeing 767. Of course, they lack the bumps, rocking and rolling which give the large simulators the power to induce motion sickness.

The real cockpit controls are impossible to reproduce on any home computer – does anyone have plans for a 767 cockpit add-on? But visually they are very realistic and many of the incidents suffered by pilots, such as engine failures, can be reproduced on an ST.

The only other things missing from most ST simulators which appear in the commercial ones are airfield approach lights and runway lights in night-time flights.

Everything else is pretty much the same. If you've ever flown your ST straight through a hangar and thought that it wasn't very realistic, think again.

Because of the way simulators are programmed, even the 767 simulator lets pilots



hit the ground or fly straight through mountains or buildings – but it's impossible to mistake the fact that it has crashed. You can't cheat.

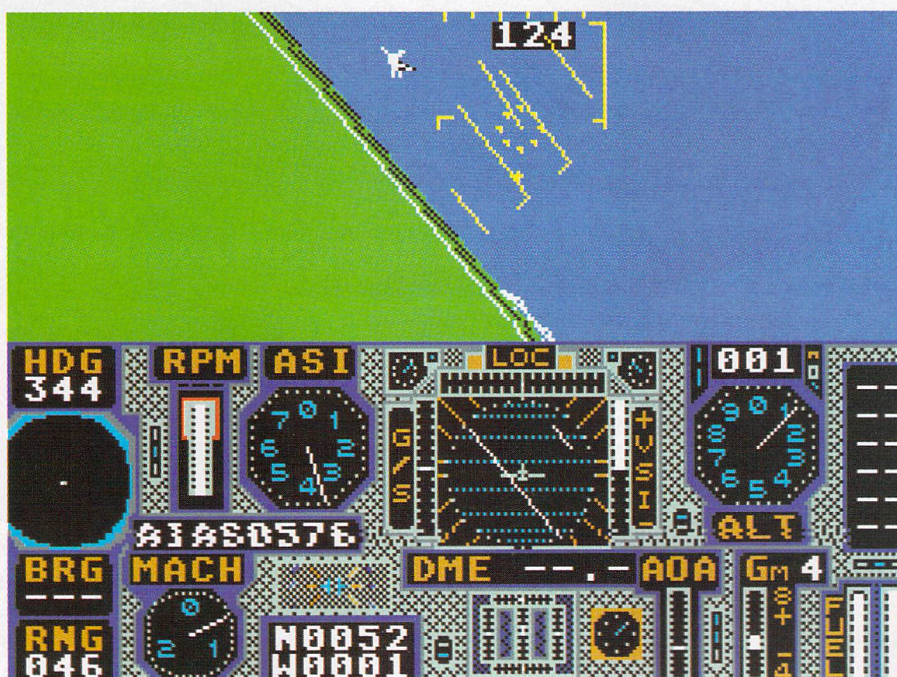
By 1982, the Sinclair ZX81 had software which demanded a 16K RAM pack to be plugged onto its back. It was called simply Flight Simulator and was based on a light aircraft, probably a single-engined Cessna. White dots on the all-black ground identified the runway edges, and the dials were simple as was the gameplay.

But of all home computers, it is the ST which probably has the most simulator programs, and some of the best as well. Many are no more than glorified shoot-em-ups which are alright for games players, but for the budding pilot, SubLogic's Flight Simulator II and HiSoft's recently launched ProFlight must take pride of place in the disk box.

DEVELOPMENT OF PROFLIGHT

ProFlight is the latest flight simulator to appear on the ST. The author, Nick Brown, has worked on several simulators, including the British Aerospace Tornado, the fighter on which ProFlight is based.

Seeing a gap in the market place for a realistic simulator, Nick began work on



The best in military simulators is Proflight, only just released by HiSoft. It's mouse-controlled, but if you prefer it can also be operated using a joystick.

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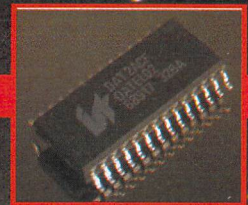
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writing the program, a task which was completed one and a half years and more than 2,000 programming hours later.

Having worked on real simulators, Nick felt that one of the areas in which flight simulators fell down was in their controls. Joysticks are poorly suited because they're switch-controlled. This means that they do not give proportional control, as is possible with the mouse. ProFlight thus became primarily mouse-controlled – but those who are more at home with a joystick have the option of changing over to it.

So with this idea in his head and the determination to put it into practice, Nick began work on ProFlight. The first stage, well before graphics were considered, was the mathematics of it all. This part of the package was written using the programming language BASIC.

HiSoft's Devpac package was called in for the development of the remainder of the ProFlight and Nick described it as a "marvellous vehicle on the Atari for the development of software", and found its anti-bug feature particularly useful.

JET-SPEED UPDATE

The next parts of the program to see the light of day were the vital flight instruments, such as the air speed indicator (ASI), and these were part of the easiest stage of the development.

Finally, the graphics could be developed. The horizon, buildings, airfield, runway and enemy planes had to be introduced and programmed so that the screen update was fast enough – anything less than 10 frames per second was not good enough. It was this visual aspect which took the longest time to complete to achieve the required standard.

With the program now 90 per cent complete, the programmer had to find a software house to market ProFlight. Nick wanted the program to be sold as a serious product and didn't want it to be associated with ones which had a games look about them, such as Battlehawks. HiSoft really liked the product and from that stage, supplied him with more ideas and supervised the completion of the package.

So doesn't the program conflict with the Official Secrets Act? Apparently not, although not a single element of the simulation has been changed to get around the Act. What's more, the programmer claims that any other software house which says that it's changed a military simulator to do so is talking nonsense – details of a plane's performance as found in a simulator are widely available.

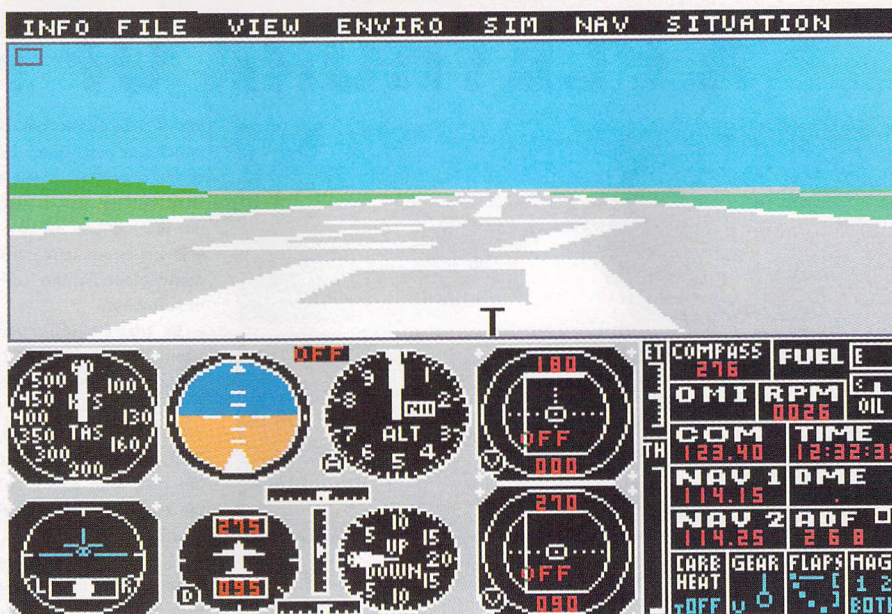
ProFlight has been on sale now for only a few months, yet new versions of the software are already being planned. According to Nick, a simulator is something which can always be enhanced, in keeping with developments in aircraft – especially if machine speeds increase.

At the moment, the ability to change the angle of view looks to be a likely implementation but plenty of simulator 'firsts' are being considered as well.

WHAT'S IN THE HANGAR?

ProFlight

The latest aircraft to be given its wings on an ST is the British Aerospace Tornado. To most people a serious software house such as HiSoft doesn't seem a likely company to put



The only civilian-based simulation program on the ST is Flight Simulator II. One of the first sims around for the ST, it gets high marks for quality

out a flight sim – and they're right, it isn't.

But ProFlight isn't the same as other fighter sims – it really does feel real. When the lid is taken off the box and the ring-bound manual is open, you'll be taken on a trip round the plane you'll be flying. Absolutely everything you could think of is mentioned – as well as plenty that you probably didn't think of.

As soon as the Tornado's wheels leave the safety of the runway you'll be taken in by the sensation of flying. Simply climbing in a straight line without stalling takes a fair amount of practice and for most, the safest way back to the ground is to eject – you'll never land the plane successfully first time. Prove me wrong!

But it's this difficulty which makes ProFlight addictive. It becomes a challenge to be able to fly the super-fast jet. Eventually you'll begin to get the hang of things, and at that stage it's safe to move on to the combat mode. This introduces a shoot-em-up element into the simulator, but don't make the mistake of thinking it's just like the rest of the simulators which are available.

Missions must be planned, and way points (points to overfly en-route to a destination) put into the fighter's computer. Selecting autopilot flies the Tornado between these points automatically.

When a missile is fired important factors such as gravity and wind speed are all taken into account. This makes the combat much more difficult and realistic. If you've finally got the hang of less realistic simulators such as Falcon, moving on to ProFlight will give many more months of exciting flight. Very complex but enjoyable, and well worth the clams.

Flight Simulator II

SubLogic's Flight Simulator II was one of the first simulators to be brought to our screens, yet remarkably it remains one of the best. Translated through various formats in its time FSII, surprisingly, is the only civilian-based ST program.

It offers the choice of two small planes. The Cessna 182, favourite with those seeking a Sunday afternoon jaunt, or the Gates Learjet 24, one of the earlier models of a top-selling executive jet.

The single-engined Cessna is the one most



On the approach into Oakland the airfield can be seen spread out in the distance



The Cessna being turned onto the final approach. The runway looms ever closer

newcomers should opt for, and in this program you're given a choice of several North American scenarios. The simulator boots with the aircraft lined up on the runway of Oakland's airport, but this can be changed.

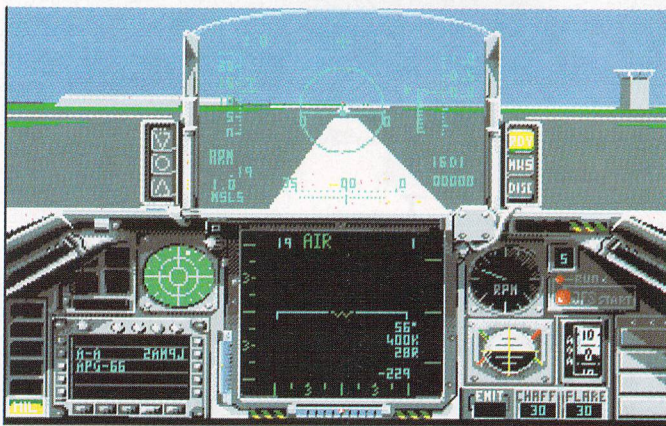
Realistic area maps are supplied with the program and by tuning into beacon frequencies listed on the map, it's possible to fly large distances without getting lost, meaning you can do more than fly around in circles above the same airfield.

Graphics? Runway layouts are without doubt the best to be found in any flight simulator, but FSII is beginning to show its age. Slow screen updates unfortunately detract from an otherwise superb product.

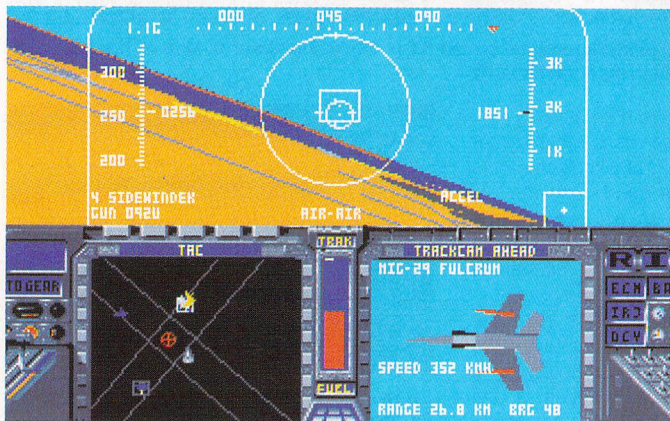
The simulation always opens with clear skies and no wind. This can be adjusted – as in the Britannia Airways simulator – so that you have a cloud base at 100 feet and a 30 knot crosswind – very tricky flying conditions.

The easily bored can choose the World War I option. Here the graphics are poorer than in most modern military simulators, but it does provide a game element.

A PLETHORA OF PLANES



Get ready to go. Falcon is lined up on the runway



One of the 1990 releases was F-19 Stealth Fighter – a huge success

Once SubLogic realised that still more money could be made from FSII, it began to churn out scenery disks for all corners of the globe, much the same as in real simulators. By pressing a key you could be flying into Chicago's O'Hare one minute, and London Heathrow the next – not bad in a Cessna. Famous landmarks identify the location and most airfields in each area are included.

People either love or hate simulators, rather like adventure games. And for some strange reason adventure game lovers tend to like flight simulators and vice-versa, although that doesn't hold true here at 'USER. SubLogic obviously realised this when it developed Hawaiian Odyssey, an extra module to FSII with an adventure theme built in.

PUBLIC DOMAIN

Often the public domain is the ideal place to begin looking for a cheap piece of software to test out whether you like a certain type of software. It has nearly everything – databases, word processors, art packages, the kitchen sink (almost) – but surprisingly little in the way of flight simulators.

The only simulator found in the freebies category was the rather aged Air Warrior. Not really a program to let you experience the ST's flying capabilities, but if you overspent at Christmas it will tide you over until you can afford something with a bit more bite.

For the simulator buff, the future is as bright as Heathrow's runway lights. The next logical steps in ST simulator development should include the introduction of a realistic

night-time flying option. Much existing software has options, which make everything dark except the runway, which glows. How many real runways glow? Not one.

It could be that software houses know something the aerospace industry doesn't, but until then it would be nice to see a runway with realistic lighting. Daytime simulator displays look very realistic – with a bit of hard concentration on the screen, you could confuse your living room for a fast military jet.

In clear view on the horizon at the moment are two new products from Falcon's hangar at Mirrorsoft. Flight of the Intruder will be the first new simulation to be released. As a fighter pilot you'll be given the choice of a Phantom or A6 Intruder, taking off from an aircraft carrier during the Vietnam war.

Also in the pipeline from Mirrorsoft for '91 is a simulator based on the famous tank destroyer, the A10A Warthog. Avenger A-10 is described by Mirrorsoft as the "meanest simulation ever produced" and has missions set in Panama and the Middle East.

SubLogic, meanwhile, is due to launch a new simulator on the IBM PC and compatibles. It will be based on several airliners and in it, pilots will have to consider passenger loads, departure slot times and almost everything else the captain of a commercial plane is responsible for.

When asked whether the program will be making its way over to the ST, SubLogic was very reluctant to give a definite "Yes", but considering the success of its earlier product it would be extremely strange if it wasn't seen

We've looked at the two programs which are pure simulators. There can be no argument about either's intention: neither has a high score table nor instructions on how to achieve a brilliant score, and so can be confidently placed in the 'serious' category of software.

So that's two programs. But what about the others? The last couple of years have seen a sudden increase in the number of programs around. Since 1988 we've seen Falcon, F16 Combat Pilot, Bomber, F29, Battlehawks and the rest, with F19 Stealth Fighter at the top of the sales chart at the time of writing.

The game element in all of them makes them less attractive for the 'purist' – anyone interested only in their ability to simulate flight.

Few of the laws of aerodynamics are acknowledged, but by trying to capture both markets, software houses have managed to come up with products which sell like hot cakes.

And to be honest, many are quite reasonable packages. Because they don't bother with complications like aerodynamics, they're much easier to fly than products such as ProFlight and Flight Simulator II, and they're fun to play.

One of the most successful of this bunch is Falcon. Feeling the need for speed, trigger-happy fighter pilots are

given the opportunity to hop into the hot seat of one of the world's most modern military jets, the F-16.

The popular Mission Disks have been brought out by Mirrorsoft to keep the program alive and kicking. There's plenty of action to be found and although not the best, some attention has been paid to the laws of flight.

Falcon just about succeeds with its representation of the runway, and enemy planes are among the best seen in this type of product.

Hot on the tail of Falcon was F16 Combat Pilot. It's not been heard of for a while now, and when it was released by Digital Integration it had already been beaten into the skies by Falcon.

Bomber followed early in 1990. Again, it was very good and sold well, but it too felt more like a game than a simulator.

In the same year the US Defence Department finally admitted the existence of the Stealth bomber, by which time a number of them were believed to have been making secret night-time flights from a Nevada airbase.

Microprose knew all about the USAF's secret and had begun programming a flight simulator based on it. F-19 Stealth Fighter was launched in mid-1990 and is the best of the shoot-em-up versions of the year. It's fun and graphically brilliant, but the flying element remains a little weak.

within a couple of years. Until then there's plenty to keep us all happy. To feel like you're really flying, take a look at Flight Simulator II



or ProFlight, otherwise you could try Falcon, Bomber, F-19 and the rest.

● The author and Interactive Publishing would like to thank Britannia Airways for their very generous help in the preparation of this feature.



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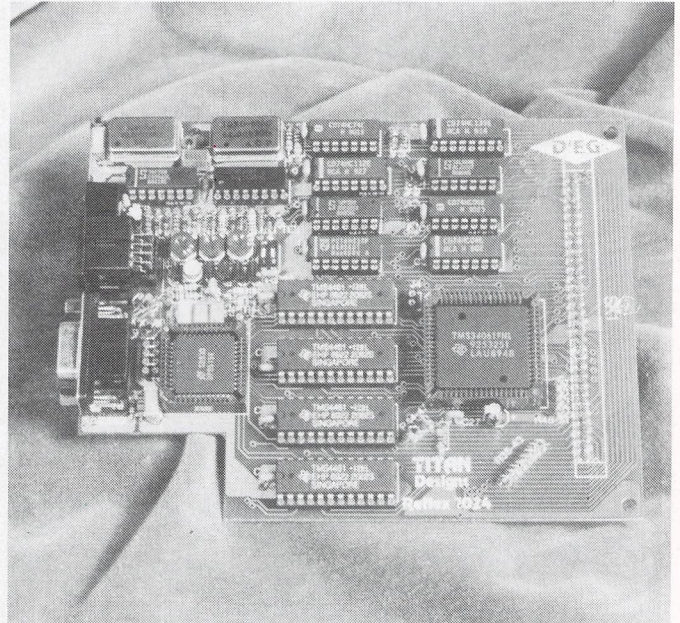
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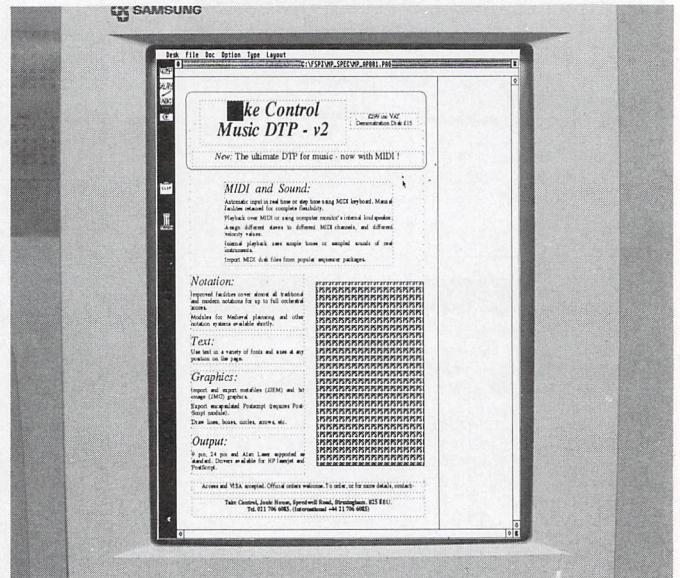
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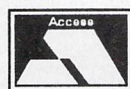
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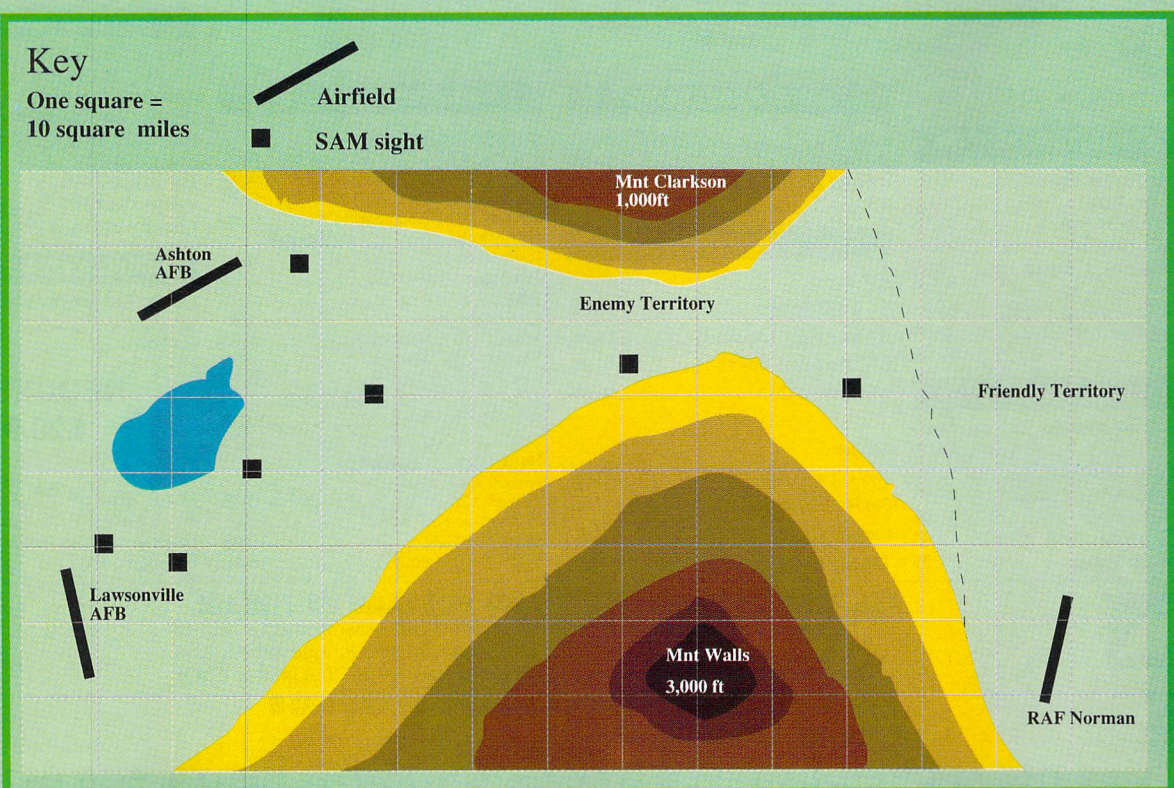
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USERDISK

February '91

ON THE DISK

DEFENDER II GAME DEMO

A fully playable demo of the latest smash hit game from Jeff Minter. Defender II is an update of the classic original coin-op hit with bright sprites, stunning sound and full screen scrolling. Superb space-age action. Not to be missed!

POWERBASIC DEMO

The fully working demo of the HiSoft programming language to accompany our beginners' series in Runtime. By following the articles you'll be able to improve your programming skills and increase your general confidence with the ST.

ST WRITER ELITE

The very best public domain word processor available for the ST. Discover the word processing power and flexibility of your ST with this fully featured program from Atari. This is the latest version and is fully compatible with the STE.

QUICK ST

Speed up your ST with this handy little desk accessory. GEM boxes seem to fly across the screen and text scrolls past in a blind blur. All this in only 21K of RAM.

QUICK INDEX

Find out just how fast your ST really is with this program. Compare your machine to

others which are running different versions of TOS or maybe those which have different screen resolutions. Incredibly useful, and very revealing!

QUICK FIND

Never again will you waste time hunting through lots and lots of different folders looking for lost files. Fire up Quick Find and no file will ever be able to lose itself again. This program saves time and frustration!

QUICK VIEW

Admittedly, the Desktop file reader is not the best in the world, but fear not, this utility completely replaces it. Scroll forward or backwards through documents at lightning speed to find the part you want.

QUICK LOCK

Lock up your disks, hard or floppy, against unwanted prying. Nothing's more annoying than having someone else fooling around with your work. Quick Lock protects all your incredibly important secrets from prying eyes. Just what you need!

QUICK MENU

Put an end to hunting through countless folders to find the particular program you want. With Quick Menu you can set up all of your favourite programs to run with a single click of the mouse - simple eh?

what's in doc?

Well over 1Mb of stunning games, sexy demos and scintillating features as well as sound samples, MIDI libraries, clip-art, the flotsam and jetsam of every day computing, how can you be without it? Forget the rest, 'USER gives you the most and the best!

● We use the most cunning disk formatting program ever devised to enable even single-sided drive owners to get their read/write heads on the goodies, but even we are limited by natural physical forces, ie if you only have one head then you only get one side, right?

● To access side two, simply double click the folder side_2 and you'll be transported to an Aladdin's cave of electronic delights

● And for those of you just can't live without the tempting teasers on side two, we offer our Side Two Service. For just £1.50 (which includes the all important postage and packing) we'll put the goodies from side two on a single-sided disk and send it. Send cheques and postal orders payable to Atari ST User Disk offer; Europa house, Adlington Park, Macclesfield SK10 4NP.

loading guaranteed

Look, we do our utmost to ensure that every disk is 100 per cent perfect. Unfortunately, physical forces such as those propounded by Einstein himself, suggest that a tiny proportion of those disks will contain errors.

If you're one of the lucky readers who has a disk that conforms to Einstein's theories, but would rather have an ordinary, common or garden working disk here's what to do: stop panicking! We've come across the problem before and know just what to do. Wrap the offending item in some stout packaging (you don't want to frighten the postie-man, right?) and send it to Stanley Precision Data Systems, Unit F, Cavendish Court-yard, Sallow Rd, Weldon North Ind. Est., Corby, Northants, together with your name and address and we'll replace it.

Power BASIC Compiler Version 1.21

Copyright © HiSoft 1987,8 5th May

Written by:

Dave Nutkins, Andy Pennell,
Dave Howorth & Stephan Somogyi

Consultant:

Simon Goodwin

OK

user
1991
60 disk
february

DEFENDER II GAME DEMO

Filename: DEFDEMO.PRG
Configuration: All STs, colour only

Defender was one of the original arcade hits. Space Invaders and Asteroids may be remembered as being the coin-op pioneers, but Defender is the one fondly remembered games for the hordes for sheer thrills and spectacular action.

Now Atari's very own games label, ARC, has com-

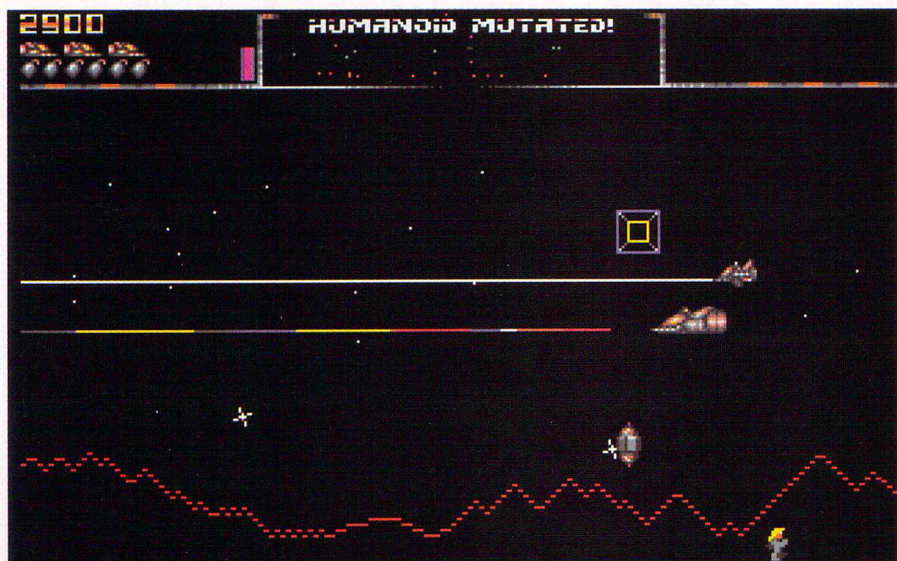
missioned Jeff Minter (he of Yak fame) to write a sequel.

Defender II offers fast, colourful sprites, massive explosions and stunning sound.

It includes no fewer than three games in one program: the original Defender, the updated Defender II and the fabulous Stargate. The game

is mouse-controlled – the left mouse button controls the thrust, and the right reverses the direction of your ship. Shift fires the laser cannon and, if you are playing Defender II, Alternate operates the lightning laser.

This demo contains one fully playable level from each of the three games.



POWER BASIC DEMO

Filename: PBASDEMO.PRG
Configuration: All STs, colour and mono

HiSoft's PowerBASIC is a modern, structured BASIC that's easy to use and offers a host of powerful features. It's fast, easy to use, and well integrated. PowerBASIC is an established industry standard – many professional programs have been written in BASIC over the years.

The various HiSoft BASIC languages are all compatible with the Microsoft QuickBASIC standard on the PC, and produce fast, compact code which can be run from within

the BASIC editor or compiled to disk as a stand alone .PRG program.

This demonstration version enables you to experiment with the power and flexibility of this excellent language. The only feature that has been disabled for the demonstration is the ability to compile a program to disk, so you can't create stand alone .PRG programs.

Full documentation for PowerBASIC, including a summary of the features and commands, can be found on the Disk.

ST WRITER ELITE

Filename: STWRITER.PRG
STWRITER.ARC
Configuration: All STs, colour and mono

Word processing comes second only to games playing as a popular use for the ST. At some time or another, everyone needs to write a letter to the bank manager, a note to a friend or a quick missive to your favourite computer magazine. Word processors make writing easy and let users make the most of their words, but not everyone has a commercial program.

ST Writer is a public domain program written by a team of programmers at Atari Corp in the USA. It has evolved from the Atari Writer program on the old 8-bit XL and XE machines and so shares many similarities with the older program.

ST Writer was written when the ST had only just been launched and there was virtually no software available for the machine. Atari needed a fast and powerful program that could prove the capabilities of the new ST to potential users, and interest other developers in writing software for the machine.

The original versions of ST Writer sacrificed the GEM windows and mouse system because text scrolling in a GEM window was too slow for a professional standard word processor. Atari developed a simple front-

ST WRITER™ ELITE	
Copyright © 1990 by Atari Corp.	
In the public domain. Not for sale.	
CREATE File	LOAD File
DELETE File	PRINT File
EDIT File	SAVE File
FORMAT Disk	RECEIVE AtariWriter™
INDEX of Files	TRANSFORM Colors
Hires Flip-Flop	QUIT

ST Writer's main menu screen. No sequences to remember (or forget), just a single key press will do it

end for the program which used letters instead of an arcane sequence of commands to process various functions.

ST Writer Elite has evolved considerably since those early beginnings and is now a much more sophisticated program. It makes some concessions to GEM, offering a separate screen of GEM menus to control many of the features of the program. Document editing is done from a non-GEM environment.

The program has undergone several revisions as programmers have become more adept at programming the ST to get the best out of its features. The version included on the CoverDisk, ST Writer Elite, is the very latest one available, and is now fully compatible with the new Atari STE machines.

Although the program on the Disk is complete, many sample and tutorial files that come with ST Writer Elite have been archived to save space.

The ST Writer manual can be read from the Runtime program, as can the READ.ME file which contains a list of all the improvements made to this version.

QUICK UTILITIES

The Quick Utilities from Canadian programmers, Branch Always Software have gained a well deserved reputation for being some of the best programs available in the public domain.

Now ST User has bought together six of the best Quick Utilities on a single disk. Full documentation for all these programs is included on the CoverDisk under the Quick Utilities menu in the Runtime magazine program.

Read all of these documentation files very carefully – they will help you to get the most from these programs.

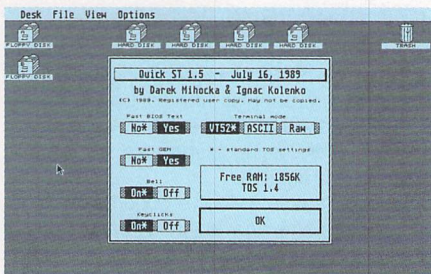
QUICK ST

Filename: **QUICKST.ACC**

Configuration: All STs, colour and mono

The ST is notoriously slow at some of its screen drawing operations. The A-line routines, which are responsible for screen drawing, were originally written in C which is not the ideal language for this sort of work. The commercial program Turbo ST speeds these operation up considerably, however it costs nearly £40.

Quick ST is a desk accessory that replaces these A-line routines with much faster versions written in machine code. Virtually all GEM programs are compatible with Quick ST and any program that calls on the A-line sys-



Options like fast GEM and fast text can be controlled from this dialog

tem will show a noticeable increase in the speed of its screen drawing operations.

Quick ST is not quite as fast as its commercial cousin, but it still provides a noticeable improvement over the normal GEM screen. Many of the features offered by Quick ST can be configured from the Desk menu.

Rather than a desk accessory, Quick ST can also be installed as a normal program by changing its extender from .ACC to .PRG. This version can be used as an AUTO folder program.

QUICK VIEW

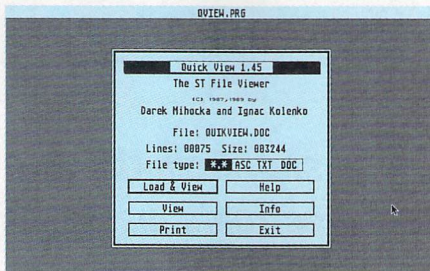
Filename: **QUICKVIEW.PR**

Configuration: All STs, colour and mono

The ST has a built-in text reader on the desktop. Double clicking on any file that doesn't have a .PRG extension will give you the opportunity to view the contents of that file. The Desktop file reader is unsophisticated, so Quick View provides a flexible alternative.

Any text file can be loaded into Quick View from the standard GEM file selector. Once loaded, you can scroll backwards and for-

wards within a file, searching for a particular word. Quick View even lets you have several files open at once, so you can change back



Quick View is ideal when searching for information from files

and forth between them if you want to see the difference between two files.

To get the most benefit from Quick View, it should be installed from the Desktop 'Install Application' dialog box for files with a .DOC extender. More detailed instructions can be found on the CoverDisk.

QUICK INDEX

Filename: **QINDEX16.PR**

Configuration: All STs, colour and mono

The current mania is for speeding up STs with 16MHz processor boards, adding new file selectors, AUTO folder programs, desk accessories and replacement desktops. But what exactly are all these additions doing to the speed of your ST?

Quick Index is a program designed to tell you exactly how fast your ST is running. Unlike some benchmarking programs which ignore speed-up utilities, disk caches and the like, Quick Index tells you exactly how your set-up performs.

The tests are divided into three types. Disk tests tell you about the disk drives attached to your system, both hard and floppy. CPU tests measure the effectiveness of the processor your machine is running (useful for testing boards like Hypercache). The final set of tests measure GEM screen drawing operations, which are accelerated by programs like Quick ST.

Quick Index is another of those rare programs which can operate either as a desk accessory or a normal program, depending on its name. The disk has the .PRG version, but you can change it to an .ACC.

QUICK FIND

Filename: **QUICKFIND.PR**

Configuration: All STs, colour and mono

Sorting through hundreds of folders to find a single file is a common pastime for ST owners with a hard disk. The GEM Desktop has no facilities for file finding, although the new Desktop on the TT and Mega STE machines do have a file find feature built into them.

Quick Find enables you to search all the drives attached to your machine for a single file or group of files. The file search patterns are very flexible – whole file names or wild cards can be used for the search. You can also select which drives are to be searched.

Once the file has been found, Quick Find displays the complete pathname of all the files that match the search pattern. Quick Find can make changes to all the files it finds, such as marking all the .DOC files as archived, or deleting all the .BAK files to tidy up your disks.

QUICK LOCK

Filename: **QLOCK.PR**, **QLOCK.ACC**

Configuration: All STs, colour and mono

Users with hard disks will appreciate this little utility. Now you can stop prying eyes from going through your files and altering your data. Running as a combination of AUTO folder program and desk accessory, Quick Lock lets you regulate access to your disks.

The desk accessory sets up any disk, floppy, hard or RAM disks so it can be write-protected, to stop data being altered by other people. Disks can also be set up so they cannot be read, preventing anyone from even taking a peek at your private files.

The desk accessory even has the ability to password protect itself – so someone who doesn't know the password can't change the read/write state of your disks. To gain the maximum benefit from Quick Lock, the Quick Lock program should be the very first item in your AUTO folder.

QUICK MENU

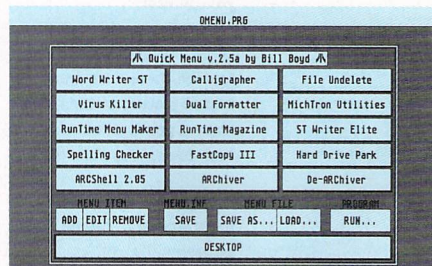
Filename: **QMENU25.PR**

Configuration: All STs, colour and mono

Most ST users, especially those with hard disks are familiar with the ST 'folder shuffle' – opening layer after layer of folders while trying to find a particular program. Replacement Desktops, like NeoDesk allow program icons to be placed on the desktop for easier access.

With Quick Menu, up to twelve programs can be set up in advance. The click of a single button runs the program, no matter where it is on the disk. Even .TTP files will run, since Quick Menu passes command parameters on to an application. Menu information files can be saved and loaded at will, so one menu can be set up for word processing, one for games and another for other programs.

Two versions of Quick Menu are included on the CoverDisk, one for colour and one for mono. If you have only one monitor, then copy the one appropriate file to your work disk. Consult the documentation files on the disk for instructions on setting up Quick Menu to suit your system.



Set up programs to be executed with a single mouse click. What could be easier?

RUNTIME

8

Programming from beginning to end, from those in the know. It's all here on the world's first dedicated electronic media magazine for the ST...

GETTING STARTED

RunTime is a disk-based magazine program with articles providing programming help and hints for games writers and much more.

The magazine appears on the disk as a program called MAGAZINE PRG and all you need to do to read the magazine is double click on the program icon. You'll see a GEM menu bar at the top of the screen – moving your mouse pointer over it reveals several drop-down menus.

These menus contain the titles of all the programs, articles, games and utilities on the cover disk. Click on a menu option and the article will be loaded and displayed on the screen. If your monitor isn't very clear you can print out the article and study it at your leisure. At the foot of the screen you'll see several icons. Here's what the main ones do when you click on them with the mouse...



This is the icon which enables you to return to the opening GEM menu bar. Click this if you want to stop reading the current feature.



Use this icon if there is a particular page of the feature which interests you and which you wish to have on paper.



If you need to print the entire feature, tutorial and so on, this is the icon you need. Click here to send the complete feature to your printer.



Often, as you're reading a feature there'll be an associated picture to help illustrate a point. Click on this icon to see the picture.



Everyone, even learned programmers, needs help occasionally. If you find that some friendly advice is needed click the cross.

ON THE ELECTRONIC PAGES

STOS PROGRAMMING

STOS, the Games Creator from Mandarin Software is probably one of the most popular implementations of BASIC available for the ST. Quick, easy to use and specially designed for programming bright and colourful games, STOS has become a firm favourite with users.

In his article in the October Runtime magazine, Phil Lawson introduced STOS programmers to the concept of defining a sprite path as a data statement.

This month Phil goes further, explaining how to load and manipulate the sprite path data within programs. An updated version of the Sprite Path Designer program is also included, so don't worry if you missed it the first time around.

FIRST STEPS IN BASIC

BASIC is often the very first programming language computer users try. It's bundled with new ST, it's simple and easy to learn, but at the same time it provides the power to access the hardware which makes the ST special.

This month Peter Phillips begins his tutorial on the ins and outs of BASIC programming.

The Print statement lets BASIC communicate with the outside world, and there are several tips for getting the most out of it.

You can follow this BASIC programming series using the demo version of PowerBASIC from HiSoft which is included on the CoverDisk this month. Remember to take a look at the full instructions on the Disk, in Runtime.

GFA RESOURCE PROGRAMMING

GFA BASIC is a fast and powerful implementation of the BASIC programming language that is rightly popular among power users. Both version 2 and 3 are still best sellers and new users are being introduced to the language all the time.

For programmers who've gone beyond the beginners stage and want to branch out a bit, John Peters begins a new series on how to program the powerful features of GEM directly from GFA BASIC.

You can learn how to program GEM alert boxes, dialogs and menus in order to make your program easy to use and give it a really professional look. Programming GEM isn't hard, and our tutorial makes it an even simpler process.

DISKS, VIRUSES AND IMMUNISATION

Following the Green Goblin Virus on the December CoverDisk the ST User team have taken steps to ensure that such an unwelcome visitor never again creeps onto our Disk.

As from last month we are using a special boot sector on the CoverDisk.

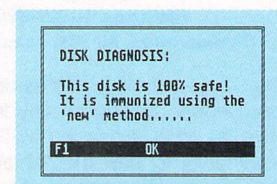
Created and programmed by Richard Karsmaker, the author of the CRL Virus Killer, this clever piece of code sits on the boot sector of a floppy disk and prevents viruses from infecting the disk. This immunisation code

creates an executable boot sector on the disk. Most of the Virus Killers available commercially such as AVK recognise this code and report that the disk is immune to virus infection.

Other less sophisticated programs simply report that the boot sector of the disk is executable. Don't worry about it as this is exactly as it should be and shows the immunisation code is on the disk and doing its job.

Remember, no matter how safe you may think your disks are, never relax your anti-virus

precautions. Check all new disks with a Virus Killer and try to keep your disk write-protected whenever you can.



Richard Karsmaker's AVK program from CRL. This is the February CoverDisk under examination

USING USERDISK AND RUNNING RUNTIME

Follow these instructions for absolutely, positively, definitely the last word in trouble-free CoverDisk use



USERDISK

This month 'USER has redesigned the Runtime Disk magazine to make it easier to follow. We've listened to all the suggestions our readers made in the Reader Survey from the December issue and the many letters we receive with comments and suggestions.

Sean Hodson of Hal Computing has put these ideas together in the new magazine program. The new front-end uses GEM-like buttons with plenty of text to explain what each option does.

As well as containing the articles for the Runtime programming magazine, this same program lets you read all the documentation files for the megabyte of programs which are crammed onto the CoverDisk. The Quick Utilities, ST Writer and the Spell Checker are all comprehensively documented. Runtime also includes instructions for using the ARChived files on the Disk.

The Runtime magazine is intended to be used for reading and printing the text and documentation files which accompany the programs on the CoverDisk. It's not possible to run any programs from inside Runtime, so when you want to run a program, quit Runtime first.

RUNTIME INSTRUCTIONS

To use the Runtime magazine program, follow these simple steps:

1 Insert the CoverDisk in drive A of your machine. This is the internal drive on most STs, although some very old machines have an external drive.

Either turn your ST off then on, or press

2 Reset to boot up with the CoverDisk. A Desktop with two disk drive icons and a single open window will appear. If you're using a colour monitor or a television, you'll have to make sure the ST is in medium resolution. The STE will not boot in medium res, it has to be high or low. So after booting up an STE, you will need to go to Set Prefer-

ences on the Desktop to set it to medium resolution.

3 Nine icons are displayed on the Desktop - most of which you will not need to use. SIDE_2 will take you to the programs on side 2 if you have a double-sided disk drive. If you only have a single-sided drive, see the instructions on page 31. TEXT contains the text files for Runtime. ARCX.TTP is for de-archiving files. DEFDEMO.PRG is the demo program. DESKTOP.INF contains information about the Desktop icons and windows. DM.RSC and MENU.INF are files used by the Runtime program. GFA.ARC is an archive file of example programs for an article in Runtime.

4 Move the mouse cursor over the square icon called 'RUNTIME' and double click on it to start the program. Runtime will run in either medium resolution on a colour monitor or in high resolution on a mono monitor. Runtime will NOT run in low resolution.

5 When the Runtime program is up and running, you'll see the opening menu screen. From here you can access all the different sections of the magazine.

6 The main menu has five buttons which can be clicked on. Click on these buttons once only (not a double click). The four top buttons will take you to other sections of the magazine, such as programming articles or program documentation. The button marked QUIT TO DESKTOP will exit the Runtime program and return you to the normal ST Desktop.

7 Selecting any button will load the text file from the Disk into the user-friendly text reading screen. Again, click on the button once only, and wait for the file to load. Selecting the button marked MAIN MENU will take you back to the Runtime start-up screen.

8 When you've read the file, or printed it out, you can go back to the menu to select another file. If you've read all you want to, go back to the main menu and select QUIT TO DESKTOP to exit Runtime and go back to the ST Desktop to continue exploring the disk.

USERDISK

To read the information file about a program you find on the CoverDisk, go to Runtime, as explained above.

To be able to run the program, it is necessary to first de-archive the required programs. For information about this operation, just read the section called Archived Programs in Runtime.

There are two files in Runtime - one is called De-archiving Programs which explains how to use the ARCX.TTP program included

on the Disk. The file called Archives on the CoverDisk contains a list of all of the ARC files and what they contain.

THE PLAYABLE DEMO

Defender II has not been archived and can be run by double-clicking on the DEFDEMO.PRG icon on the Desktop. This demo can only be run on a colour monitor.

ST WRITER

This is the only other item on the Disk which has not been archived (because there was sufficient space to include it without doing so). To run it, go to the Side 2 folder and double-click on STWRITER.PRG. This will give you the program, however ST Writer has lots of example files and these have been archived to save space. They are in STWRITER.ARC and LETTERS.ARC contains tutorial files. To de-archive these, follow the instructions as given in Runtime.

NOTES FOR HARD DRIVES

If you have a hard drive and you boot from the CoverDisk, your Desktop will not have any icons for your hard drive partitions. It's better if you boot the hard drive in the normal way, then put the CoverDisk in the floppy drive. Once this is done, open a window on drive A by double clicking on it. Use the window slider bars to find the RUNTIME icon and then follow the instructions above for using the program.

It is possible to copy the entire Runtime program to the hard drive to speed up the time it takes for text to load. If you do this, remember to copy all of these three files: RUNTIME.PRG, DM.RSC and MENU.INF.

You must also copy the whole of the TEXT folder to hard drive. This folder contains all the text files for Runtime, and both the folder and the files it contains must be copied.

These three files and the text folder must all be copied to the same place, ideally the root directory of the C drive. Runtime looks in the same directory for its RSC and INF file and the TEXT folder. If it can't find them, the program won't run.

THE FINAL WORD

We really do want to make the CoverDisk as simple to use as possible, without compromising on content. We still want to pack as many programs on there as possible, which is why we need to archive programs.

These instructions should help to make using the Disk and reading Runtime quite straightforward. But if you still find you have difficulty, or if you feel that some of the instructions should be expressed differently or something else should be included, please tell us.

This page of instructions will appear in every issue of 'User from now on - to help people new to the magazine, and to the ST. So don't forget - if you have any suggestions, let us know.

Specialists In Atari Ram Upgrades

Upgrades Available Up To A Realistic 4 Megabytes!

ST Format "The very best ram upgrade boards on the market"

Easy To Install

Upgrading the memory of your Atari ST has never been easier using Third Coast's range of memory upgrade boards. We have plug in upgrade boards to take your machine up to a realistic 4 Megabytes so you get no more out of memory headaches. Third Coast's range of memory expansion boards take around 1/2 an hour to install and come supplied with full fitting instructions for all revisions of Atari's. If you should get into any difficulty fitting any of our memory upgrade boards are technical staff will give you any assistance you need over the telephone. Third Coast's memory upgrade boards are fitted by plugging a socket over the MMU chip and the Video shifter chip and require no soldering whatsoever.

Expansion Policy To 4MB

With Third Coast's 1/2 megabyte plug in board for Atari's with and without surface mount MMU chips we offer an expansion policy to 4MB. What this entails is, if you purchase a 1/2 megabyte expansion board from us and you decide you need either 2.5 megabytes or 4 megabytes. Return the board to us and we will discount you the price you paid for the 1/2 megabyte board off the current price of the 2.5 megabyte or the 4 megabyte board. You are not left with 16 useless chips like the solution offered by others but merely a cost effective simple way of upgrading your machine to 1 megabyte, 2.5 megabytes and eventually to a full 4 megabytes.

Expansion Options

If you have a 520STM, 520STFM or even a 520STFM with surface mount MMU chip we have the solution to take your machine up to 1 megabyte with the expansion policy to 4 megabytes as described above. Third Coast also offer expansion to 2.5 and 4 megabytes for 520ST owners. For 1040ST and Mega 1 owners we have an expansion board to take your machine up to 2 megabytes, 2.5 megabytes and 4 megabytes. For Mega 2 owners we offer a plug in board to take your machine to 4 megabytes.

Fully Compatible

Third Coast's range of expansion boards are all auto configuring and compatible with all software for the Atari ST.

Warranty

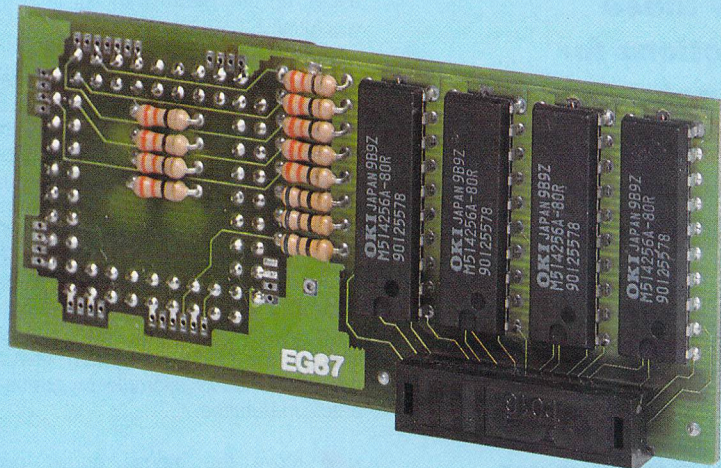
All memory expansion boards carry a full 12 months warranty and free 12 months telephone support.

Software

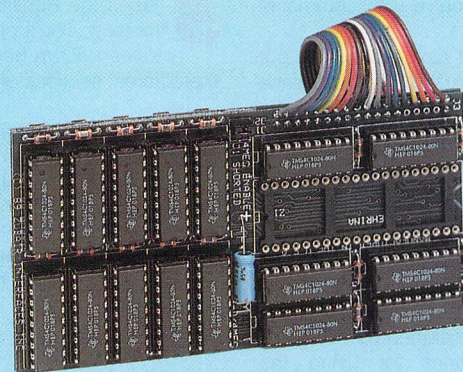
All Third Coast ram upgrades come supplied with a ram checker which checks every chip on the upgrade so you know if you have fitted the upgrade correctly. Also included is a ram disk, print spooler and several other useful public domain utilities.

1MB Internal Floppy And Upgrade

For those Atari owners who have a machine with 1/2MB drive and memory we offer a 1MB internal drive and a 1/2MB soldering upgrade kit for the special price of £99.99



1/2 megabyte plug in board Atari ST User September 1990
"Features-Excellent Ease Of Use-Good"



Z-Ram 4MB expansion board Atari ST User July 1990
"Features-Excellent Ease Of Use-Good"

Pricing

520ST-1040 Ram Upgrade Kit Requires Soldering. . .	£39.99
520ST-1040 Plug In Board Socketed MMU Chip. . .	£79.99
520ST-1040 Plug In Board Surface Mount MMU. . .	£94.99
520ST-2.5MB Plug In Board Expandable to 4MB . .	£189.99
520ST-4MB Plug In Solderless Expansion Board. .	£324.99
1040ST-2MB Board Requires Minor Soldering . . .	£169.99
1040ST-2.5MB Plug In Board Expandable to 4MB. .	£189.99
1040ST-4MB Plug In Solderless Expansion Board. .	£324.99
Mega 1-4MB Plug In Solderless Expansion Board . .	£324.99
Mega 2-4MB Plug In Solderless Expansion Board . .	£189.99
520-1040 Plug In Board Unpopulated	
(takes 4 256*4 Drams).	£49.99
1040-2MB Unpopulated Board (32 256*1 Drams) . .	£69.99
4MB Board Unpopulated (16 or 32 megabit Drams) .	£69.99
520STE-1040STE Plug In Simms	£49.99
520STE-2.5MB Plug In Simms	£149.99
520STE-4MB Plug In Simms	£299.99

RFI Interference

All Third Coast's ram upgrade boards fit under the RFI shielding so that you get no interference on your screen.

For more information on any of Third Coast's products please return the form below to the address listed at the top of the page.

Name:
Address:
Postcode:
Tel:
Interests:

Please Make Cheques/Postal Orders Payable To
Third Coast Technologies Ltd. We Also Accept
Access And Visa Over The Telephone.

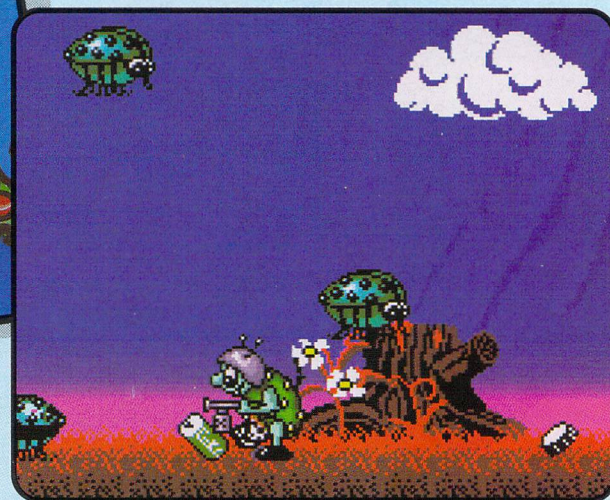


play test...

**GAMES NEWS 35,
TEENAGE MUTANT HERO TURTLES 38
LOTUS ESPRIT TURBO CHALLENGE 40,
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HEROQUEST

Sheffield-based Gremlin, after its mind-blowing trio of releases – Team Suzuki, Toyota Celica Rally and the ultimate in car racing, Lotus Esprit Turbo Challenge – has slowed things down a little.

The company has announced that it has gained the rights to the hugely successful board game HeroQuest. The transition to computer of this fantasy role-playing game currently has Gremlin's top programmers working flat out so that it will appear on the shelves in time for Easter.

In an attempt to enhance software sales Gremlin is spending over £500,000 on promotion of the game.

TEST DRIVE: THE DUEL

One of the first driving games to make its mark in the computer world was Test Drive: The Duel. Street racing against Corvettes, Porsches and Ferraris was the order of the day while trying to avoid the attentions of the local traffic police.

Unfortunately though, this well-received game was available only on the Amiga format, so owners of STs had to take a back seat. Accolade have changed all that and are now prepared to hand over the ignition keys to anyone who is willing to fork out the £24.99 asking price.

For those of you who have rich relatives or if you received lots of cash for Christmas, then by forking out another £11.99 you'll be able to purchase one of four accessory disks. So put your pedal to the metal and get on with some adrenalin pumpin' driving.

(A) TEENAGE MUTANT HERO TURTLES

As we informed you earlier, the Turtles are finally here. These masked heroes in a half shell are out to rescue the luscious April O'Neil from the sinister attentions of the nasty Shredder.

Fighting takes place in six different New York locations, where adversaries meet you head-to-scaly-head in a huge power struggle.

As you are able to interchange between all four of the turtles, you can play any turtle at any time and so benefit from their individual superhuman skills. The action promises to be as bloody and violent as the movie, so get some sleep while you can because when the turtle bug bites, insomniacs rule.

(B) KILLING CLOUDS

This is an investigative game from Image-works set in an anarchic society. It is the 21st century and San Francisco is slowly being strangled to death by a cloud of toxic gas.

Your job is to get to the bottom of the problem. Something which is easier said than done because organised crime and an atmosphere of disillusionment stand in your way. The game



is being developed by one of the most progressive development teams – Vektor Graphics. They promise that the game will incorporate everything the latest technology can offer, as well as a decent game plot.

Imageworks are confident that this game will prove to be an exciting and worthy addition to anyone's collection. When we receive a copy, we'll give you our opinion. The price is £24.99 and it's due out any time now.

DRAGON'S LAIR II

For those who have been following Don Bluth's Dragon's Lair, starring Dirk the Daring and his long-time enemy Mordroc the wizard, then we have news for you – Dragon's Lair II is almost ready.

This time our gangly hero has to save the curvaceous Princess Daphne from disappearing for all time in a timewarp vortex. Six disks of pure unadulterated graphic pleasure

await those who can afford the restrictive asking price which is yet to be announced.

For your money Empire will give you over 50 brilliantly animated screens enhanced by excellently reproduced digital sound. If you do buy it, and subsequently hear strange noises coming from deep within the workings of your computer, don't panic. It's just your ST groaning at being pushed so hard.

SPINDIZZY

Software houses almost always choose interesting names for their characters. We've met Strider, King Crimson and a host of others with equally colourful names. After all, the main character should be christened with the most flamboyant and imaginative name available.

Well, Activision have pulled out all the stops in their latest release SPINDIZZY and called their hero Gerald. Gerald isn't human, no, far

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from it. He is, in fact, a spinning top. He has to travel through a problematic world solving puzzles and finding precious gemstones.

The game is akin to Marble Madness and Clown 'o' Mania and will cost you £24.99. It's in the shops now.

(C) INSECTS IN SPACE

Get out your insect repellent or fly-swatter because Hewson have opened the intergalactic door to a scary variety of alien insects in their 16-bit version of *Insects in Space*.

These antisocial little critters are killing off the adult population but leaving the children alive. As the arch-leader of the Motherhood, Saint Helen Bak, (it's nice to see a female heroine for a change), the world is looking to you for salvation.

By using your laser-powered eyes you have to persuade them to go and pester some other planet. This game has a January release date and will cost £24.99

MIG-29 SOVIET FIGHTER

Freshly smuggled in from behind the Iron Curtain by Code Masters is a Mig-29 Soviet Fighter. The real McCoy would set you back around £10 million pounds, slightly out of the reach of most people, but if you buy the base-model, with no added extras and without the go-faster stripes it will cost you £6.99.

This simulation allows you to try out your skills against numerous airborne and ground targets. Great fun.

(D) JIGGERS

This is a game which Digital Dimension has brought out for just over a fiver. It's a mind game that has its roots in Rubik's garden. This 10 level game is very simple to learn, but extremely difficult to master.

All you have to do is change a grid of multicoloured cubes into one colour. Sounds easy, but try it. It's definitely worth the money.

(E) FRUIT PURSUIT

Another budget offering from Digital Dimension. One-armed Bandit lovers will be in their element here.

It incorporates everything that has been devised on an arcade model - nudges, super holds, Fruit match ups and many more. With no money to be won, it's now a case of trying to get your marker to the top of something that looks like a draughts board.

(F) STREET HOCKEY

Get yourself padded up and whatever you do don't forget your crash helmet, here's the *Street Hockey* championship. You and your friends can taste the atmosphere of this amazing game from Gonzo.

Street hockey started out in the ghettos of America but has now



attained worldwide credibility as a serious sport. The rules are the same as for conventional ice hockey but the game's played on rollerskates.

The computer game takes you on a journey through the most deprived areas of New York, where you do battle against other street-gang hockey teams. One or two player options (you can even link it up to a computer of a different format) give the game depth and extra interest.

For those who buy early there is an added bonus, namely a free T-shirt which has a bright *Street Hockey* design on it.

(G) FINALE

This is Elite's swansong as regards to compilation box-sets. Having brought out a number of compilations in the past, they've decided to call it a day and are offering some of their best selling titles in a fond farewell.

In return for spending £24.99 you'll receive *Overlander*, a car shoot-em-up; *Space Harrier* (all 20 levels), a fast-moving fast-action futuristic shoot-em-up; *Ghost 'n' Goblins*, the predecessor to *Ghouls 'n' Ghosts*, and what is most probably Elite's

most popular title, *Paperboy*, which is a cycling escapade, delivering more than a few problems to anyone who plays it.

(H) JUDGE DREDD

Yet another cartoon superhero to swell the ranks of characters who have made their mark on computer disk. Fighting for justice, but known to be quite ruthless in his operation, the Judge has a multitude of mutations to destroy.

Two such examples are the fatties who are gorging themselves silly on depleted food supplies, and deranged creatures which are wreaking havoc among the law-abiding citizens, after escaping from the clutches of a sinister professor. This platform game from Virgin Mastertronic is due for release soon.

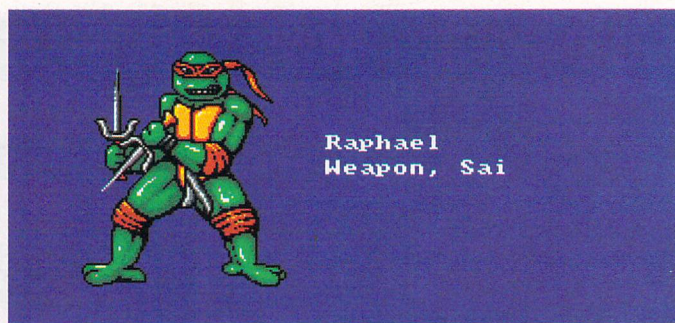
TRACKSUIT MANAGER

Hot on the trail of Subbuteo comes another football game, *Tracksuit Manager* from Electronic Zoo. This is a game which follows the ups and downs of an international soccer team manager. At a rock bottom price of £7.99 it has to be worth a look.



Leonardo
Weapon, Katana Blades

Leonardo's primary weapon is the hair-splitting Kantarna Blade. He's most effective when attacking sewer enemies



Raphael
Weapon, Sai

The needle-tipped Sai is Raphael's preferred attack tool. The speed and gravity of his strikes are what he prides himself on

Teenage Mutant Hero Turtles



IMAGE WORKS
£24.99

Surely there can't be anyone who hasn't heard of the Teenage Mutant Hero Turtles? Love them or loathe them, the Turtles are here to stay, at least until the next big licensing deal comes along.

The Turtles began life as ordinary pets. However, one fateful day they were accidentally dropped down a sewer. Under normal circumstances they wouldn't have survived, but instead of landing in the murky depths the pets found themselves swimming in a strange kind of nuclear gunk. Contact with this substance caused them to mutate. They grew in size and even learned how to talk!

The Turtles were not the only creatures to be affected by the nuclear goop. A sewer rat

had also come into contact with the stuff. Using his vast intellect, the rat learned the secret ways of the Ninja and, under the guidance of a master fighter, he soon became proficient in the deadly ways of Ninjitsu.

The rat came to be known as Splinter. Under his watchful eye the Turtles also became deadly Ninja fighting machines. Splinter, a purveyor of Italian art, named his students after classical painters. Thus were Leonardo, Raphael, Michaelangelo and Donatello created.

April O'Neil, a news reporter with a network television company, has been kidnapped by the vile, ruthless, evil bully-boy, Shredder. As leader of the nasty underworld Foot Clan,

Shredder's dastardly scheme is to brainwash the reporter into joining his gruesome gang.

Controlling the Turtles, you must wage war on Shredder and his men in a frantic battle to rescue the lovely April. Your adventure starts in the downtown streets of New York. As Shredder has hideouts all over town your mission is by no means going to be easy. When you search the city streets and sewers you'll come across all manner of creatures.

The end of each level is reached when you find April. However, she is always guarded by Rocksteady and Beebop, two of the Shredder's most trusted henchmen. As you battle it out with one of them, the other will take off with April. The game continues in a similar fashion



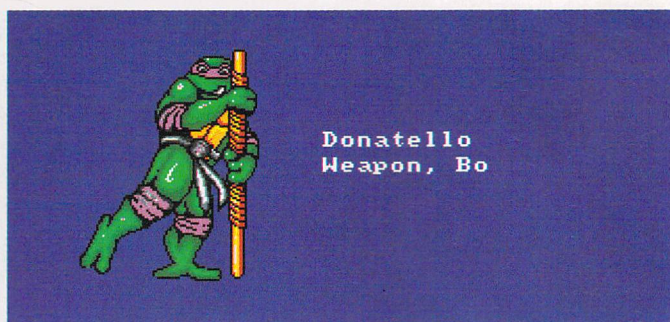
One of our heroes comes face to face with a giant wasp-like creature. If he's stung, he could always replenish his energy with a slice of pizza



April O'Neil is guarded by Beebop and Rocksteady. Even when you floor the mutant rhino, the pig-like creature will make off with the reporter



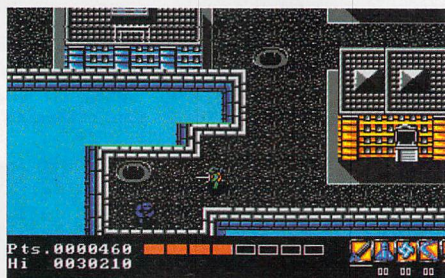
Michaelangelo
Weapon, Nunchuckus



Donatello
Weapon, Bo

Although Mike may not be as strong as the other dudes, enemies still cower at his deadly Nunchuckus and his courage is second to none

The Bo is Donatello's form of amusement. Looking like a simple stick, it is a truly formidable weapon when used correctly



Searching around the city, you must locate hidden manholes and entrances while avoiding the Shredder's Foot Clan

until you eventually track down the gang to their hideout at the Technodrome. There you confront Shredder and capture his death-dealing Life Transformer Gun.

Throughout the game you'll collect various different icons, each assisting you in your valiant cause. Pieces of pizza replenish your life force, while invincibility and more powerful weapons can help you overcome the seemingly endless enemy onslaught.

All in all, the Teenage Mutant Hero Turtles is a competent beat-em-up cum platform game. Needless to say, because of the Turtles' fame every kid in the land will want to play the game. The game's difficulty level has been set at just the right level. Newcomers will find the early levels challenging, and there's enough to keep seasoned gamers busy.

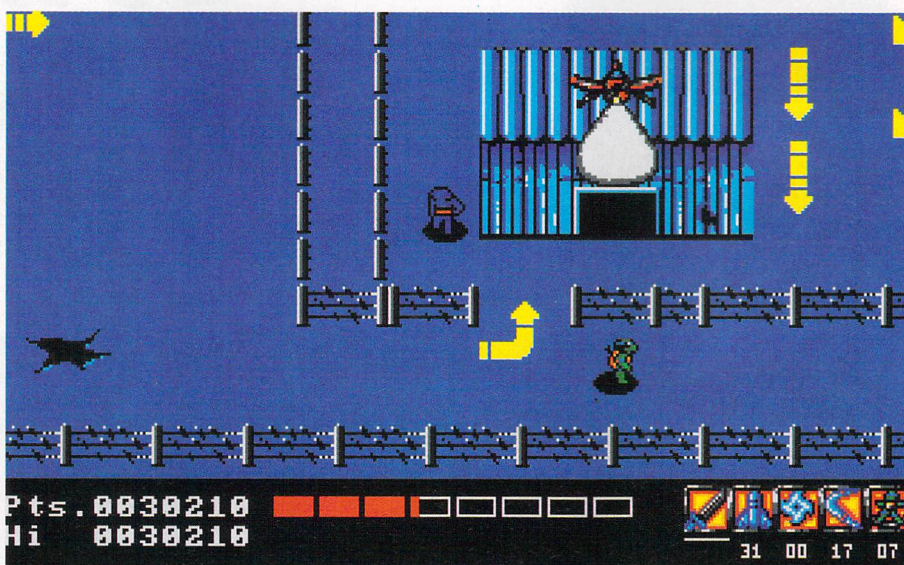
I particularly liked the option to save your game. Using this facility, gamers will be able to see more of the game. Arcade fanatics should be warned however, the Teenage Mutant Hero Turtles game should not be confused with the Ninja Turtles coin-op.



Having entered a building, Leonardo must battle past the monsters in order to discover what useful items lie in store



You may choose which of the Hero Turtles you wish to be. Splinter's map also comes in really handy during the escape



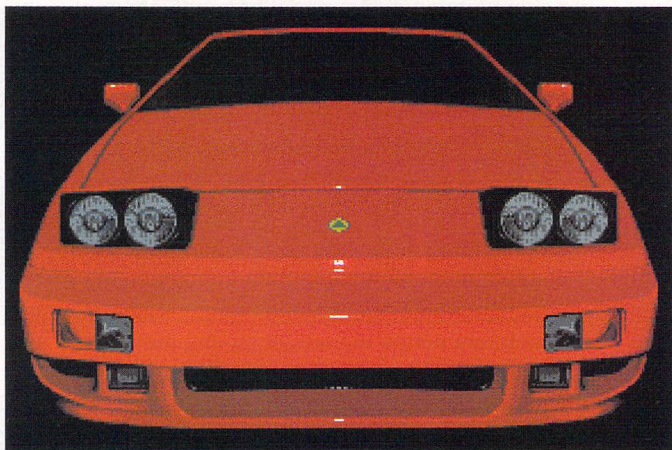
Having searched the Big Apple, you find yourself at a hidden airbase. As ever, the Foot Clan patrol the area, aided by airborne search planes which make life difficult for you



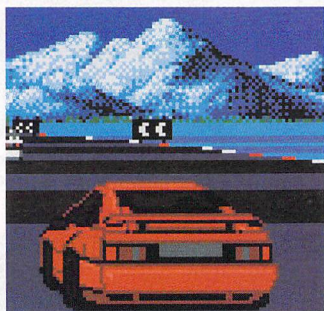
Hidden within the airbase's sewer system is the entrance to the Foot Clan's camp



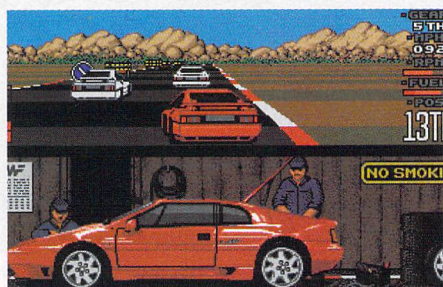
The hangars at the base prove to be swarming with all manner of meanies. However if your courage holds out, you will be rewarded with a number of invaluable extras



Wow, believe it or not, this is the red Lotus which you'll be driving around the course. Just think of the power under that bonnet – the things that dreams are made of, right?



GREMLIN
£24.99



Getting ready to begin the race in the one-player mode. All cars are on the starting grid...


Lotus Esprit Turbo Challenge can be summed up in one word: brilliant. What Kick-Off does for footie games, Lotus does for driving. Early in 1990, Gremlin secured the rights to associate the Lotus insignia with a computer game, but only if the game was of supremely high quality.

Lotus also stipulated that the game must offer prospective buyers something new in the way of gameplay. Armed with these criteria, Gremlin put the project into the safe hands of its programmers and Lotus Esprit Turbo Challenge was born.

The basic idea is simple. Race a bright red Lotus around a variety of different tracks against other computer-driven cars – each one is represented by a white Lotus. Nothing new there, I hear you say. But fortunately, there's more. Gremlin then decided to add extra interest and long-term appeal to the game by splitting the screen horizontally and giving Lotus a two-player option. Still not

LOTUS ESPRIT TURBO SE

SPECIFICATION.



ENGINE: LONGITUDINAL, MID-REAR, WHEEL DRIVE. CAPACITY 2174CC, 4 CYLINDERS IN LINE.
BORE/STROKE: 95.3MM/76.2MM.
COMPRESSION RATIO: 8.0 TO 1.
VALVE GEAR: DOHC 4V/CYL
FUEL AND IGNITION: MULTI-POINT FUEL INJECTION GARRETT T803 TURBOCHARGER WITH INTER-COOLER LINKED TO MAPPED ELECTRONIC IGNITION.
TRANSMISSION: 5-SPEED MANUAL.
GEAR RATIOS/MPH/1000RPM:
 3.360/5.6 (1ST), 2.050/9.2
 1.380/13.7, 1.030/18.4, 0.820/23.1
POWER: 264BHP/3900RPM.

TORQUE: 260LB FT/3900RPM.
SUSPENSION: FRONT AND REAR: INDEPENDENT COIL SPRINGS, TELESCOPIC DAMPERS, ANTI-ROLL BARS. FRONT: DOUBLE WISHBONES. REAR: TWIN-RADIUS ARMS AND TRANSVERSE LINKS.
STEERING: RACK AND PINION, 3.0 TURNS LOCK TO LOCK.
BRAKES: FRONT: 10.2INS VENTILATED DISKS. REAR: 10.8INS DISKS.
WHEELS/TYRES: CAST ALLOY. FRONT: 11INS. REAR: 8.5INS RIMS. GOODYEAR EAGLE TYRES. FRONT: 215/50ZR16. REAR: 245/50ZR16.
WHEEL WEIGHT: 2929LB

There's as much information given about the vehicle as you feel you can cope with. The more serious you are about the race, the more details you will need to know. If you're well acquainted with the Lotus you'll be far more likely to win

wildly innovative, but after you've played the game you probably won't care.

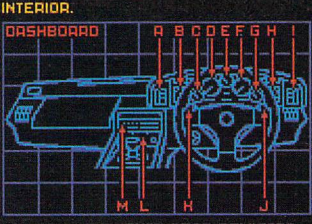
The smooth scrolling of the oncoming track, the impressive backgrounds, the excellent computer-controlled opposition and the ease with which you are able to control your car puts Lotus Esprit Turbo Challenge so far ahead of the competition they might as well be driving Reliant Robins. Within the game there are three levels of racing

difficulty – easy, medium and hard. In total there are 32 different circuits to speed around, 7 on the easy level, 10 on medium and 15 on the hardest.

Throughout the game you will encounter lane closures, surface water, oil, pit stops for petrol and the occasional bad driver, all of which will slow your progress. Usually the first race in each sector is pretty straightforward with no real obstacles, but the races become

LOTUS ESPRIT TURBO SE

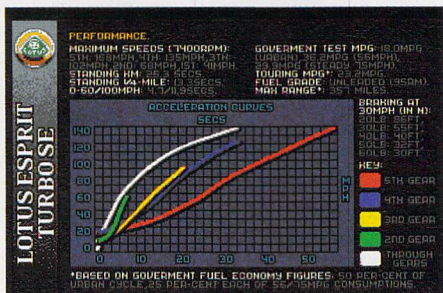
INTERIOR.



EQUIPMENT.
 1. CENTRAL LOCKING.
 2. HEAD RESTRAINTS.
 3. ELECTRIC DOOR MIRRORS.
 4. HEATED DOOR MIRRORS.
 5. ELECTRIC WINDOWS.
 6. AIR CONDITIONING.
 7. ICE-WARNING INDICATOR.

A: SIDE/HEADLIGHTS, REAR DEMISTER.
B: VOLTMETER.
C: OIL PRESSURE.
D: REV COUNTER.
E: BOOST GAUGE.
F: SPEEDOMETER.
G: WATER TEMPERATURE.
H: FUEL GAUGE.
I: HAZARD LIGHTS, FOG LIGHTS.
J: WINDSCREEN WASH/WIPE.
K: INDICATORS, DIP/MAIN BEAM HORN.
L: HEATER/VENTILATION CONTROLS.
M: STEREO RADIO/CASSETTE.

Really get to know your vehicle before you start the race. This screen gives you the information which will be important during the race. Remember, the more you know, the better your chances are of winning



Here's the graph which gives the driver vital information on acceleration, fuel consumption and the like. It's worth studying

progressively more difficult the further you get. You must always finish in the first 10, otherwise you're eliminated and have to start again.

A place in the top 10 not only earns you some driver championship points but will dictate your starting grid position in the next race. If you finish first in one race, you'll be placed on the back row of the grid at the start of the next, but if you come tenth you will start from the middle of the field.

Gremlin has given a lot of thought to game-play and offers a variety of different controls over the gear change and throttle/brakes set-up. Being given a choice between manual and automatic gears, or whether your throttle should be operated by the fire button or by pushing forward on the joystick enables you to concentrate on driving the car.

In Lotus Challenge, just as in any Grand Prix, points are awarded for finishing - ranging from 20 points down to one. Your ultimate objective is to finish the season as number one driver. And to add to the challenge, Gremlin has hidden a message at the end of the game and is offering prizes to those who can reach the end to reveal it.

GAME INFORMATION

NORMAL CONTROL METHOD

UP - FASTER DOWN - SLOWER
 UP AND FIRE - UP A GEAR
 DOWN AND FIRE - DOWN A GEAR

ALTERNATIVE CONTROL METHOD

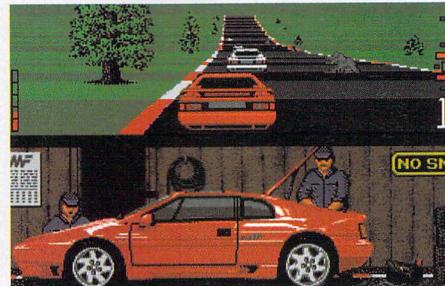
FIRE - FASTER DOWN - SLOWER
 PUSH UP - UP A GEAR
 PUSH DOWN - DOWN A GEAR

GEAR CONTROL

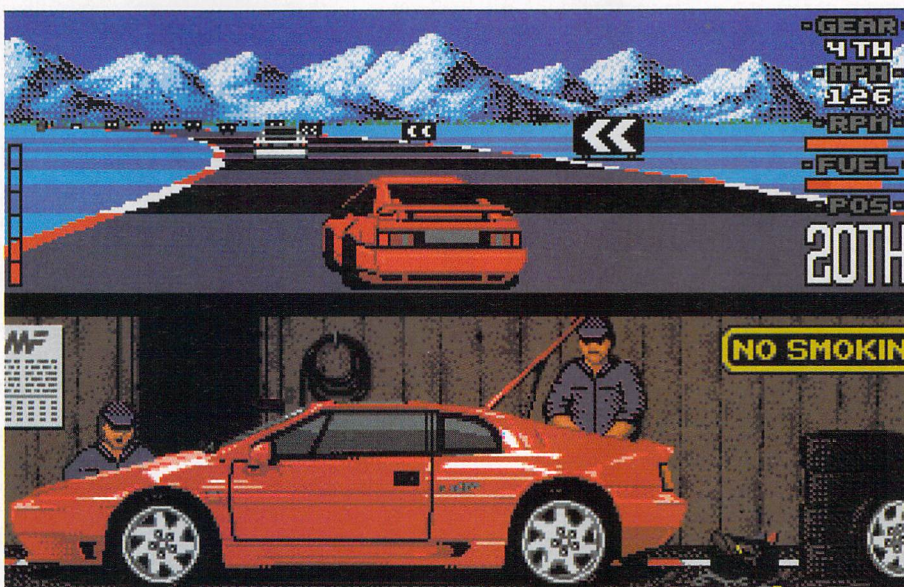
IF COMPUTER ASSISTED GEARS ARE SELECTED ATTEMPTING TO CHANGE GEAR USING THE ABOVE CONTROLS WILL HAVE NO EFFECT.

PRESS FIRE TO CONTINUE

Choose the method of control which is preferred. You can choose between manual and automatic gears - it's entirely up to you



Those huge rocks on the right-hand side of the track could end the race for you, so try to avoid them at all costs

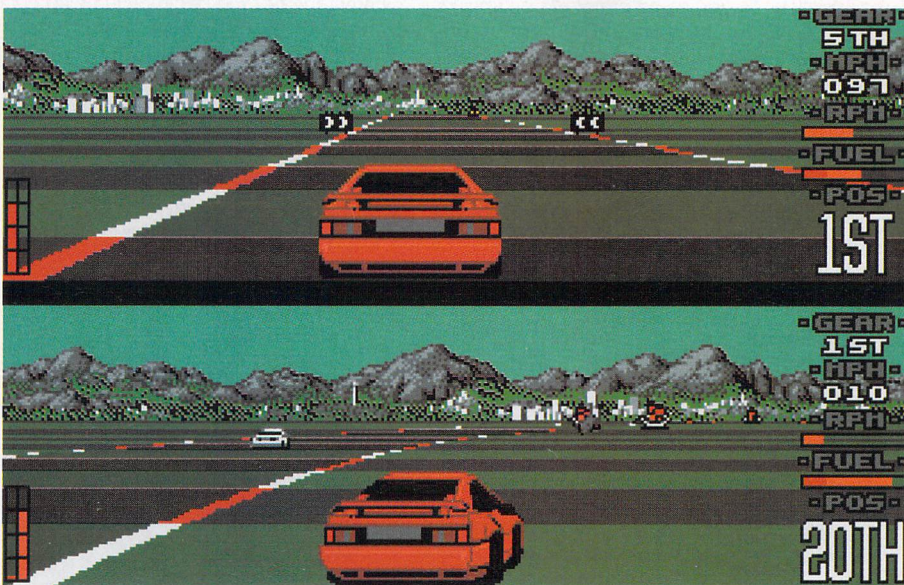


There's a really sharp bend coming up straight ahead. The way you take this particular corner could determine your positioning in the race. Just negotiate it a little better than the drivers ahead of you and first place isn't beyond your grasp



Are you going to have loud and groovy music playing throughout the race or would you prefer just the noises from the vehicles?

GRAPHICS	86%
SOUND	84%
GAMEPLAY	94%
OVERALL	94%
REVIEWER	MIKE

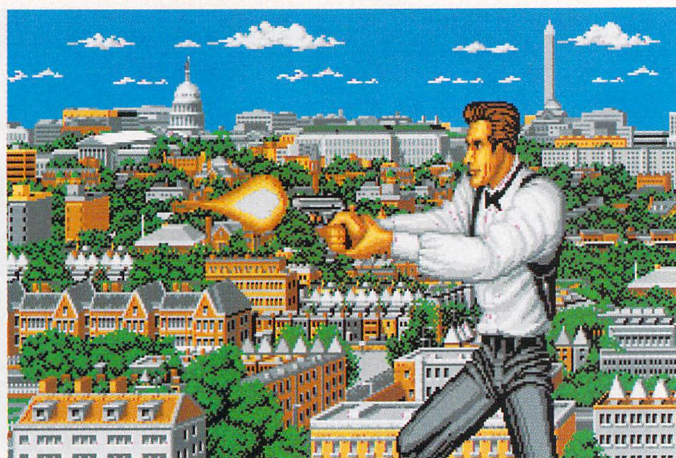


The fantastic two-player mode which means that you can use all your driving skills to race against a friend as opposed to the computer. The novel idea of splitting the screen horizontally adds extra interest and appeal to the game. It's definitely a winner





Sly Spy has to throw himself from a plane at a great height, and then try to blast the bad guys from the sky before he becomes the target himself



Make sure your aim is straight or the Council for World Domination will succeed in their plan to fire a nuclear missile towards the USA

OCEAN
£24.95

Sly Spy

G RAPHICS	65%
S OUND	58%
G AMEPLAY	58%
O VERALL	60%
R EVIEWER	MIKE

Once again the peace and tranquillity of the planet is under threat. This time the baddies are flying the flag for the Council for World Domination. Innocent people are dying as these merciless dictators bring down democratically elected governments in this, yet another (yawn...) power struggle game.

All the other superheroes like James Bond or Superman are busy righting wrongs elsewhere in the Universe, so the job of saving civilisation falls to an intrepid espionage specialist – Sly, or, as he prefers to be known, Sly Spy. Not exactly a great cover, is it?

Armed with the standard CIA semi-automatic pistol and some knowledge of the lesser-known martial arts, Sly feels quietly confident that he can complete his mission successfully and return the planet to some sort of normality.

He has been informed that throughout his journey, pieces of a super Golden Gun have

been left for him to find. If he can piece it together, he'll have a formidable weapon at his disposal. And so Sly sets out enthusiastically to save the world.

This latest beat-em-up or shoot-em-up platform game from Ocean leaves a lot to be desired. Having undergone the transformation from amusement arcade machine to home computer, the conversion seems to have lost its appeal and is now devoid of any real challenge or excitement.

There are nine levels to face, each with a different theme. You begin by jumping out of a plane and go on through warehouses, car chases, and even under water. Although each scenario is bright, with well-detailed characters and backdrops, it's the gameplay which lets Sly Spy down badly.

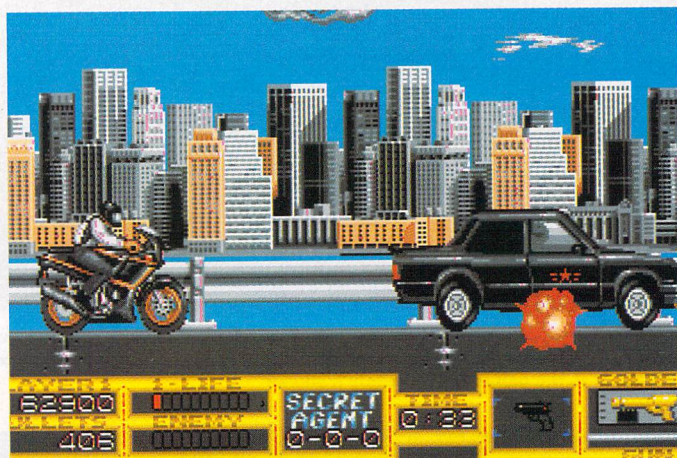
Not only do you encounter predictable and unimaginative enemies but you find that there's a limited amount of space for you to move around in. Wander too far to the left or

the right and you encounter an invisible wall blocking your way. This proves to be really annoying as there always seems to be an item lying on the floor just out of your reach.

As you spend valuable time and effort trying to retrieve these items, your opponents are appearing from this so-called no-go area and giving you a real kicking.

With nine whole levels in which to run amok, you'd think that the game would be a big, joystick-wagging challenge. Wrong! What the packaging doesn't tell you is that Sly Spy has nine small levels, so just when you are getting into the action, the end-of-level guardian appears, leaving you feeling aggrieved and just a little cheated.

Sly Spy seems to lack direction and real credibility, and the gameplay seems a little dated. And yet earlier this year, Ocean provided the brilliant Rainbow Islands, and made good progress with their F29 Retaliator. Well, we all have our off days!



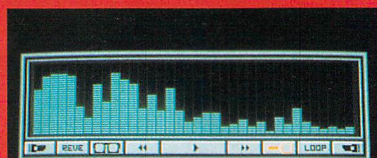
As well as being a master spy in the air, Sly Spy is an ace on his high-speed, super-charged motorbike. A fast and furious chase through the city streets tests all his driving skills to the very limit



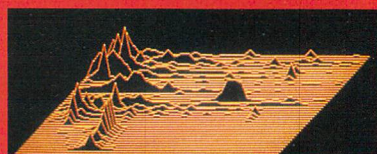
From a bitter battle in the streets to an underwater conflict. Is there no limit to Sly's skills? Once this particular baddie has been stopped, more are sure to appear to challenge the inimitable Sly

MASTER SOUND 2

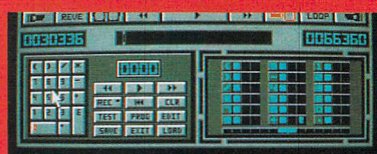
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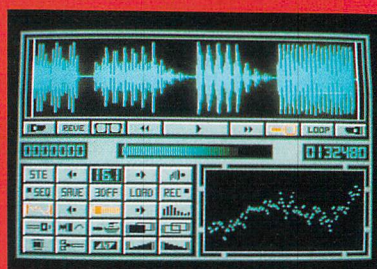
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NEW STE CONTROL PANEL



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| * CUT | * COPY | * OVERLAY | * WIPE |
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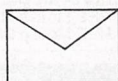
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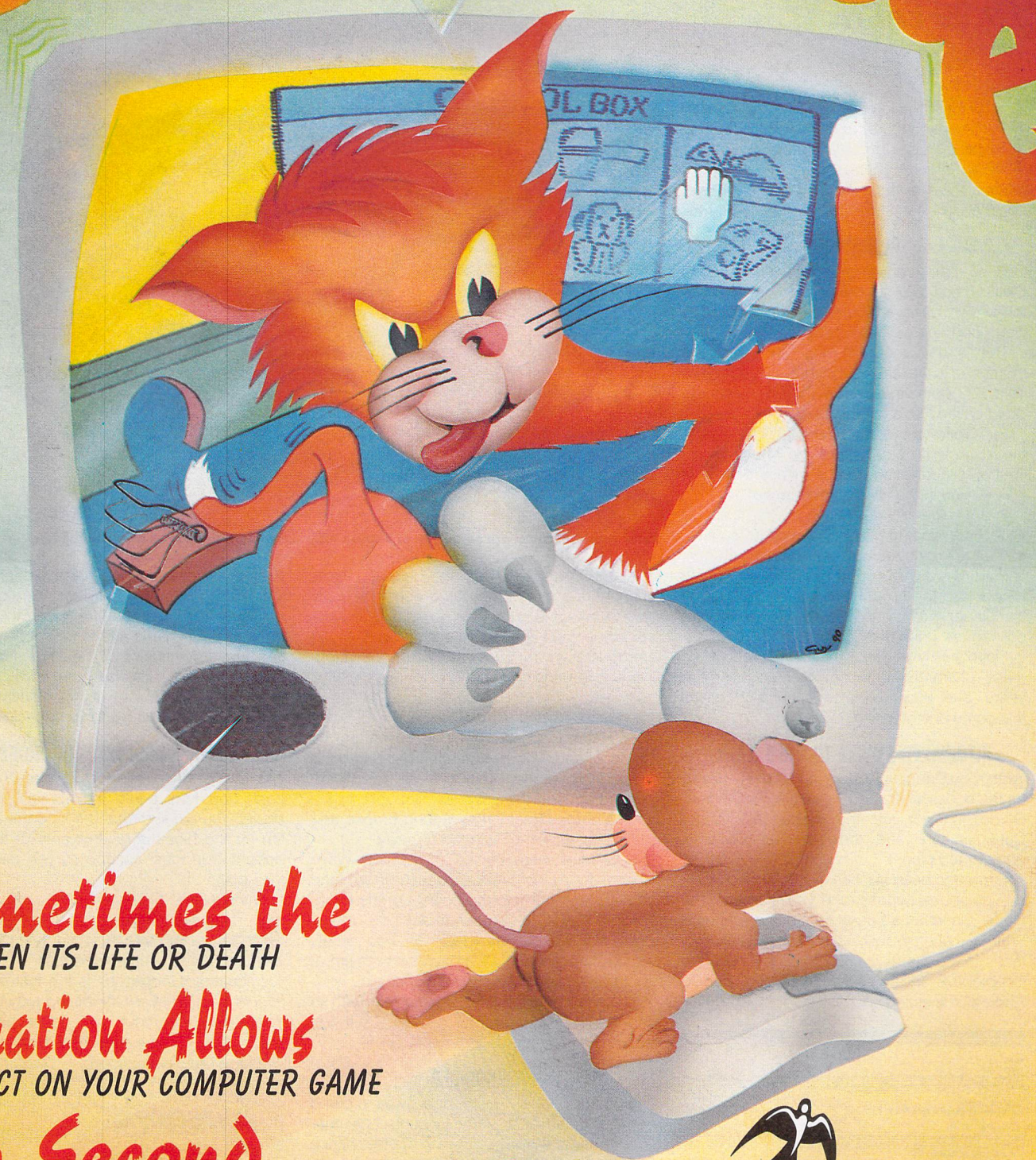
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By



Infocom Adventures

VIRGIN MASTERTRONIC
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Interactive fiction has been very popular with adventurers and now Mastertronic have managed to get hold of some of the best Infocom back titles and have re-released five of them at the budget price of £9.99 each – most definitely worth the clams.

PLANETFALL

OK, so being an Ensign 9th Class in the Stellar Patrol may not be the greatest career in the known Universe, but at least you've got a warm bed and get fed regularly.

That is, until your ship explodes and you're marooned on a strange planet with a hostile Wild Kingdom and only a playful, fun-loving droid called Floyd for company.

Survival on a strange planet 12,000 years in the future is no picnic, and you'll have to test your wits against the many pitfalls that lie in wait for you in the hostile environment.

Every minute is a challenge. You'll spend your time finding enough food to survive, escaping from a crumbling and decaying ruin, finding a way out of the dangerous Wild Kingdom and finally, finding a way to get off the planet in order to be able to rejoin your colleagues in the Stellar Patrol.

Floyd easily became the best loved of the many characters Infocom created over the years, and Steve Meretzky's humour makes this game one of a kind.

HITCHHIKER'S GUIDE TO THE GALAXY

Written by Douglas Adams, and loosely based on the books, radio and TV series, Hitchhiker's Guide puts you into the character of Arthur Dent, human, and the last survivor of a demolished planet.

Earth has been vaporised to make room for a hyperspace bypass, and you're reduced to hitching a lift on a Vogon spaceship with Ford Prefect – shortly after which you're jettisoned into space and picked up by Zaphod Beeblebrox, Trillian and Marvin the Paranoid Android in a stolen spaceship.

Vogon Hold Score: 33/61
not even know where you are or who you are or how you got there.

>smell
(darkness)
It does smell a bit. There's something pungent being waved under your nose. Your head begins to clear. You can make out a shadow moving in the dark.

>examine shadow
The shadow is vaguely Ford Prefect-shaped.

Vogon Hold
This is a squalid room filled with grubby mattresses, unwashed cups, and unidentifiable bits of smelly alien underwear. A door lies to port, and an airlock lies to starboard.
In the corner is a glass case with a switch and a keyboard.
It looks like the glass case contains:
an atomic vector plotter
Along one wall is a tall dispensing machine.

Ford removes the bottle of Santraginian Mineral Water which he's been waving under your nose. He tells you that you are aboard a Vogon spaceship, and gives you some peanuts.

Safely aboard the Vogon Starship after the destruction of the planet earth. Now, can you understand the language?



Take your pick from the selection of budget Infocom adventure games released by Mastertronic

All the characters from the book are here, although the plot of the game doesn't exactly follow that of the book. The sense of humour is the same, and the puzzles are some of the strangest ever devised. It will keep you laughing, and scratching your head for days.

ZORK 1

Zork, based on the original Adventure by Crowther and Woods, has achieved unrivalled recognition in the adventure games world. Zork introduced the adventuring public to the realms of the Great Underground Empire and the excesses of the Flathead Dynasty.

Beginning west of the mysterious White House, the trail of fabulous treasures will lead you ever deeper into the bowels of the earth. You'll marvel at the stupendous Flood Control Dam Number 4 and gasp as you nearly plunge headlong into a bottomless chasm. It could be too much for the faint of heart!

But remember to take a lamp with you to shed a little light on your situation, lest you become a meal for the legendary Grue.

WISHBRINGER

The magic stone, Wishbringer, was created from the heart of a princess denied her true love. It has the power to grant wishes, hence the name. Wishbringer has been hidden away for years, but now it's time for it to re-emerge into the world.

As a simple postman, you never expected to get embroiled in any adventures. All you had to do was deliver a letter to the old woman who runs the Festeron Magick Shoppe. I bet you never expected to have to

rescue a kidnapped cat, and defeat an evil mage – all this before the Post Office closes!

Wishbringer is one of the Infocom Introductory Level programs and is the ideal place for first-time adventurers to develop their skills. None of the puzzles are too hard, and the game provides plenty of helpful hints if the unthinkable happens and you get stuck.

LEATHER GODDESSES OF PHOBOS

The evil Leather Goddesses plan to invade earth and turn it into their private pleasure planet. You are kidnapped from earth as a victim for the hideous experiments of the Goddesses. You must escape so you can thwart their plans.

With fellow prisoner Trent, you journey around the solar system, avoiding the hazards which lie waiting for you while trying to find a way to stop the Leather Goddesses.

Leather Goddesses is the fastest-selling Infocom game ever. Combining witty (but definitely adult) humour, the game has three levels: tame, suggestive and lewd – to suit your age (and inclination!).

A TMOSPHERE	95%
G AME WORLD	92%
G AME SYSTEM	80%
O VERALL	90%
R EVIEWER	SIMON

THE ATARI ABC

Now, there's a PC-AT compatible that not only solves problems like other AT compatibles, it also solves the one problem that its predecessors have created ... affordability.

Silica Systems are pleased to present the new Atari ABC. The ABC is a 286 AT compatible that runs at over 5 times the performance of the IBM XT. This is achieved by combining the power and speed of a 16-bit 286 processor, with Atari Corp's development experience and engineering capabilities, which use the very latest in design technology. However, the Atari ABC's are available at 'XT prices' and many XT owners will wonder why they paid more, but got less!

The ABC is a reliable, high performance computer, built to exceptionally rigorous standards. It is well designed, to a state of the art specification, maintaining maximum expansion capability for the future. This includes up to 4Mb of RAM and 3 AT expansion slots. Plus, unusually for a PC at this price, the ABC has the ability to install two or three extra drives, with the cabling already inside the CPU.

The ABC has a host of impressive features, all built-in as standard, encouraging simple installation and ease of use. In addition, the ABC's small footprint and quiet operating, mean that you will notice it less on your desk than other PC's. Except, of course, when you begin to take advantage of its AT power.

At its remarkably low price point, the ABC is ideally suited for home, office and educational use and will take full advantage of the vast range of PC compatible software. And, with 12 months FREE on-site maintenance (8 hour response), you can rest assured that your ABC will be fully supported.

The ABC is the latest addition to a comprehensive range of both 286 (8Mhz or 12Mhz) and 386 (16Mhz and 20Mhz) PC's, from the Business Systems Division of Atari Corp. Atari's PC range offers an unsurpassed combination of reliability, compatibility and expandability, with unique features like Atari's 44Mb removable hard disk on their PC4. Return the coupon NOW for further details of the complete range of PC products from Atari's Business Systems Division.

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As Weaver, you must lead your party of soldiers over 57 miles of very treacherous Vietnamese terrain. Your goal is the US Base at Do Hoc



As you make your way through the jungle, one of your scouts encounters a lone VC guerilla. A battle to the death ensues

OCEAN
£24.99

The Lost Patrol



Unfortunately, one of your men catches a bullet in the back. After a brief ceremony you leave his gun and helmet behind as a memorial. If you don't keep moving, more of your men will join him

June 7th, 1966. An American helicopter returning troops from some R and R in Saigon crashes somewhere in the remote central highlands of Vietnam. In the accident the chopper's radio is damaged beyond repair. The seven crash survivors face a gruelling trek across 57 miles of harsh terrain to the nearest US Base at Do Hoc. The area is infested with Viet Cong guerillas and riddled with deadly booby-traps. The journey home isn't going to be easy.

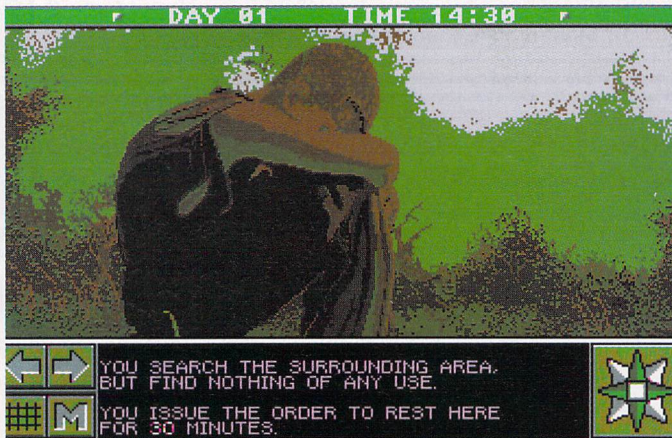
With minimal supplies of ammunition and food the troops are going to need all their skills and a whole lot of luck. For the next 57 miles the platoon is on its own – it's the 'Lost Patrol'.

You must assume the role of Sergeant Charlie Weaver, a 29-year-old soldier with two year's army service – 10 months of those in the jungles of Vietnam. As the highest ranking NCO, it's up to you to take charge of the remaining members of the troop.

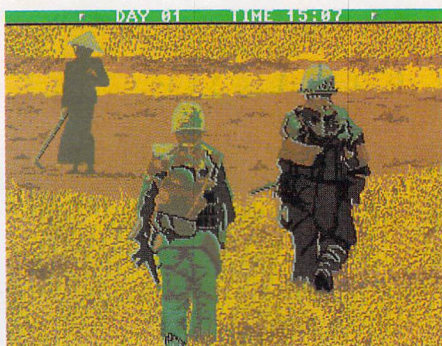
As you begin the game it's wise to post two of your troops as wingmen – scouts. Keeping their wits about them, these boys should be able to tell you of anything strange or untoward in your immediate vicinity. As you



Suddenly, you find yourself pinned down by enemy fire. There's nothing else for it but to stand and shoot it out with them



In order to keep up morale and strength you must make sure your men rest at regular intervals, even when the enemy is near



On your travels you stumble across a small Vietnamese settlement. Be very careful...

make your way through the surrounding countryside, one of them may even unearth a Viet Cong sniper.

Should this occur, the VC will down his AK-47 and partake in a bout of fisticuffs with your soldier. If you win, you may interrogate the Cong, lose and you'll be responsible for another wasted life.

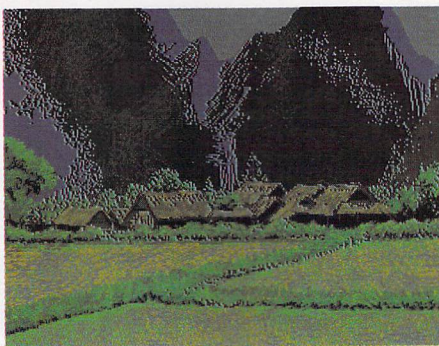
One of the primary objectives is to make a dawn raid on a Vietnamese settlement. The frail Vietnamese villagers won't argue should you decide to stock up with their produce. But be warned, some settlements are merely a front for the Viet Cong.

You may find yourself pinned down by enemy fire, so it's wise to keep at least one guard on duty. If you're vigilant, you may discover a VC foxhole. These tight passages run for miles. You can explore them if you wish but I'd advise strongly against it – they're usually swarming with deadly VC soldiers.

The morale of your troops plays an important part in the game. Successful missions will keep the soldiers' spirits high. Too many bad encounters or a death will cause real trouble.

As you progress, the boys will doubtless need short breaks to recover from the arduous march. It's also wise to remember that the night belongs to the Viet Cong. Make sure that you dig in before it gets dark.

Carefully making your way across the paddy fields, you may find yourself pinned down by an enemy attack. Sometimes this comes in the form of a carefully hidden sniper. Choosing your best marksman, you can search the area with your telescopic sight,



Further investigation uncovers a foxhole. You decide to send Gomez into the darkness

and you might just score a direct hit. In other skirmishes you may find yourself under attack from what seems like the whole of the NVA.

When this happens there's no alternative but to shoot it out. Take care – although bold manoeuvres may win medals, they also lose lives. Should you be unable to see the enemy, you might try lobbing a grenade in their general direction. While not being easy, this action does prove to be the most satisfactory one.

You'll often encounter mine fields. Electing a soldier, you must carefully guide him through the field, exposing any mine he encounters. This operation is pretty tricky, but it must be attempted if the area is to be traversed safely.

The Lost Patrol is a game which will appeal more to the strategists among you. The five arcade sequences offer a reasonable challenge on their own. The thinkers among you will also enjoy planning the troops' manoeuvres. Unfortunately, the two elements fail to gel together. Personally, I found the game somewhat repetitive and tedious. The presentation is good, but the gameplay is lacking. ●

G raphics	79%
S ound	76%
G ameplay	77%
O verall	78%
R eviewer	NICK



A shot rings out and your troops surface with a cache of explosives and supplies

GLOSSARY OF TERMS

AK-47 – Assault rifle used by the Viet Cong and NVA

AWOL – Absent without official leave

C Rations – US field rations

Didi Mau – Vietnamese for “go away”

Grunt – Infantryman

Greens – Army basic-issue clothing

Hooch – Tent or peasant's hut

KIA – Killed in action

Klick – Kilometre

M16 – Standard issue US assault rifle

Mama San – Pidgin English for an old Vietnamese woman

Medivac – Medical evacuation, usually by helicopter

NCO – Non-commissioned officer, ie sergeant

NVA – North Vietnamese Army

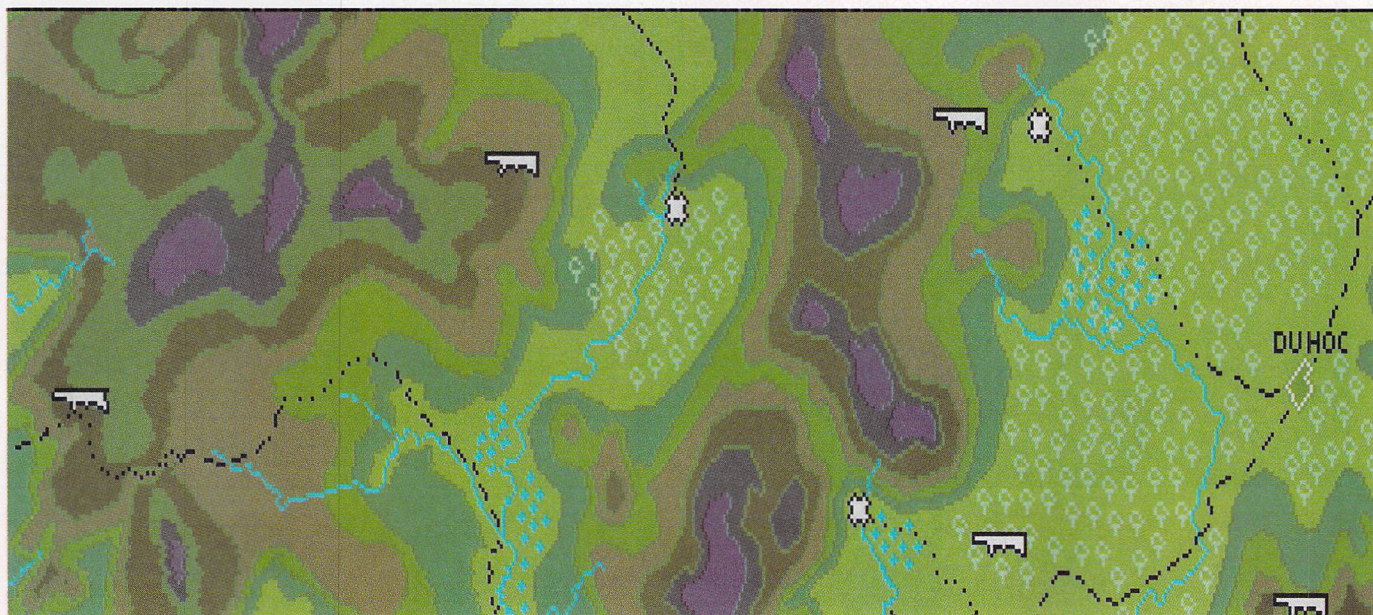
R and R – Rest and recreation leave

RPG – Rocket-propelled grenade used by enemy forces

Tail-End Charlie – Last man in patrol

Viet Cong – Vietnam communist, South Vietnam guerilla forces

WIA – Wounded in action



There are 57 miles between you and your downed chopper. It's going to be tough. Can you survive the challenge of the Lost Patrol?

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"Yo ST using Dudes and Dudettes, dis is the first time I've been in ST User and it's cool init. I've got a really great view from here.

Mr Mike and the GLC crew, that's Nilbog and Nigel the Munchkin if you aint been keepin' up with things, has been working on those offers for ages Dudes and there well 'ard ain't they.

So ST using Dudes and Dudettes, get your butts down 'ere and see de bestest ST Shop in the whole world, which Mr Mike said is pretty big so there Dudes.

Ta Ta For Now Dudes,
Cosmo



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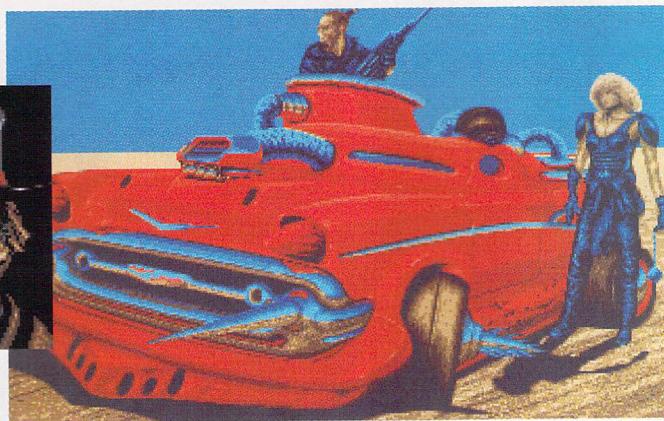
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Nitro

PSYGNOSIS

£24.95



These are the kind of funky Cyber Punks you're up against. Driving skills are at a premium if you're going to stand a chance of even finishing the race, never mind trying to win it

Nitro is a supremely uninspiring car racing game with an urban cowboy flavour thrown in, in an attempt to wring some street credibility and 'kid appeal' from what is essentially, that old tried and tested rev-em-and-wreck-em formula.

The game opens with a character selection screen depicting some nameless bad-ass character who is your alter-ego. Name the character, using a paltry three letters, and you're given the chance to select a vehicle.

The choice given encompasses Formula 1, Sports Cars or Turbo Buggies. With Formula 1 cars there's a high fuel consumption, but they are fast and perfectly adapted to road surfaces. Sports Cars don't use much gas, they're average on roads and average across country. Turbo Buggies have an average petrol intake, are bad on roads, but prove to be something else across rough terrain.

After selecting a car, it's off for a mad dash for the finishing post, at least that's what the packaging spiel would have you believe. In fact, it's off to a singularly dull series of roads, bridges, trees, bollards and the like, for an amazingly frustrating spot of joystick waggling in an attempt to stay road-bound.

The car is controlled using a joystick. Pressing the left fire button increases the revs and moves the car forward ever faster, left and right movement on the joystick turns the car. If you keep the joystick hard over to one side or the other, the car careers around in circles.

After choosing a car, the screen clears to show an urban scene, then clears again to provide a view-from-above of four cars, three belonging to the computer and one yours. There's a countdown of lights, you jam a finger down on the fire button, rev the car, move over the start line and into the race.

A curving track ensures that you have to provide plenty of steering control to stay on the road, a task made doubly difficult because steering a car with a joystick feels rather like steering a car underwater – kind of soft and squishy. The whole thing is very frustrating. After hours at the 'wheel', you begin to get the



That guy in the centre is you. Did you ever see such a bad-ass? The question is, will your reputation live up to your mean looks?

knack, but if you stay many hours at the wheel in this game, you deserve to get a medal for endurance.

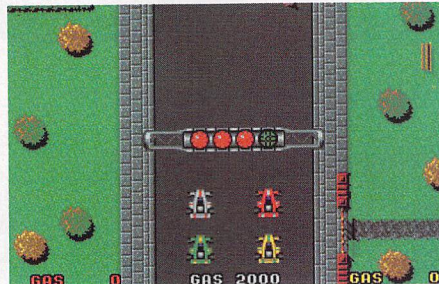
Occasionally, at various places throughout the race, objects appear before you which, if you drive over them, increase the capabilities of your car. There are pedestrians too. Knock them over in some rounds and you're fined, in others you get points – really novel idea, right? Knock pedestrians over and you get points. OK, so I'm not trying to knock the game merely for a bit of gratuitous violence, but then original and funny gratuitous violence is one thing, this is another...

Complete a race and you're awarded extra points, fuel and so on, based on your performance. You can go shopping after a race too, to purchase repairs for your vehicle or to buy such necessities as fuel, a device to make the car go faster (stripes?) and the like.

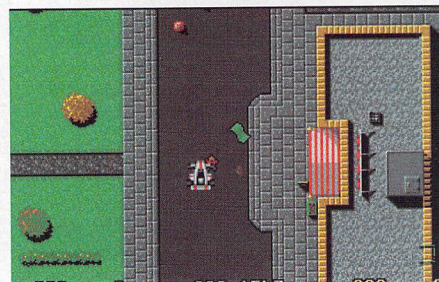
Nitro's graphics are competent but dull. Wavy race tracks, pipelines, trees and the like, as well as other vehicles (which always come off better in a collision) are all here, but why am I reminded of the Frogger games of yesteryear? One nice feature is the night race – all you can see is what's illuminated in the glow of a few spotlights. It's the only bit of the game where a moment of excitement manages to creep into the gameplay.

Sound comprises the usual spot effects tacked over a bit of computer music that Metal Mickey could probably get down to (Metal Mickey? Ask your Ma...), but won't have the high energy generation movin' and groovin'.

All in all, squaring this against that, taking one with another, Nitro is OK, but then how many hot games are described as being OK? Zilch – right! Nitro is not so bad that I can actually knock it, it's just that no-one's gonna rave over it either. If you want to spend your hard-earned on a modern Frogger with a few bolt-ons, buy Nitro, otherwise pass on it. ●



On the starting grid you and the other drivers wait for the countdown of the lights. Wait for green, rev your engine and you're off



Pedestrians have a nasty habit of appearing just at the wrong time. Hit them and you'll gain points – but only in some situations!



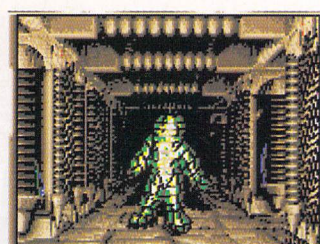
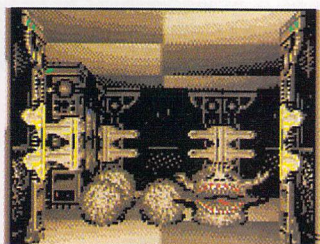
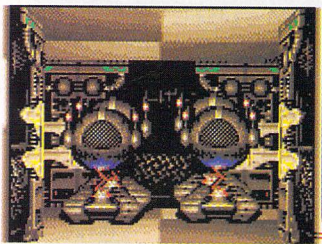
Tight corners require subtle joystick control to master. After hours at the wheel you should be able to control the car reasonably well



After completing a race you'll be able to buy gas, oil, or a more powerful engine at the race shop. Or should you have the vehicle repaired?

GRAPHICS
SOUND
GAMEPLAY
OVERALL
REVIEWS

70%
60%
75%
72%
DENNIS



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Captive



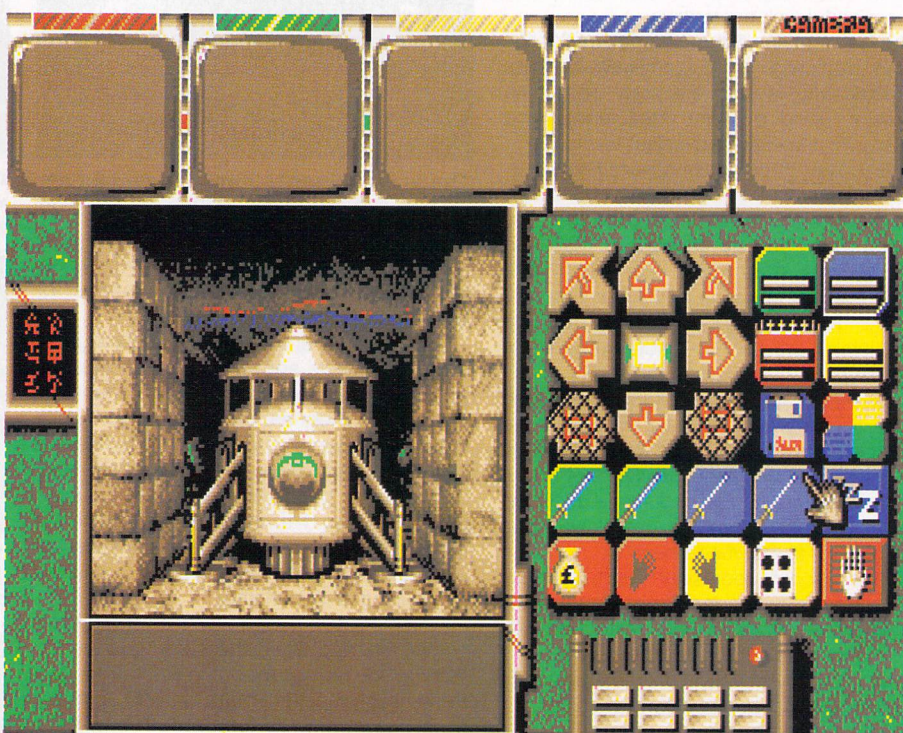
Throughout the bases you'll come across some shops. In these you can spend your hard-earned cash on repairs and special purchases, such as weapons and optics

Two hundred years! Two hundred lousy years for a crime you didn't even commit! Yep, justice is rough in these parts, but then again, life is cheap. After sentencing you're transported to a shuttle bay before being put into cryogenic suspension. The prison freighter blasts off. Its destination a small star on the furthest reaches of the galaxy.

Touching down on the remote colony, the wardens take charge of their new inmates. Each prisoner is assigned to a cell and the electronic timelock is set. Of course, 200 years may seem an eternity to some people. However, being suspended in a deep cryogenic sleep, you won't remember any of it.

You awake to the sound of sirens wailing in the distance. Your sentence has ended, 200 lost years are over. At least, that's what you think. Peering out of your cell door you notice the locking unit. The digital readout still reads 198 years. Something is wrong, very wrong.

Due to an electrical fault, you've been awakened prematurely. It slowly dawns on you that you're doomed to spend the next couple of hundred years in solitary confinement. Naturally, the guards don't feed cryogenic prisoners. That means you'll have to find a means of



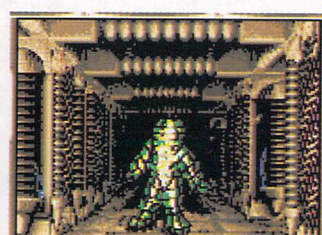
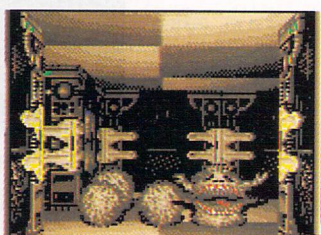
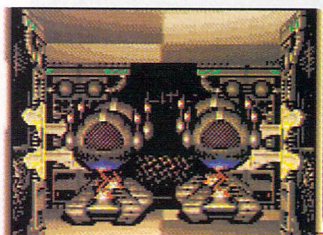
In order to travel between planets you'll have to use your special landing craft. Try to remember where you left it because it's really easy to become disorientated and lost. As you disembark, beware of the creatures on the planet's surface. These huge dinosaur-like monsters have a nasty bite that could very well prove fatal

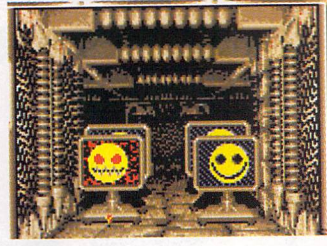
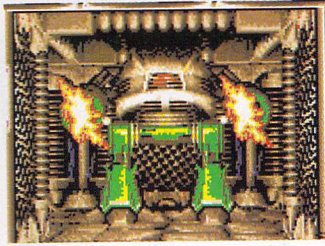
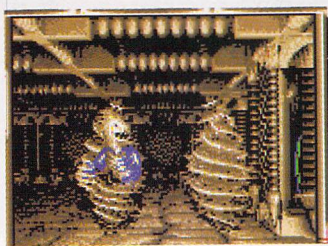
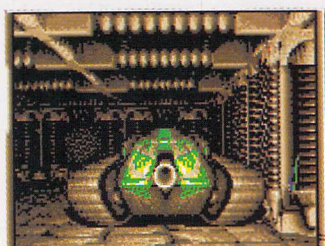
escape or die a slow and very painful death.

Your cramped cell does contain an emergency food parcel. Nothing substantial, just enough to last maybe a month. Then, out of the corner of your eye you notice a battered briefcase. Thinking it to contain basic medical equipment you ignore it.

However, curiosity eventually gets the better of you and you open the unit to discover an ABCC 500XL/GT computer system. Powering the unit up, you manage to activate the

G raphics	90%
S ound	84%
G ameplay	93%
O verall	96%
R evuewer	NICK





modern link-up. Maybe you can contact someone and persuade them to help you find your way out of this mess!

By some fluke you establish contact with a group of four droids. All that's left to do is use the computer to guide them to your place of internment. Flicking the modem to the 'on' position, you begin your self-rescue mission.

Captive is very reminiscent of FTL's Dungeon Master. I'd even go as far as saying that it could be where Captive's creator, Tony Crowther, found his inspiration.

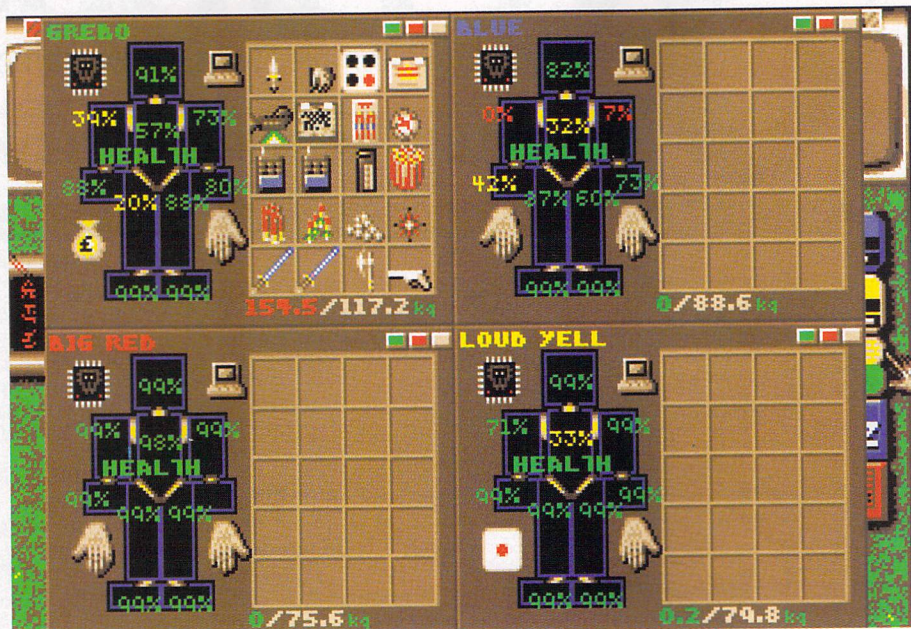
The game is set in the deep void of space and the action takes place over a series of planets and moons. There are some 10 levels to negotiate before you eventually manage to release yourself. Thereafter you may continue to explore the many planets at random.

Landing on a planet, you must first find the entrance to a hidden base. Once inside, you search the labyrinths for the generator room. In order to escape you must destroy the base's power source and make your way to the exit.

Before this operation may be performed however, you first have to obtain at least one planet probe. If you don't discover a probe you'll be unable to locate another base, thus halting your progress somewhat.

Naturally, the bases are guarded by all manner of creatures. These range from small pixie-like fellows carrying crude spears, to huge robots (looking remarkably similar to Ed-209 out of RoboCop) armed with the very latest in laser technology.

Destroying monsters will yield gold which



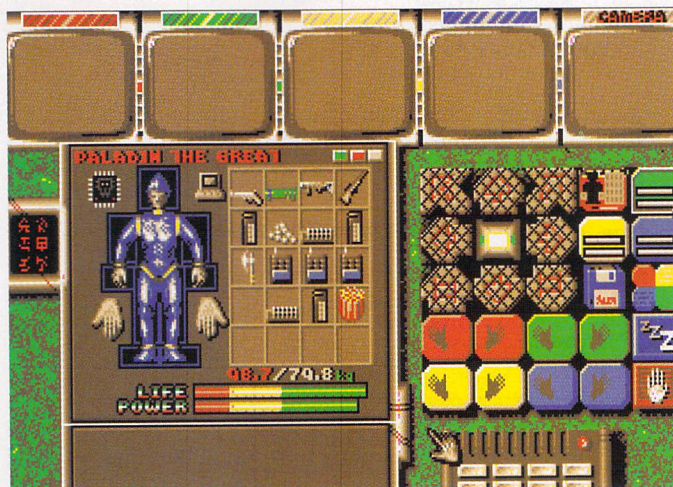
It may be necessary to take a quick glance at your party. At the touch of a button you can review their status. Here we can see just how healthy our boys are. You'll notice that one fellow has damaged arms and the other has to carry everything

may be exchanged for goods or services at various shops. You may repair damaged items or buy useful weapons or robotic upgrades.

Killing adversaries will also earn you experience points. To begin with, your team will only know how to use their fists in a brawl. But as they progress they'll learn how to use swords, pistols, rifles, automatics and even lasers.

And each base you explore proves to be a bit tougher than the last. You'll need all your wits about you if you're to save yourself. One thing's for sure – you'll spend hours trying.

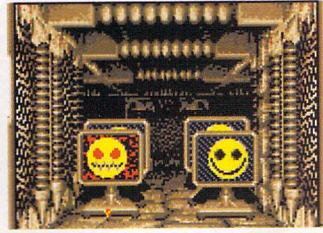
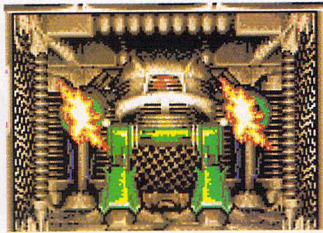
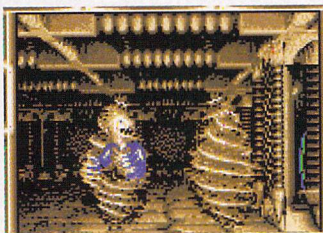
Captive is a first-rate game, one that's well worth the asking price. With excellent presentation and superb gameplay you'd be a fool to miss this one.



Your robots carry backpacks in which you may store vital equipment. These range from handy plug-in roms to weapons and spare parts



It's advisable to check on the statistics of your party. Experience gained from encounters with aliens may be transformed into new skills



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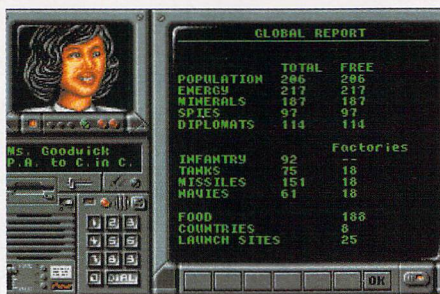
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A battle is raging in the North Sea and the future sovereignty of the UK is on the line – it will be the first country to be invaded



That woman at the top right of the screen is Ms Goodwick. She'll provide all the information you'll need to win the battles



This is the situation you hoped would never happen. The computer has picked up armed enemy missiles heading directly for you

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The Final Conflict

Despite the best attempts of those peace-loving Superpowers, World War III has finally broken out. It could mean disaster on a global scale – and the fate of the planet rests in the hands of a tiny group of people. Of course, one of these all-powerful beings just happens to be you.

As a world leader, you are in control of an awesome aggressive force – to be deployed in the name of peace-keeping, of course. You have armies, tactical nuclear weapons, spies, diplomats, and stockpiles of weapons and food, all of which must be carefully employed.

In this game, tactics and diplomacy will win the day. If you begin blasting away too soon, you'll destroy more than just the enemy.

Your spies can be sent to infiltrate your enemies' bases where they may obtain useful information. The right information could win the war for you. Your diplomats will try to win more allies for you (you know – parties, meeting the right people, that sort of thing. So important in situations such as these!).

If they can convince enough of the other countries to come over to your way of thinking, the tide will turn. Make too many enemies, on the other hand, and you're finished.

The diplomats will do their best, but the decision of other countries to side with you or against you depends almost entirely on your

current standing with the other neutrals left in the game. And if you treated them badly in the past, you'll have your work cut out persuading them to be friends again.

If you're taking too tough and aggressive a line, you may find yourself with twice as many enemies as you started out with. Be nice to the neutrals and they'll be nice to you – stay out of their way as much as possible, you don't need more trouble.

Your armed forces include infantry, tanks, naval units and armed missiles. As well as conventional weapons, you have tactical nuclear weapons at your disposal.

A stockpile of these must be built up, and it's important not to fire them just for the sake of it because you could start a Nuclear Winter. If radiation levels rise too much, then the world freezes over. Not something to aim for. A well-timed strike to an already crippled nation however, could finish it off.

Careful use of your resources must be made if you are to keep your armies supplied with weaponry and your people well fed. A balance needs to be achieved – obviously weapons are vital in any war, but there's not much point in winning if all of your people have starved to death in the meantime.

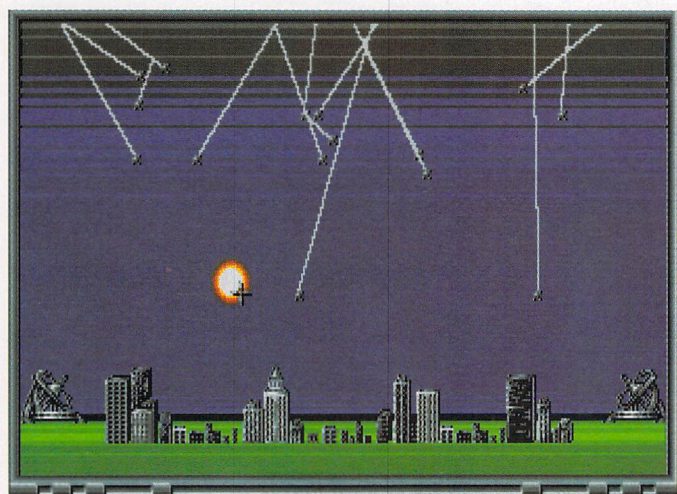
The game is mouse-controlled, and the pointer must be moved around to the various

icons at the sides of the screens. With these icons you can move forces between countries, and increase or decrease the production of food and weapons. Maps of the world keep you informed of the location of enemy, neutral and friendly territory. Remember, the most strategic thinker wins the war.

When all's said and done, the last missile has been fired and the last enemy has bitten the dust, there's not really all that much to this game. It tends to be repetitive and there isn't much variation in the action.

As war games go, it's fairly simple, although it could have appeal for novice wargamers. Although the graphics are good, the sound is nothing special. Unfortunately, although the gameplay is reasonable The Final Conflict doesn't quite make the grade.

GRAPHICS	71%
SOUND	64%
GAMEPLAY	60%
OVERALL	65%
REVIEWER	PAUL



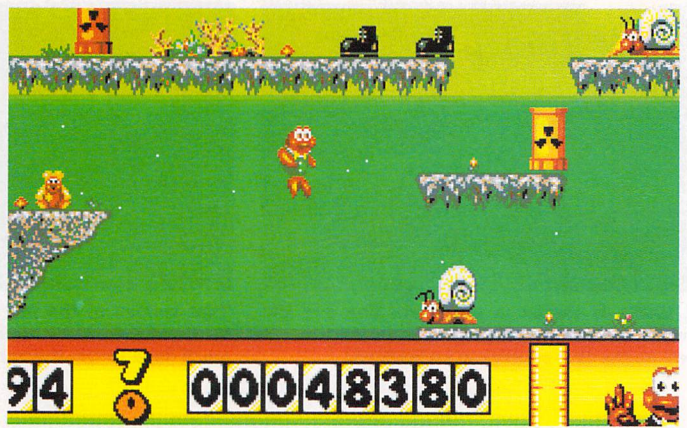
No, it's not a celebratory fireworks display. Those lights are actually armed nuclear missiles which are ready to reduce the city to rubble



Will you be the person to press the button first? If so, you'd better make sure you have the skills which are needed to bring victory to your side



He's not your regular sort of secret agent. He is however, very good at his job. If he manages to pick the key up he will be able to free the lobsters from their prisons - commonly known as lobster pots



James will have to very careful here. Those are canisters of nuclear waste floating around. It's up to him to get rid of this toxic waste which is causing havoc to the marine life

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James Pond

Hi, this is Pond, James Pond, Agent 000. Welcome to an adventure in my undersea world. The sea is under attack. Slime and slurry are causing some weird undertows beneath the surface.

The oysters are tossing and turning in their beds, the flying fish have been grounded and even the once friendly crabs are growing meaner as every tide passes. The sanctuary of the ocean must be preserved by James Pond, the slippery super-sleuth.

James Pond is a fish, small in stature but big in heroics. Your job as his guardian is to see him safely through the 12 levels of danger which you must face.

In his bid to clean up the environment, he must perform several tasks: release lobsters

each portion of his adventure. Unfortunately however, Pond can only carry one item at a time. This isn't a problem on the early levels, but in the later ones, selecting the right item at the right time will increase Pond's life span and enable him to complete his mission.

In the beginning of the game, Pond's only form of defence is blowing bubbles, which temporarily trap any creatures trying to attack him and prevent him from completing his task. Trapping them is one thing, but destroying them is another. To kill something, Pond needs to walk over it while it's trapped.

While he's circumnavigating the seabed, he will come across numerous power-ups and weaponry which make him into a far more formidable opponent.

Sometimes though, at stages in the game, he needs to find and explore various secret caverns to discover what tasty morsels they conceal. It might only be food which, if picked up, will increase the score. If James is really lucky, an opportunity to advance to a later level might appear.

The sounds which accompany the game are excellent. So whether you would prefer to listen to a natty little foot-tapping tune or to have the sampled sounds of underwater activities coming through your speakers and enhancing the game, you won't be disappointed with the results.

Cute seems to be the vogue at the moment and James Pond is no exception. The brightly drawn and nicely animated creatures benefit from simplistic playability, and give the game lots of charm and appeal.

Although the scrolling isn't perfect and the levels could be slightly bigger, Millennium's James Pond is a game which will grow on you. Once it's been played you'll find that it really is quite addictive.

G RAPHICS	84%
S OUND	76%
G AMEPLAY	83%
O VERALL	83%
R EVIEWER	MIKE



Dynamite must be placed under each leg of the oil rig before it can be destroyed. All this effort just to bring harmony back to the ocean

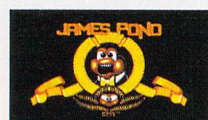
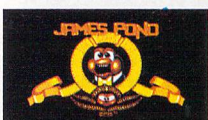


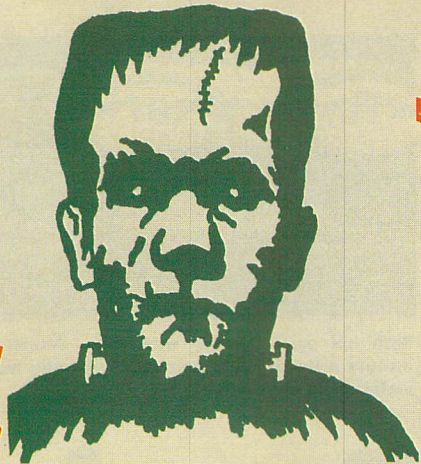
During the game, you'll be given the chance to enter sub-levels where extra weapons, power-ups and points can be gained



by finding the keys to the lobster pots in which they're trapped, blow up an oil platform by placing dynamite at the base of each supporting leg, help trans-mutant fish escape from the toxic waste and into clean, unpolluted water and eventually play Sir Galahad to a host of beautiful mermaids.

By searching each environment thoroughly, he'll find all the items he needs to complete





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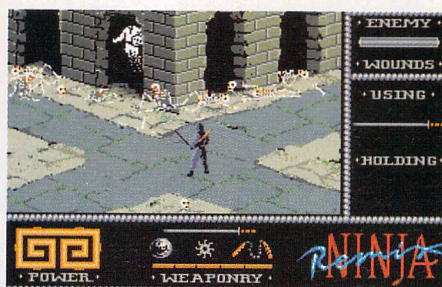
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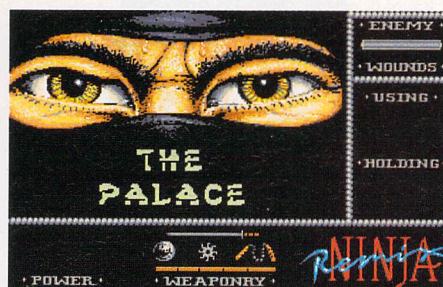
Education Orders Welcome



While searching the dank dungeons Armakuni is attacked by a giant spider. Only by using his Bo will he be able to defeat the monster



Not all the creatures can be killed - this headless ghost for instance. Contact with him will sap your energy so timing is essential



With his eyes burning with rage, Armakuni swears a deadly oath against those who have violated his brotherhood

SYSTEM 3
£24.99

Ninja Remix

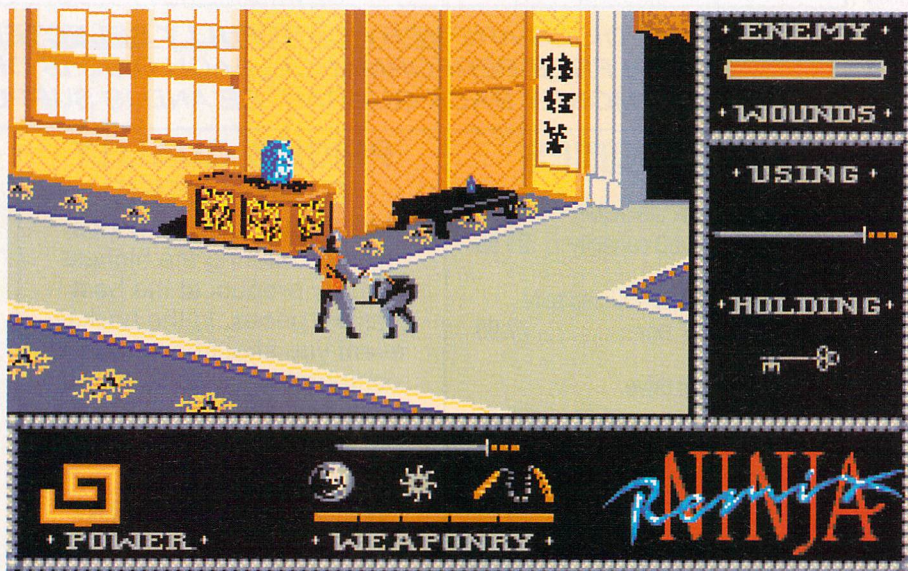
GRAPHICS 85%
SOUND 92%
GAMEPLAY 86%
OVERALL 87%
REVIEWER NICK

System 3 is probably best known for its Ninja games. Since they first appeared on the 8-bit machines in the early 1980s, the games have achieved cult status. During those early years, System 3 signed a deal with Activision. This meant that Activision would be responsible for the handling of a set number of System 3 games.

Unfortunately, System 3 and Activision later decided to go their separate ways. So now, using its own talents, System 3 is proud to present Ninja Remix, its latest, and hopefully the definitive beat-em-up.

Two hundred years after the rule of the Fujiwara Clan, the farmers and common folk decided it was time to leave their homes and travel to the distant Togakure mountains, there to establish a clan of their own. Thus was born the Ninjitsu - the mystic shadow warriors.

As the Ninjitsu perfected their arts they

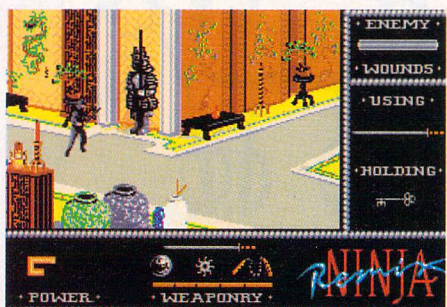


The inner sanctum of the palace is guarded by fearsome fighters. Using either your impressive array of weapons or your bare fists you must defeat the evil hordes

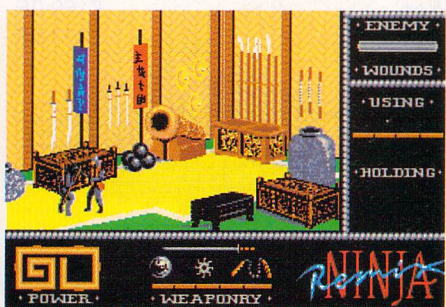
became known for their deadly, stealthy ways. Four centuries after the creation of the Clan they had become the most skilled warriors in the land, feared by the bravest Samurai and the most powerful of the Shogunates.

The evil-minded Shogun leader of the Ashikaga Clan, Kunitoki, had long envied the

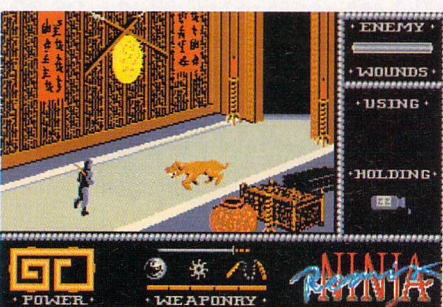
power and ability of the Ninja brotherhood and vowed to discover their secrets. Kunitoki believed that the only way to gain the knowledge he so desperately wanted was to destroy the Ninjas. To this end, the evil Shogun swore a deadly oath to all his gods that he would kill the entire brotherhood.



Not all the scenery is really as it seems. This grand suit of Samurai armour holds more than a few surprises for the unwary Ninja



Using the best of your Ninjitsu techniques you battle it out with one of Kunitoki's men. If you defeat him you may explore further



While attempting to gain access to the temple you awake a hungry guard dog. There's no time to draw your sword so try another approach

The secrets of Ninjitsu were written in the Koga scrolls and every 10 years the brotherhood would travel to the island of Lin Fen to pay homage to their founder, the White Ninja. Each time a visit was made to the island, the Ninja received even more knowledge from the secret scrolls.

Knowing of this pilgrimage to the island, Kunitoki planned to assassinate the entire brotherhood in one single sweep. Using his skills in the black arts to conjure up four foul spirits, Kunitoki sent his evil hordes to the island in a bid to achieve his goal.

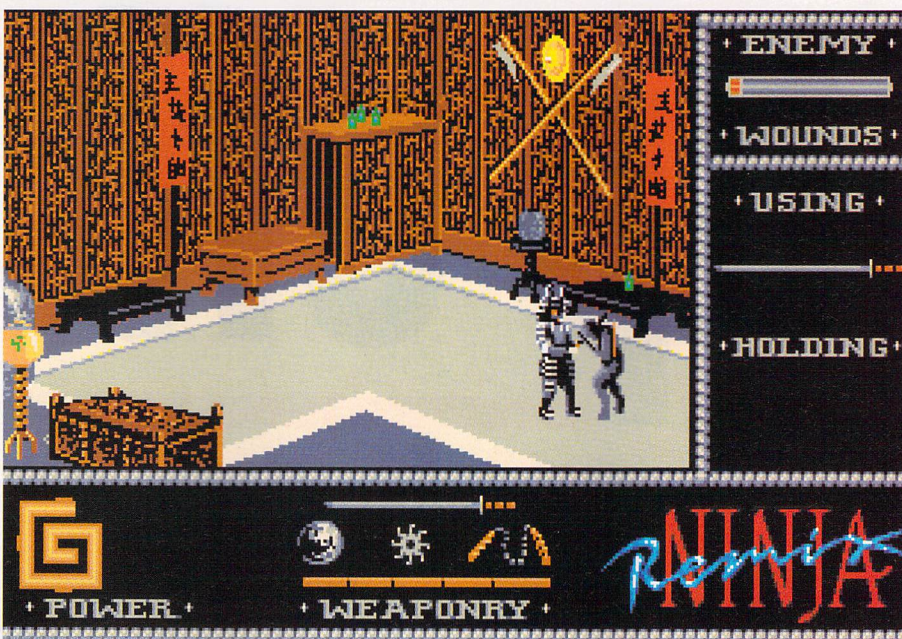
With the once proud Ninjitsu Clan slaughtered, nothing stood in the way of Kunitoki's dreams. Having received news of the Ninjitsu's fate, Kunitoki, together with two guards, set sail for Lin Fen. After landing on the island, the evil Shogun set about learning the ways and skills of the Ninja. Soon he'd be the most powerful man on the earth. No one would be able to defeat his armies.

Unbeknown to Kunitoki, one Ninja remained. Tradition insisted that one brother must remain at the Bunkinkan shrine to guard the most precious of artefacts should some disaster befall the rest of the brotherhood. Armakuni was not pleased at having to stay and guard the shrine, he was young and eager to learn more of the ways of the Ninja. He'd have to hear details second-hand from his brothers.

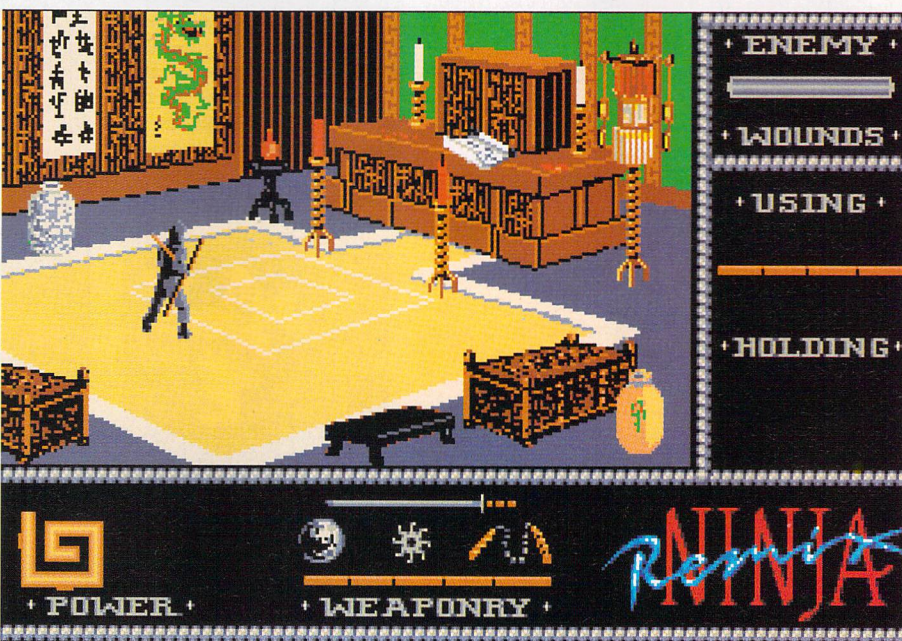
As the days passed, Armakuni learned of the disaster that had befallen his brothers. Gathering his courage, he knelt at the shrine of Bunkinkan and swore an oath of revenge against those who had murdered the Ninjitsu.

Armakuni had only been to the island of Lin Fen once before. He knew it was a natural fortress and that there was a secret entrance into the palace. However, as he reached the island he faltered, losing some of his initial courage. Some of the passages seemed different. But there was no turning back, he'd sworn an oath and now he'd have to honour his brothers or die.

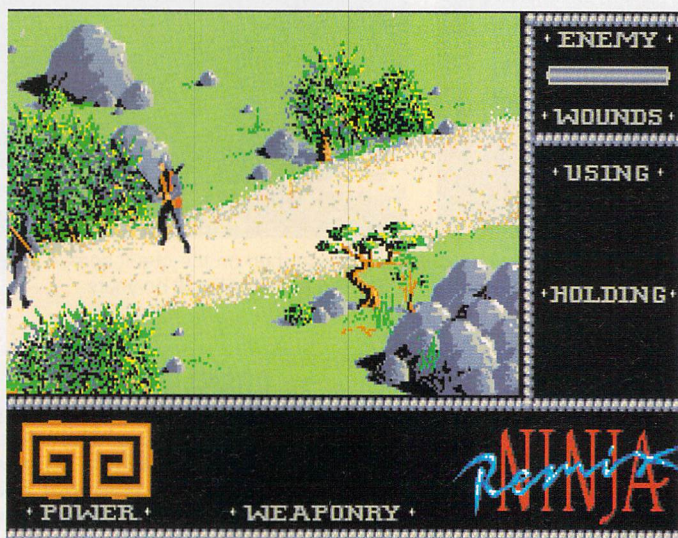
Ninja Remix is an arcade adventure-style game with an element of beat-em-up gameplay. The action is really enjoyable and the save game facility adds to the game's overall longevity. The presentation is excellent, the graphics being well-drawn and superbly animated. It's the sound, however, that really stands out. Ninja Remix has one of the best scores I've ever heard on an ST.



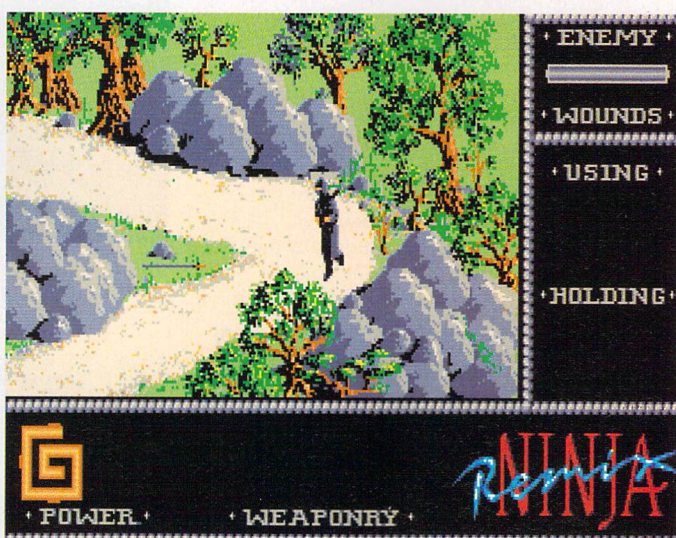
Even as you approach the shrine you fall under attack. Kunitoki himself appears out of the shadows. Using his newly acquired Ninja skills he sets about you with his sword



The lost Koga scrolls are yours at last. However, before you can claim them for the brotherhood you'll have to defuse the evil Kunitoki's deadly trap. It won't be easy...



Having landed on the island of Lin Fen you must find the necessary items so that you may progress in your quest for the Koga scrolls



Searching the gardens, you are attacked by numerous guards. However, as you progress you uncover a lethal sword. It should help

tip off

Stuck at a critical part of your favourite game? Tearing your hair out yet? Here are some hints to help you finish it off once and for all...

ELITE

You'd be surprised how many people out there have asked for help on this game. Well, that help comes in the form of Kevin Miller of Sutton Saint Nicholas, Hereford. When you have loaded the game and it asks you for a word out of the manual, type SARA and then while playing the game, pressing the * key enters you into a cheat screen.

Next, you will be asked to type in the new value for the byte you wish to change. Listed below are some of the more useful numbers and their meanings.

- | | |
|-------|---|
| 33/01 | Gives a Cloaking Device |
| 34/01 | Supplies you with 16 tons of food |
| 38/01 | Supplies you with 16 tons of tex tiles |
| 18/01 | Provides you with an ECM unit that tracks and destroys oncoming enemy missiles |
| 24/01 | Gives you an energy unit that increases your speed of recovery |
| 31/01 | Takes up quite a lot of space but adds 16 tons machinery to your cargo |
| 33/FF | jammer (press L to use) |
| 27/01 | Gives you a much needed piece of equipment, the docking computer (probably an STE) |
| 21/01 | For any budding young Houdini, the perfect Escape Capsule |
| 51/FF | More cargo, this time 16 tons of computers |
| 61/FF | You'll never go cold with 16 tons of furs to keep you warm. |
| 71/FF | Provides you with 16 tons of gem stones |
| 2F/01 | Retro rockets. If you have any problems with these, try changing the first digit by one. For example 21/01 = 22/01. |



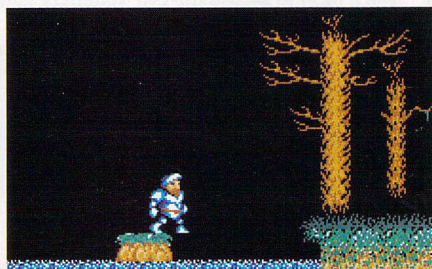
GHOST BUSTERS II

If there's something strange in your neighbourhood - you've bought a game but you're not that good, who ya gonna call? Dotty Busters!

Load up the game as usual, then when the Activision logo appears, hold down the keys Alternate, Control, S and U, then press fire. You will now find that on level one your cable will not snap and you should have infinite courage. Thanks to Alex Durrani of Durham for that spooky tip.



GHOST 'N' GOBLINS



This cheat by Helen Wallace of Bedford, London should come in quite handy. Load as



normal and then on the credit screen type in DELBOY. Immortality will be yours.

RICK DANGEROUS II

Richard Austin from Stamford Brook, London has an easy way to get through this one. Enter your name as POOKY on the high score table. When you select play level, by moving the joystick from left to right, you'll be given the option of a 16-bit game or an 8-bit one. Puzzled? Give it a go.

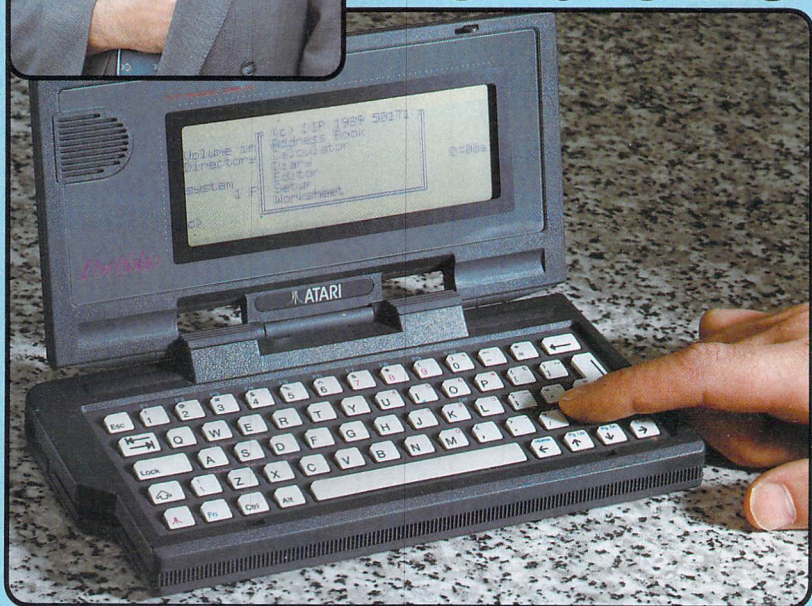
GREMLINS II

As the great man said "I did it my wayyy..." or something like that. Anyway, typing SINATRA on the high score table will give you infinite Billys, so trying to stop them shouldn't be too hard a task.

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- ★ **RAM:** 128K with an internal RAM disk, configurable from 8K. Externally expandable to 640K RAM.
- ★ **Keyboard:** 63 keys, QWERTY, IBM PC BIOS compatible. Buried numeric pad and function keys. Optional key click.
- ★ **Character Set:** Extended IBM ASCII (255 characters).
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- ★ **Peripherals:** 60 pin expansion BUS to take serial and parallel ports and memory expansion units.
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TEXT PROCESSOR

The Portfolio's built-in text processor program

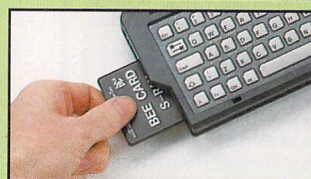
includes word wrap, line and column count, string search, in fact most of the functions you would find in a word processor. It handles printer and word processor control codes and allows easy transfer of files between Portfolio and your desktop PC.

SPREADSHEET

For real calculating power, Portfolio has a Lotus 1-2-3 compatible spreadsheet built-in. It has 127 columns x 225 rows and reads/writes Lotus V1.0 and V2.01 files, so you can transfer data to and from Lotus 1-2-3 on your desktop PC. The Portfolio's 256K ROM includes MS-DOS and PC BIOS compatible systems software.

COMING SOON!

In addition to the excellent software built-in to the Portfolio Free of Charge (see right), other software and peripheral products, such as the sophisticated Pocket Finance package and serial/centronics interfaces are available. And it doesn't stop there. Many manufacturers have recognised the potential of the Portfolio and have already started to design new peripherals and software. Products currently under development include: Serial interface with built in mini modem, Apple Macintosh interface, business, utility and programming software plus a range of adventure and battle strategy games. For further free details on the Portfolio range, fill in the coupon below and return it to Silica Systems now.



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Portfolio can communicate with other computers and supports a growing range of peripherals via a built-in 60 pin bus connector. Peripherals available include serial and parallel interfaces and memory expanders (to 640K). You can also add a card drive to your desktop PC, to enable it to read/write to Portfolio's cards.

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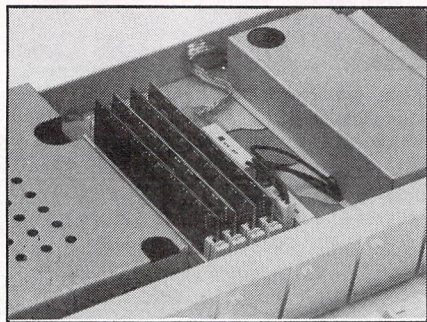
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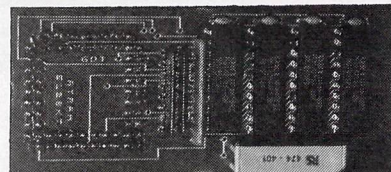
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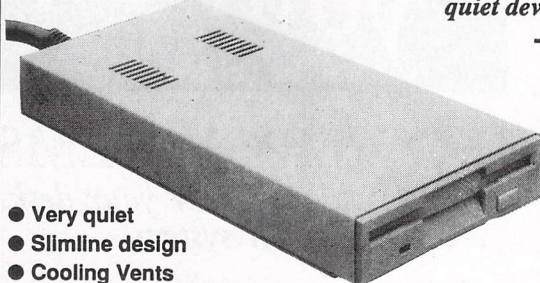
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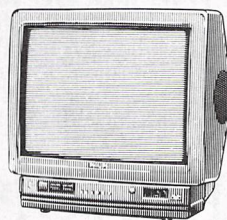
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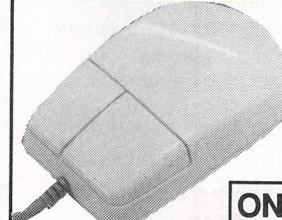
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The Tower Systems featured in this ad come to you with all hardware already installed, and ready to go.

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16 MHz 68000 CPU, 16kb cache memory, on board clock, Mega ST only.

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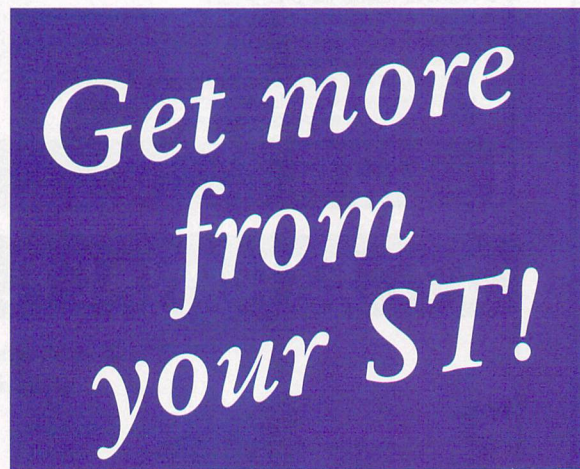
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Includes: Mega ST4 ★ 45Mb hard disk (25ms) ★ 21" EI6500 paperwhite monitor + MGE II graphics card

List price: £3700.00 + VAT Saving: £700

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Comprises: Mega ST 4 ★ ProCache-030 ★ 68030 CPU + TOS 1.4 enhanced ★ 45meg hard disk (25ms) 500k/sec ★ SLM 804 laser printer ★ EI6500 21" paperwhite monitor with MGE II graphics card

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We are an independent company specialising in boosting, modifying and customising computers. Our products are mostly state-of-the-art solutions to system problems or limitations.

We keep constantly abreast with the latest developments in the USA and Europe in order to offer the newest and best in Atari technology.

All our products can be DIY fitted, though not by a complete novice. They come with easy step-by-step instructions and are backed up by our helpline during normal working hours.

Alternatively, if you prefer to leave it to professionals, you can send your equipment to us for modification by our team of engineers.

We offer fast turnaround, full warranties, and a quick collection and delivery service throughout the UK.

So whatever your requirement, contact Atari Workshop for a fast workable solution.

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It's as easy as DTP

**Publish
Publish
Publish**

**Charles Michael
provides a few
helpful hints on
what to buy and
how to use it...**

The delicate art of Desktop Publishing (DTP) has been flourishing over the past couple of years, due to machines like the Apple Macintosh and, in no small measure, to the success of the ST.

In all, five DTP packages are available ranging in both price and sophistication, from the budget Easy Text to the fully professional Calamus. With any of these packages you can achieve successful results on screen or paper.

Don't feel that you must have a top-wack laser printer, huge amounts of memory, a hard drive and a scanner to produce decent pages. While these things will increase the versatility of your system and the scope for exciting documents, they also increase the opportunity for you to make a dog's dinner of the whole thing.

It's far better to take it slowly and put together a simple design, printed with a dot matrix printer, than to have a hastily PostScript-printed handbill which looks like a jumbled flyer for a Victorian hanging!

A basic system need consist of nothing more than an ST, a monitor, preferably mono, and a dot matrix printer. Software needs are equally modest. All you require is one of the budget DTP packages and some clip-art, or

a drawing package if you're good with a mouse. These will be sufficient to create and print a wide range of documents from advertising flyers and party invitations, to newsletters, pamphlets or even product manuals.

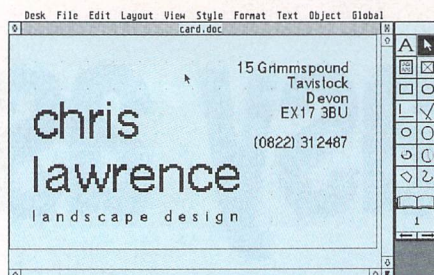
SIMPLE IS BEAUTIFUL

OK, so you have at least a basic DTP system, but how do you put ink to paper? In any discussion of page layout there will always be the person who knocks the examples as "not being good design". But remember, design is always subjective.

If you don't like what's shown here, bear in mind that it's only the concepts which we're trying to get across. Use your own feel for layout and typography, and check out current norms for the type of document you're trying to put together. Don't follow someone else's work too slavishly, and pick unusual sources if you do have to copy.

The most important rule in DTP is to think simple. You may have 115 fonts installed on your system, with 15 different style effects available for each, but you really don't need to use them all on the same sheet of paper. It's much better to be selective.

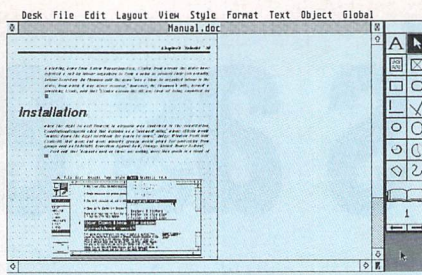
So many of the documents designed on DTP systems have the tendency to look like



A business card is normally a fairly easy proposition for DTP because it has few elements, most of which are text.

There's only one font used in this design – the importance of the various elements is controlled by the size of the characters and inter-character spacing.

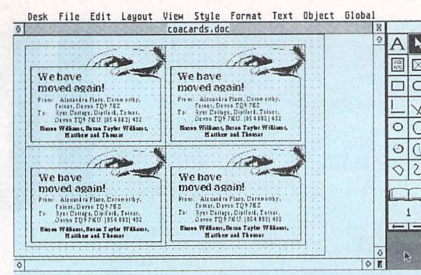
The lower case initial letters are unusual enough to suggest an artistic or design influence – handy for a landscape designer



Any document with a lot of text, such as a manual, needs space if the reader isn't to become tired after the first few pages.

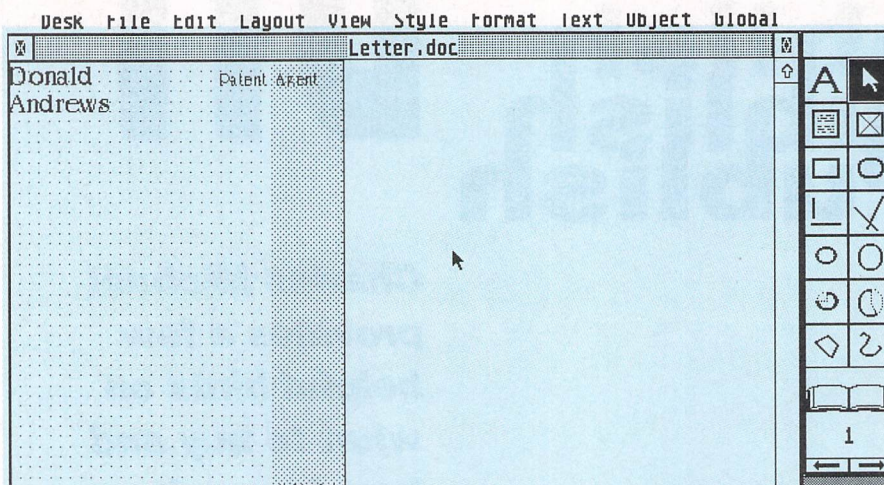
Allowing for this extra space also gives the room which is needed to lay out text and graphics in a neat fashion.

Extra leading has been applied to the body text here for added emphasis, and the sub-heading has been given a lot of room again to draw the reader's eye

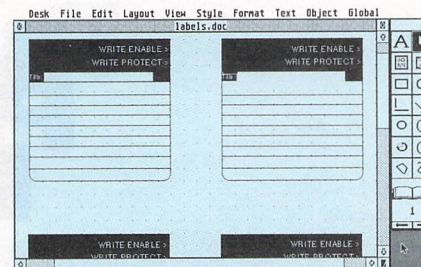


Party invitations and other smaller documents can be repeated several times on the same sheet too. This change of address card uses a clip-art surround to add interest.

The page is designed and printed landscape – long edge horizontal – rather than portrait, and the four cards on it are joined along their edges to speed up cutting out. If your printer will take thin card, here's the perfect opportunity to use it

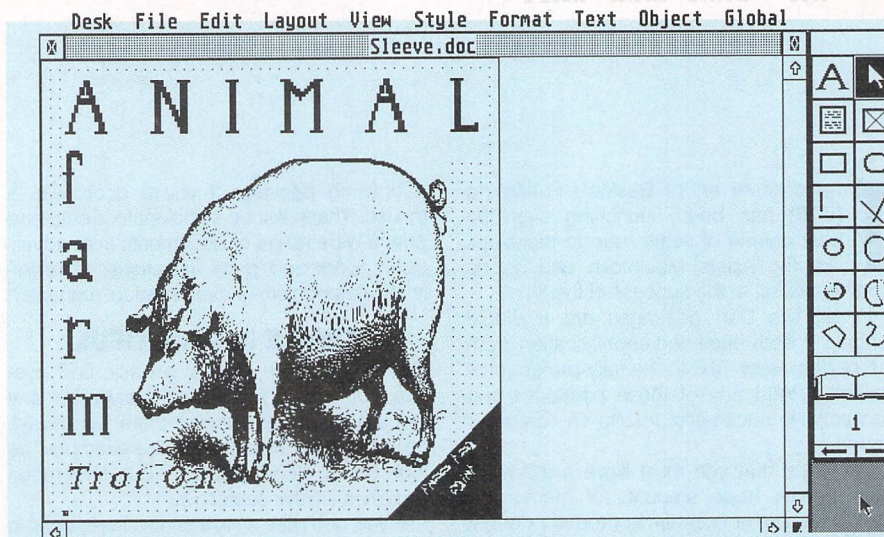


A letterhead is a small advance in complexity over the business card. Something is needed to break up the expanse of plain paper. A lightly toned panel down the right-hand side does this and helps to draw attention to Donald Andrew's profession, by splitting the two components of his title. The address is then blocked at the bottom. The panel could be coloured, as could the text



A 3.5 inch disk label is an interesting and easy project. It also opens the option of printing more than one item on a sheet of paper.

Here, some labels are copied from the one finished drawing, using PageStream's grouping and duplication functions. You still have to cut them out and stick them on, though



If you use your system for large projects, like a record sleeve, you'll have to find a special way of printing it out. A long carriage dot-matrix printer would be one solution. A better quality print would probably have to go to a bureau, where a 12 inch photographic roll could be used in a photo-typesetter. Pushing the text to the edges of the document draws the eye to it, even though the large graphic is the first element on the page to be recognised

circus posters – most of them however, aren't advertising circuses and so they lose their impact by giving entirely the wrong impression to the reader.

It's a much better idea to restrict yourself to a couple of contrasting fonts for each document and use size and weight – light, medium or bold – for emphasis and differentiation. Using this kind of regime ensures that

the reader isn't confused by the changes in readability of different fonts.

In fact, ease of reading and order of reading are what page design is all about. The idea behind DTP is to communicate with those reading the page and steer them to the parts you want them to read, in the order of importance. The eye can be steered by size, weight and design of text, so all of

these factors need to be thoughtfully and carefully balanced in the final document.

The same ideas hold true for graphics. If you put a huge picture of a vulture on to the page, that's going to be the first thing that readers see, long before they read your witty text about "paring prices to the bone".

Too many images will also confuse. A page can't normally bear more than two images, and one needs to be a lot bigger than the other. The exception is a catalogue or advertisement, where a lot of products are shown together. Here it's important to separate each product with lines or boxes.

On budget DTP systems, there are two main ways of adding images to a page: scanning and clip-art. While scanning is the better bet for descriptive documents like manuals or advertisements, scanners with resolutions of 200dpi give grainy results.

A scanned photograph in your document may well only appeal to propeller-heads who realise you've put the page together on your ST. The general reader will wonder why the picture quality looks so poor!

A CLIP ROUND THE EYE

The ideal DTP page is one which gives no hint of its electronic origin. It's often better therefore, to stick to drawings which have been scanned professionally and presented as clip-art. It's a good idea to build up a comprehensive library of clips.

There are plenty of images to choose from in the public domain, but be careful because many of the clips available in this country are obviously of US origin. Drawing styles are different in the States, and US clips can stand out badly in a UK document.

There are two types of image format commonly available for clips: bit-map and vector.

A bit-map is an arrangement of dots on screen or paper which is fixed. A vector or object clip is a drawing which is only defined as a series of lines and points. The software then interprets the information in the file and completely reconstructs the image from a table of coordinates.

When you import a bit-map clip into your DTP you're often given the option of scaling and fitting the image to a given frame on your page. If you can possibly avoid it, don't change its original size and shape.

The software will do its best to multiply the dots, but you automatically get stepped edges to your images which look crude, and stamp the page as 'DTPed' before you start.

Vector or metafile images don't suffer from this problem, as they are only defined by their coordinate tables and are redrawn from scratch each time they're altered in size. Unfortunately, Vector clip-art is far less common than bit-map images, so you'll often have to make do with bit-maps.

ROGUE ELEMENTS

There are elements other than text and graphics contributing to the final look of your page. The position of each image and piece of text can be vital. Use your DTP to the full by opening up a series of frames of the right size and playing with them.

Move the frames around the page and locate them in different positions. If you find it difficult to visualise a graphic or text, put a tint in the frame or load a piece of sample text. As long as it helps give you the feel of the overall page, it's adequate.

Try cropping the image you are using in a number of different ways and see how this affects the design. The size of the text and particularly its leading (line spacing) will also have a dramatic effect, as will the weight (thickness) of rules (lines) and boxes. Try not to box too many items, or the resulting page will look very bitty.

Rules are normally used for dividing one piece of text from another. Cutting them off short however, can also serve to link various items, particularly across columns in a newsletter or magazine.

The creative use of white space – a phrase often bandied around – simply means using the unprinted areas of the page as well as those with text or graphics. It's very important not to crowd the page, to give adequate space for each element to take its place and to make it easy for the eye to move from one line to another. Default leading on many DTPs is too close and should be loosened to make it easier to read.

EASY DOES IT

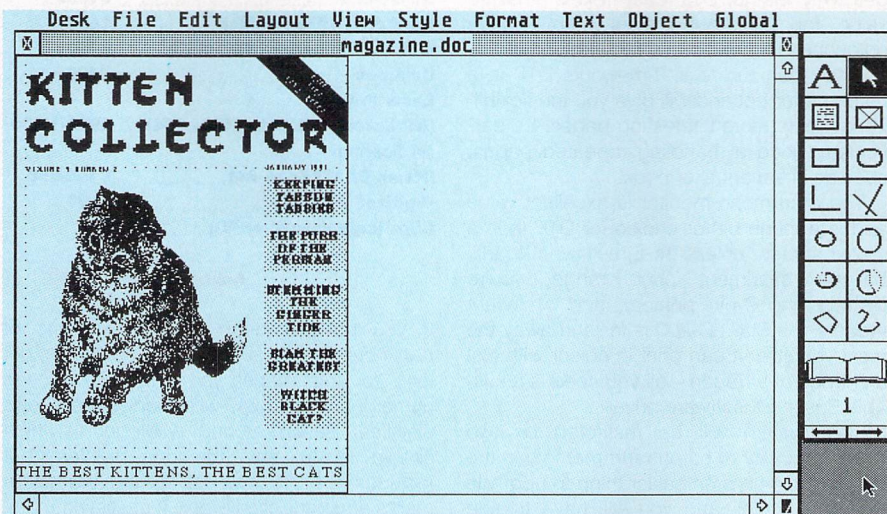
DTP enables just about anyone to create a page of text and graphics in a fraction of the time it would take to cut and paste it. This doesn't absolve the designer of any responsibility to his or her readers, though.

Think carefully about the way you want your page to look and the image you want it to convey. If you're designing a letterhead for a firm of solicitors, don't make it look like one for a hairdresser – and vice versa.

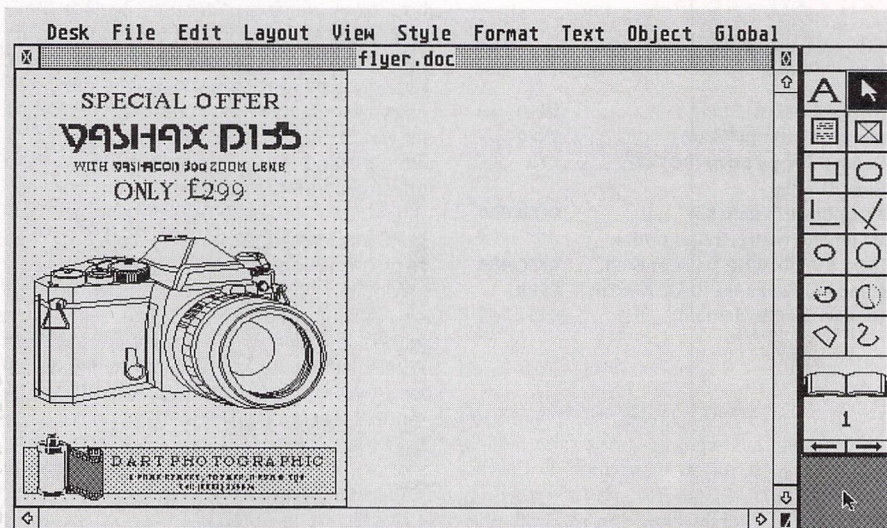
You don't need to have attended a three year art and design course to be able to put together a great looking page. However, as with any new skill, you need to practise to find out what you can and cannot do. Give yourself time to experiment with your chosen tools – the DTP program and your ST.



A typical newsletter or parish magazine is laid out like a true newspaper. Try to tie the pictures to their stories by careful positioning and captions. The size of headlines is a great help in directing readers to the most important stories first. The items boxed out here could be left without rules but the human eye is very keen to see separating lines in all sorts of places. Keep the text justified and make use of any column support which your DTP offers



The front pages of magazines and newspapers actually look very different. This fictitious example (at least I hope it's fictitious!) uses a deliberately 'cuddly' headline font to suggest its subject. The main front cover picture is very important on a mag, but may be supported by one or two smaller pictures which are inset. It's important to draw attention to the main items inside the publication, so the tinted boxes give a sort of mini contents list



An opportunity at last to make use of all the fancy fonts you spent so much on. If you're advertising a product and can scan its logo in, the flyer will look a lot more professional. Producing a sheet with the name and logo of the shop at the bottom like this, opens the door to repeated pages. For future use, save a blank document containing just the bottom strip

WHAT CAN YOU GET FOR YOUR CASH?

What should you buy for your page make-up? As always, it depends on the cash you can muster, but here are three typical systems. Mix and match between them if you have a different budget. Prices given are approximate, but include VAT.

BUDGET

ST 520 STFM.....	£290
Mono monitor (SM124).....	£110
Easy Text/Timeworks.....	£20 -75
9-pin dot matrix printer (Star LC-200).....	£200
Clip-art (public domain).....	£25

Approx. total £700

This really is the absolute minimum you can get away with for DTP. Easy Text is amazing value for £20, but leaves many things untouched in terms of page make-up.

If you can run to it, Timeworks DTP is a much better bet and will give you the flexibility to create more interesting pages. It's particularly good at handling repeated pages, such as in a manual or book.

The Atari mono monitor is excellent value and is a much better choice for DTP than a colour screen, unless it's a multisync. In this bargain basement price range, you're restricted to 9-pin printers, and of recent models, the Star LC-200 is far and away the most versatile. It can print in colour with just a change of a ribbon – all you need is a suitable Epson EX software driver.

This system will be restricted by two things – quality of output and memory in the ST. The memory's an easier thing to upgrade than the printer, and you will have trouble with documents of more than a few pages with only half a megabyte. Think long and hard about adding an extra floppy drive, unless you enjoy practising aerobics with your right hand at the ST's internal drive.

MEDIUM RANGE

ST 1040 STFM.....	£440
Mono monitor (SM124).....	£110
Second floppy drive (PC720).....	£75
PageStream/ Fleet Street Publisher.....	£150-200
24-pin dot matrix/inkjet printer (Star LC 24-10/HP Deskjet 500).....	£250-450
Hand held scanner (DAATAScan).....	£250
Clip-art (public domain).....	£25

Approx. total £1,550

Fixing most of the shortcomings found in the budget system and upgrading a few others, brings us to more than twice the price of the original. But you do have a workable, if slightly slow, system with this particular set-up.

There's no reason to upgrade the mono monitor, which will serve you well for your DTP needs, but moving up to the 1Mb ST

will save a few memory-outs. The second drive will also save your right arm.

Of the two suggested DTPs, my vote would go to PageStream, which is the more flexible package, despite its bugs. Watch out for version 1.82, which is meant to have cured most of them.

A hand-held scanner will give you scope to produce your own illustrations, which will generally be more relevant to the subject than off-the-shelf clip-art. Therefore, the clip-art budget can be reduced a little.

The 24-pin printer choice is another Star machine – they seem to have hit the value button right on the head.

An alternative which isn't often considered in the ST world is the Hewlett Packard Deskjet – formerly in its Plus version, now known as the 500.

This printer sprays very fine particles of ink at true 300dpi resolution. While not quite up to the standard of a laser printer, it does obey most of the LaserJet codes, and will therefore run with either of these two DTPs.

MONEY NO OBJECT

ST Mega 4.....	£1030
Hard drive (Atari 30Mb).....	£450
Multisync monitor (NEC MSII).....	£450
Calamus.....	£460
Laser Printer (HP LaserJet IIP/Atari SLM 804).....	£900-1,100
A4 Scanner – (Hawk/DAATAScan A4).....	£450-650
Digitiser (Vidi ST).....	£100
Clips (commercial or PD).....	£50

Approx. total £4,300

If you have a deep pocket with lots of banknotes in it or some very rich relatives not long for this planet you could go for the numero uno system, with added bells and whistles. Based around a Mega 4, which should avoid any memory problems, it includes a hard drive for storing big documents and your clip library. A multisync monitor will give you high quality mono output for DTP and colour for Xenon 2.

Calamus is still rated the best DTP for the ST and there are wide rumours of a forthcoming price drop with the release of Calamus 3, the colour version. Although it does have what could be described as a bit of a learning curve, and no PostScript output, it can certainly produce some very smart copy.

If you must have the Atari laser printer, it'll set you back around £1100, but why not consider instead the HP LaserJet IIP, a neat industry-standard laser with a smaller footprint than the SLM804 and an optional PostScript cartridge? It also leaves the Mega 4's memory alone.

With this kind of budget, you can go for a full A4 width scanner. This can either be a flat-bed machine where you lay the paper on a glass sheet, or the push-through system used by the Mitsubishi scanner marketed by Pandaal. This works like a fax machine, using a powered drive. You can also unhitch it to enable it to scan from the pages of books or magazines.

And finally, for a really great finished document, why not go for broke and try a digitiser? This lets you use images from video as well as paper, which can then be added to your ever-increasing clip-art collection. ●

YOU WANT MORE?

The DTP program itself isn't the only bit of software you'll need to produce interesting pages. A little extra investment in fonts, scanners, digitisers and clips can add dramatically to the effectiveness of your work.

Fonts depend mainly on the DTP package you've chosen, particularly at the high end of the market. PageStream and Calamus both have extra font packs available, although PageStream supplies 10 families as standard.

The new version, due for release this month, will use scalable fonts from Agfa Compugraphic, one of the leading names in the field. Calamus fonts also come from Compugraphic, and three are supplied with the program. Extra fonts, from a range of over 40, cost between £70 and £140 per family, which isn't cheap.

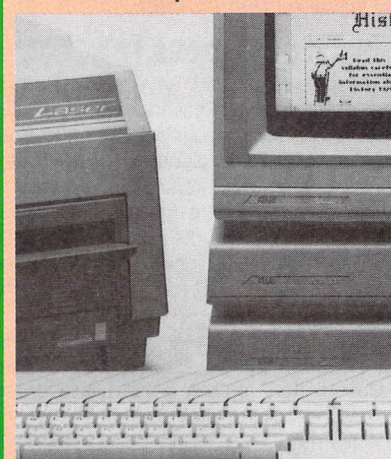
Clip-art is the easiest and quickest way to brighten up your pages, and there are many clips available in the public domain. It's difficult to assess how many of these are duplicated between PD libraries, but some libraries will send you print-outs of the clips they supply. The danger to the supplier, of course, is that anyone with a hand-held scanner can add them to a system for free.

Scanners are a useful way of adding printed images to your pages. They need to be used with care, as it's much easier than you might think to produce really hideous scans. It's worthwhile taking a bit of time with the contrast control and the accompanying software to try to pull out as much detail as possible.

Bear in mind too, if you use a laser printer, that a 200dpi image, as produced by most scanners, has less than half the number of dots per square inch of a 300dpi image (40,000 as opposed to 90,000). Watch out for 300 and 400dpi scanners which produce their resolution through 'dithering' techniques. The scan quality isn't quite as good as with a true high resolution device.

Video grabbers are also useful, however the translation of colour images to black and white is not always as good as it might be. In some ways, digitisers are best left for multi-media, screen-based work.

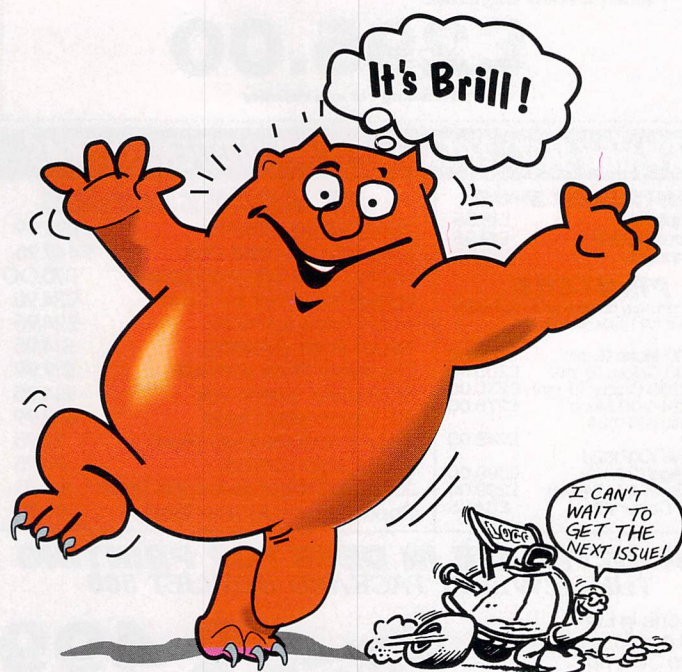
Paint packages can be a useful adjunct to your DTP system, particularly if you want to do more than crop or scale clip-art. Buy one which imports and exports as many different formats as possible. On second thoughts, buy two – one for bit-map and one for vector art.



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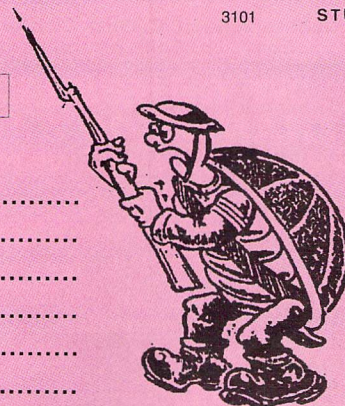
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Product: Re-ink
Supplier: Caspell Computers
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Price: £12.95

Configuration: All STs, colour and mono

The Western world saw some 128 million printer ribbons thrown away in 1989. Twenty-six million of those were in the UK, and if they were lined up end to end they would stretch from Land's End to John O'Groats three times.

At between £3 and £20 each, the cost of this extravagance mounts rather quickly, and the threat to the environment is even more alarming. An alternative to the problem of a fading ribbon is to re-ink it, and from a small British company called Office 12, comes the aptly named Re-ink.

It's based on Refresh, an earlier product from the same firm. Reacting to the increased pressure on industries to be seen as 'green', the company developed this spray to remove the need for ozone-damaging chemicals. At the same time, improvements in the ink made it more compatible with the various types of ribbon available. It is now marketed in a smallish, ozone-friendly spray can, which holds 120 millilitres of the black ink.

GETTING THE JOB DONE

The top of the ribbon cartridge needs to be lifted off and this is usually quite a simple job if you use a thin piece of metal as a lever. A small screwdriver is perfect for this, and you'll usually find that the lid is clipped onto the main body of the cartridge. (You'll also usually find that your screwdriver is not where you left it last and everyone else swears blind they didn't touch it... - Ed)

At the next stage, it would be wise to use something other than the meal table as a workbench. The spray goes everywhere, so wherever you work it would be a good idea to cover the area with some paper.

The can should be shaken well and the ink sprayed onto the ribbon from a distance of about 75 millimetres (give or take a few microns - Ed). Obviously smaller ribbons need less ink than the larger examples, so the number of sprays needed varies quite considerably - between 10 and 60 pumps.

CASH IN A CAN

John Butters, in his rather fetching green suit, proves that a printer ribbon can last forever - well, almost...

Excess ink must be wiped from around the cartridge and the lid replaced. If you took it off carefully, then it should go back together without difficulty.

The ribbon must be left for at least 24 hours before it can be used, so it's a good idea to have two ribbons in circulation if you can't wait for a day before printing.

SAVE, SAVE, SAVE!

The company suggests that the best results come from topping up the ribbon as it starts to fade, rather than waiting until it's nearly dead and giving it a full dose.

Using the spray like this will give up to 100 re-inks and if used on completely faded ribbons you can expect to get 30 re-inks. If you use the cheapest ribbons you can therefore expect to save at least £77, and if you have one of those rather flashy models, costing £20, you could save your bank balance an incredible £587.

Re-ink worked well with the ribbon in my

Panasonic dot matrix printer and is said to work on all fabric ribbons, although problems may occur with other kinds.

Obviously Re-ink is not intended for use with colour printers. But it's a simple and workable idea that is certain to save heavy printer users a small fortune.

THE BOTTOM LINE

Features: Ozone-friendly, comes in spray can, 30 re-inks from one can.

Ease of use: Straightforward but a little messy.

Features
Excellent
Good
Average
Bad
Appalling

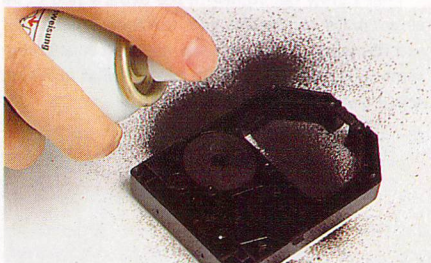
Ease of use
Excellent
Good
Average
Bad
Appalling



The equipment you need for re-inking - the spray, a screwdriver and the ribbon



Carefully remove the cartridge's lid. A small screwdriver should do the trick



Spray the ribbon from a distance of about six centimetres, but cover the work surface first



Replace the cartridge's lid. Remember to leave the ribbon for 24 hours before using it

ART- WORK!

Charles Darwin was the natural selection in this month's competition. See him evolve before your very eyes

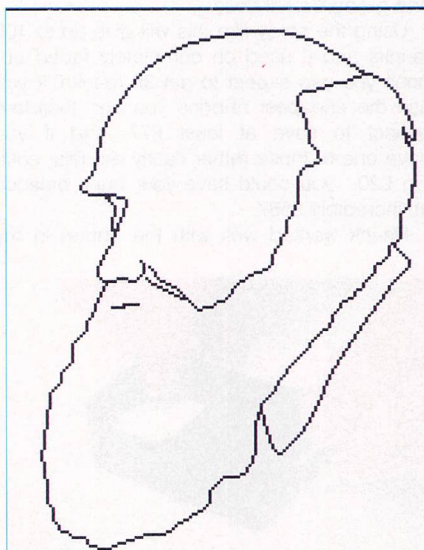
YOUR MAN WITH THE BRUSH

Ray Pluck declined to send in any personal details apart from the fact that he lives in Guisborough, Cleveland, he wears glasses, and he has a minimalist hairstyle. But thanks for the artwork – it's great!

Ray Pluck created this haunting portrait of Charles Darwin using Degas Elite. In the traditional fashion, he refused to supply a photo of himself: "I'm not going to have my prematurely balding, heavily bespectacled cranium exposed to public ridicule for you or anybody else!"

OK, so that's Ray's excuse – what about the rest of you? Remember, you have only one more month in which to cover yourself in glory on these pages and put yourself in the running for a Gasteiner mouse and a Tracey.

1. First, I select my subject. I'm rather fond of science fiction vehicles, but this time I thought I'd try my hand at something different: a portrait. A large black and white photograph of an elderly



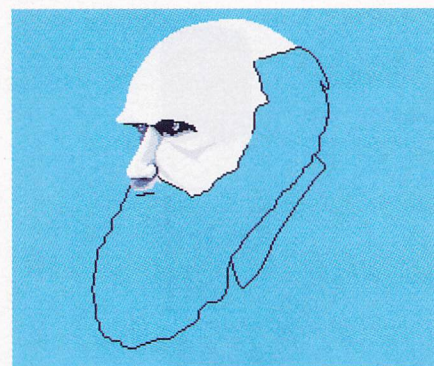
Charles Darwin (one of my scientific heroes) seemed an ideal source.

First I drew the outline of the head, trying to be as accurate as possible (get the foundations right and whatever you build on top will be so much more secure). The outline, as with most of what followed, was drawn under magnification.

PRIZE WINNERS SIGN HERE...

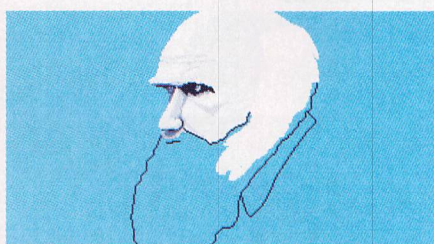
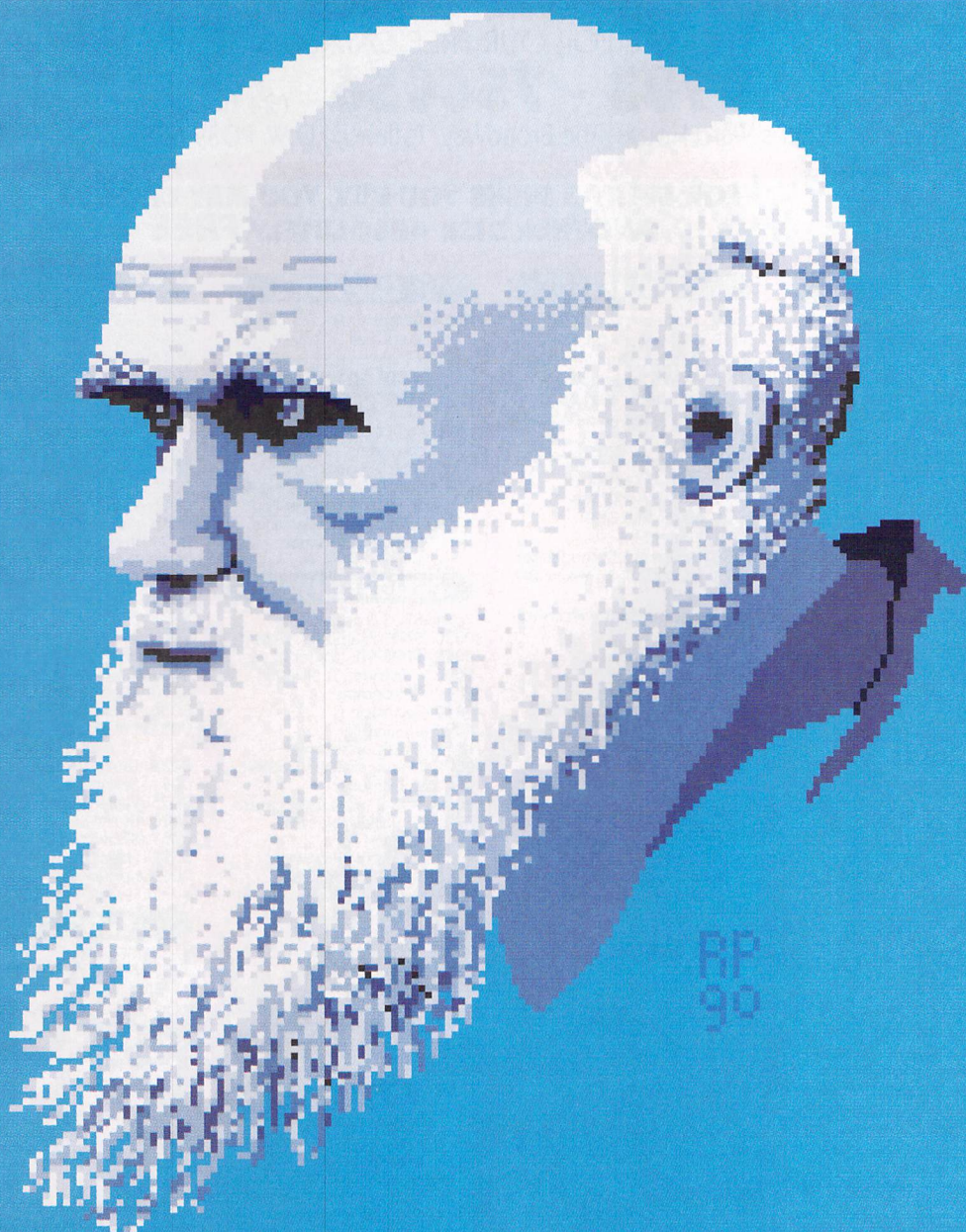
This is your last chance. No pic, no prize, so get cracking! Entries must be received before January 5, to be considered for next month's (the last in the competition) Artwork!

pages. Some lucky artist will receive a Gasteiner mouse and a Tracey – and that lucky artist's name will be announced in the April issue. You have been warned!

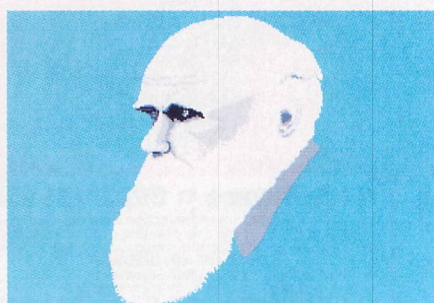


2. Darwin's eyebrows were quite prominent and I used the outline of the right one as a route 'into' the face. The darkest areas in the picture are under the brows and so at this point I could assign shades to the palette, from darkest to lightest. The eyes are probably the most important part of any portrait – if I know I've got them right then I feel I can relax, the hard bit's done...

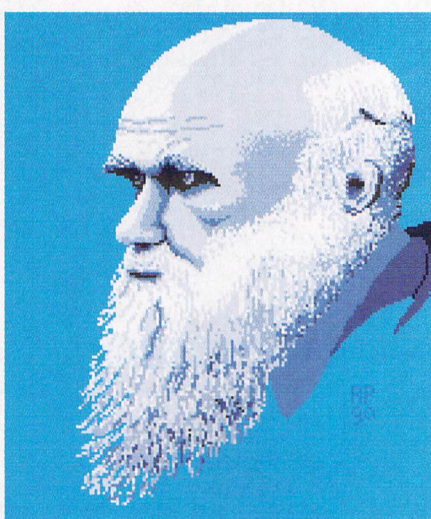
I find cheekbones difficult and I keep going back to them throughout a picture. You don't want to highlight them too much, but miss them out and the face becomes flat and uninteresting; just doodle (but don't make them up – draw what you see).



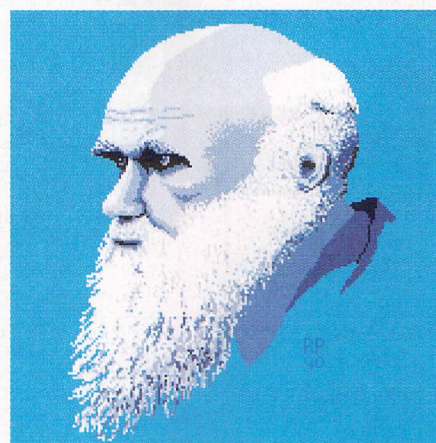
3. I then added detail to the face and started to fill the beard. His nose was too long...



4. The beard (and the small area of ear that is visible through it) then became the focus of attention. I used the K-line facility to draw in the base detail.



5. Almost done. I was still adding detail to the beard, trying to get the shading right (light at the front and on top, darker to Darwin's left and below). It was at this point that I decided the whole head was slightly too light. To correct this I selected the RGB slider window and went through the entire colour range, knocking all the sliders down by one notch.



6. Having darkened everything in the last stage I was in a position to re-apply the white (which I had previously used for skin highlights) to the hair and beard.

And that's it. Darwin was - outwardly - quite a cheerful bloke and in most of the pictures I've seen of him he seems to have a twinkle in his eye - I don't think I've got it. My Darwin looks a bit too stern. Never mind, maybe he was having an off day... ●

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- G116 -Chunnel - French Tutor Game
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- G045 -England Team Manager
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- G061 -Stocks and Bonds
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- G031 -Megaroids, Star Battle, Time Bandit
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- G083 -Companion
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- G110 -Company (not STE)
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- D074 -STE Atari France
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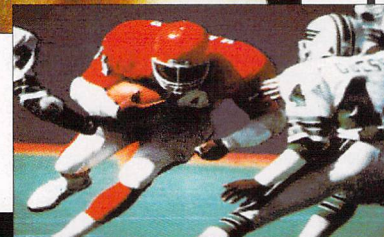
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ST DEMOS

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SD 009 STAR WARS RAP - Great sound mixing and parallax scroll

SD 503 PREDATOR - Brilliant animation taken from the film (D/S)

SD 504 SO WATT - A collection of quality demos from the Carebears (D/S)

SD 505 WHATTAECK - Another good set of demos from the Carebears (D/S)

SD 506 MIND BOMB DEMO - Great demo with 20 separate parts! (D/S)

SD 507 SWEDISH NEW YEAR - Three demos from different programmers (D/S)

SD 508 CUDDLY DEMO - Brilliant demo with many parts (D/S)

SD 509 UNION DEMO - Another excellent Multi-part demo. (D/S, NOT STE)

SD 510 GREMLINS DEMO - Collection of pix & samples from the film. (D/S)

SD 511 ROBOCOP 2 DEMO - Collection of pix & samples from the film. (D/S)

SM 006 TCB TRACKER DEMO 1 - 4 Channel sampled music! Who needs Amiga??

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SN 503 SNOWMAN DEMO - Good animation & music from the film (D/S, 1 MEG)

SN 504 'THE RUN' - Great animation of a police chase (D/S, 1 MEG)

SN 505 S.A.M. - Animation showing part of the Psycho shower scene

SN 506 DRAGONS LAIR ANIMATION - Digitized from the Laserdisc (D/S, 1 MEG)

SN 507 CALIFORNIA RAISINS - Dancing raisins! (D/S, 1 MEG)

SR 000 ANI ST - Full working version of this excellent animation package

SR 002 VIZ SLIDESHOW - Full of hand-drawn artwork from the comic.

STE ONLY DEMOS (All STE disks are DOUBLE SIDED, 1/2 MEG unless stated)

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ED 002 BOING STE - Featuring a Big bouncing ball (1 MEG)

ED 003 AN COOL STE DEMO - 4096 cols, Hardware scroll, Stereo FX (1 MEG)

ED 004 3D SCROLLER - Shows what the STE's blitter can do! (1 MEG)

ED 005 JUNGLE DEMO - Great graphics and Stereo sound effects!

ED 006 PSYCADELIC HOUSE - No, not a spelling error, it's ACIIID!

ED 007 DELIRIOUS - Excellent! 6 different demos to play with.

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SG 005 DIE ALIEN BLOB - A good scrolling shoot-em-up.

SG 006 FLOYD THE DROID - Good game with funny sampled sounds.

SG 007 NAVAL BATTLE - A good version of the classic battleships game.

SG 008 VIRUS - Save your computer from the lurking virus! (NOT STE)

SG 009 EMPIRE - Buy & sell properties to battle your way to the top!

SG 010 HAUNTED HOUSE - A fairly standard (But playable) platform game.

SG 011 ZOG - Little brainpower required here! Blast everything!!

SG 012 JOUST - Brilliant game. Try and dismount your opponents!

SG 013 FUZZBALL - A good platform game

SG 014 ENGLAND TEAM MANAGER - Think you could do better??

SG 015 A DUDLEY DILEMA - A great adventure game.

SG 016 BERNUND RACE - A good sailing game. Get the seaisick pills ready!

SE 000 SHIPWRECK - An excellent educational maths game with graphics.

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EU 000 STE BOOTUP - Allows you to boot up into medium resolution

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SU 500 FONTKIT - Create your own custom desktop fonts! (D/S)

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SU 004 AUTOROUTE DEMO - Usable demo of this computerised map.

SC 000 M.P. FLYING CIRCUS - Say no more, Wink Wink, Nudge Nudge!

SC 001 SPY WHO LOVED ME - Playable demo of the game.

SC 003 DELUXE PAINT ST - Usable demo of this excellent art package.

SC 004 DAYS OF THUNDER - Playable demo of the game.

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BETWEEN THE SHEETS

A spreadsheet is the ideal tool for anyone who wants to compare week-to-week business figures, or perhaps the effect of certain conditions on it. This shareware version of a spreadsheet, available in the public domain, is a great introduction to this kind of software and could save you forking out big money on a commercial product.

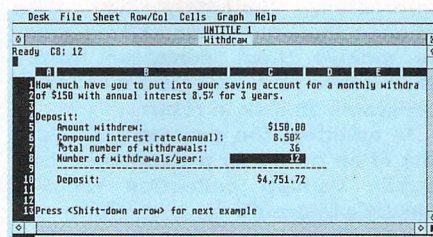
Version two of Sheet was created by Chorming Ling of Boston, USA and works on either colour or monochrome monitors. It includes a BASIC interpreter and examples of the type of work the program can do.

Being GEM-based, the spreadsheet operates cleanly, but some of the commands are difficult to discover if you're used to the famous Lotus 1-2-3 or similar software. As a result, the comprehensive but rather unwieldy manual will be called upon frequently.

At the top of the screen, the drop-down menus are headed Desk, File, Sheet, Row/Column, Cells, Graph and Help. Spread-

sheets are split into sections known as cells. You can move between cells using the mouse or cursor keys, and the current one is always highlighted.

All the usual spreadsheet functions and more are included in Sheet. For example, rows or columns can be added or deleted from a spreadsheet and columns can be widened or narrowed. Sheet is available from Public Dominator on disk MP7.1.



STRIKE IT LUCKY

Those strangely addictive fruit machines have long lurked in corners of pubs and other recreational places, luring unsuspecting punters with the promise of riches beyond their wildest dreams.

Of course, occasionally a profit is made, but more often the proverbial fool and his or her money are permanently parted. Even then, ever-hopeful human nature encourages the gambler to put in more money to try to win back what has already been lost.

You no longer need to spend money to play fruit machines. Lucky 7 is a public domain version of a fruit machine and it doesn't cost a penny to use – well no real money anyway – because a set amount of 'pretend' money is provided in the bank.

It costs 10 pence for each spin, which is automatically taken from the balance in the

bank. A click on the Start button with the mouse produces the spin.

By clicking on the right-hand mouse button, you'll see the winning lines and the amount of money you'll receive for each. When you win – and it happens much more often than on those nasty money-grabbing machines in pubs – you'll have the choice of adding the money to the bank or gambling it.

All the other usual options are included as well. Nudges are achieved by illuminating all of the letters making up the words 'Lucky Seven' on the right-hand side of the screen. This is done by turning up fruit with a number within it on a spin.

For example, if a blackberry had the number three inside it, the letters LU and C would light up, and if a second fruit had two inside it, you'd also get the letters K and Y.



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News

pd MT Software has recently struck a deal with leading disk manufacturers Mitsubishi and Panasonic to supply its disks at low prices.

In the wake of the deal, a special disk line will be set up which will despatch disks to customers on the same day, if orders are received before 4pm.

Ten blank Mitsubishi or Panasonic disks will be sold by MT for as little as £4.99, and extra staff will be employed to despatch the disks.

pd Visitors to Atari's Whistle Stop Tour are unlikely to have come away with much. Not much, that is, unless they visited the Leeds event where Goodman Enterprises hosted a stand and took along some of the 'best selling' programs from its collection.

The library rarely has stands at computer shows but Mike Goodman judged the event to be "very worthwhile".

pd A new and unusual type of PD service is being offered by a new library calling itself Your ST Public Domain Library.

The Library will send a list of all the software it has to anyone who is interested. Customers can then choose their programs and, in order to receive them, send the library their order plus an equal number of programs on disk in return.

In addition, the customer sends a list of all the other programs in their public domain collection for the library's information.

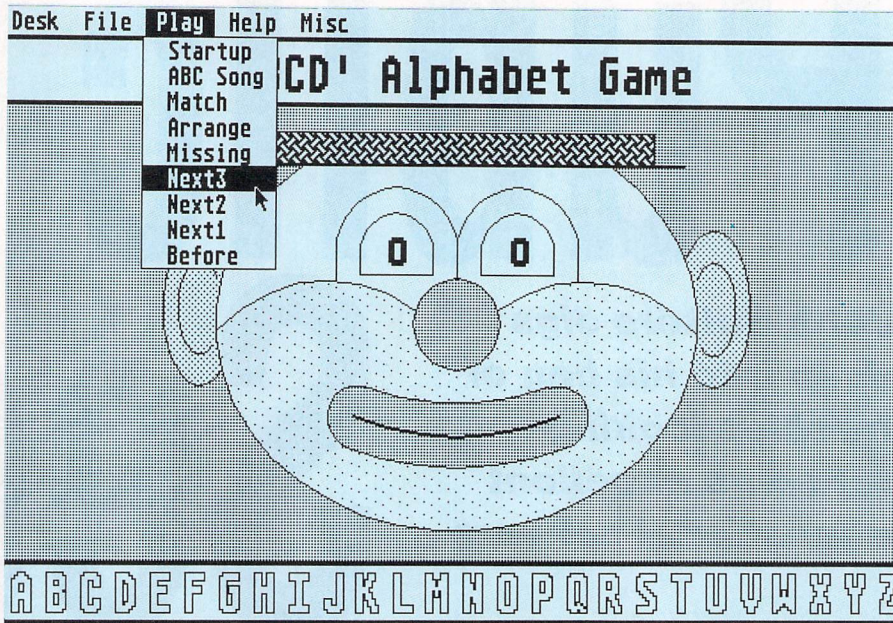
The library uses this information to keep each customer informed of new programs that the library receives which the customer doesn't already have.

pd Another new library for ST users is Halifax-based Trust PD. The library has its catalogue available on disk and its address can be found at the end of Public Sector, on page 92.

pd The cover feature about astronomy programs for the ST in the December 1990 issue of 'USER' referred to a public domain program called Solar System Geography.

Readers who have had difficulty in finding the software should contact Goodman Enterprises, which has plenty of copies, and whose address can be found at the end of Public Sector.

THE FREE R'S



Select different tests from the various drop-down menus

Games playing is the area of ST computing most frequently explored by young computer enthusiasts. But the machine is capable of much more than simply firing a missile at an intruding alien, and education is an area in which the computer is useful.

There are several commercial packages available, covering a wide range of topics. But why pay for something you can get for next to nothing? The public domain, as ever, provides STers with all sorts of software in this field. There are programs for all ages and subject types. Lets take a look at some of the better programs...

● One of the first steps in any education is to learn the alphabet, and the public domain has a brilliant program for this. Goodman Enterprises' disk number GD805 has various sections which lead to an interesting game-like program for the very young.

A clown's face is in the centre of the screen and his eyes are used to hold letters. At the bottom of the screen the alphabet runs from left to right. Children may be given a sequence of letters and asked which one is next in the sequence, or decide which letter has been taken from the alphabet at the bottom of the screen.

It's a simple but sturdy program that runs in either medium or high resolution – so monochrome users can learn their alphabet as well. Now, what comes after D?

● If you want to improve your child's (or your own) maths, look no further than Table Test. Multiplication tables made easy!

To begin, the child enters his or her name by clicking on the letters of the alphabet. Table Test then gives two options – tables can be viewed or the child can be tested on them. The viewing option asks which table you want to look at (any one from 2 X to 12 X) and lists the results of multiplying that number by between 1 and 12 times.

A test mode also gives a choice of tables. The same options are available as well as a random test in which between 10 and 30 questions are asked. During this test a ques-

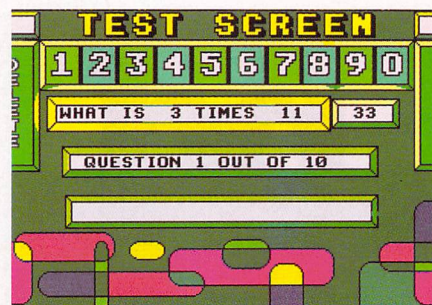


Table Test. Up to 30 questions are asked in each of the tests. It's good fun...

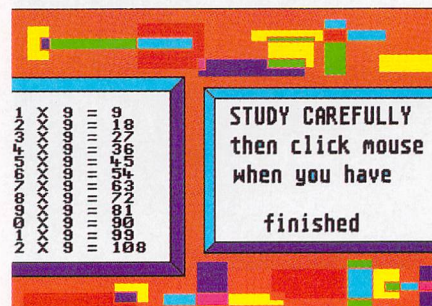
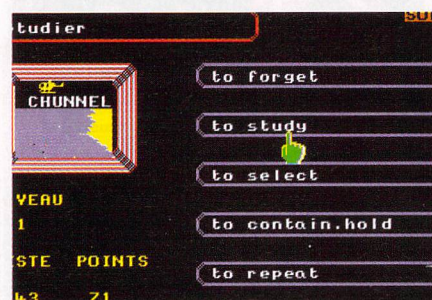


Table Test. Take some time to study the tables before the test. It's worth the effort



Chunnel. Choose which one of the five answers is correct. Good luck...

tion is asked, such as $4 \times 11 = ?$ The reply is entered, and if worst comes to worst, after three incorrect tries the correct answer is supplied by the computer. Disk GD809 from Goodman Enterprises is the one to look for.



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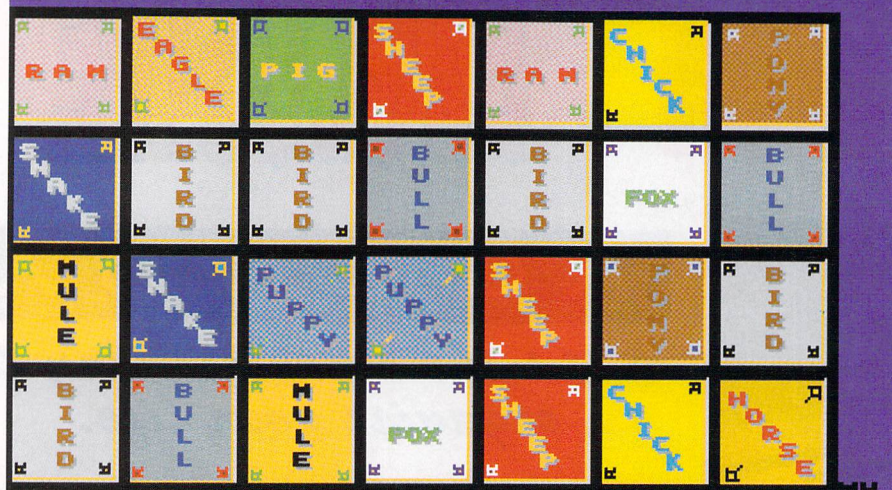
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STU 2

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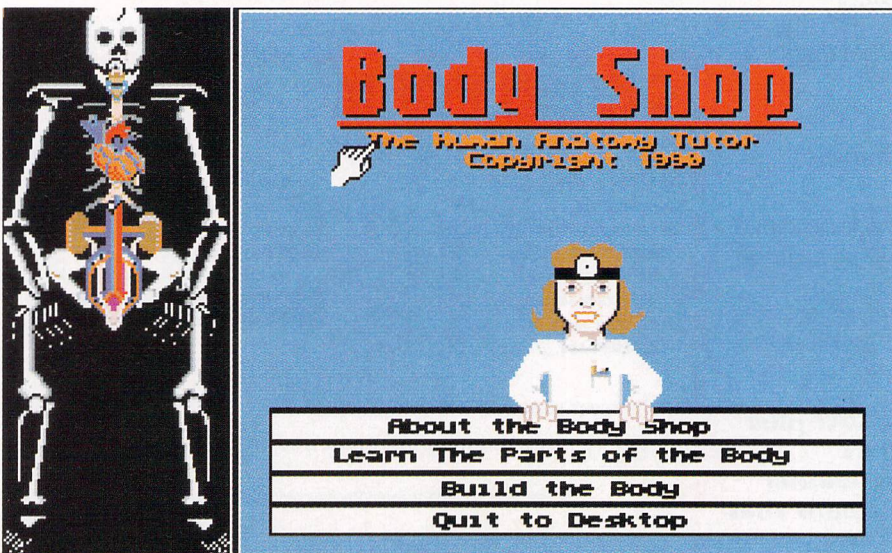
WHEN IT'S YOUR TURN, CLICK A GATE.
THEN YOU'LL SEE THE ANIMAL BEHIND IT.



Barnyard. The loading screen gives an idea of how the animals are spread out



Failure to match the animals in barnyard means that no points are gained



Either build up a body or learn all the different body parts in Bodyshop

● Almost every child at secondary school has to study a second language, usually French. That's where Chunnel can help, a language tutoring program which runs in medium resolution on a colour monitor.

Chunnel gives a choice of three levels of play – the student can choose to translate

English into French, or French into English. It works in a fairly simple fashion – a phrase in one language appears, and alongside it is a choice of five possible equivalents in the other language.

Using the mouse, the student clicks on one of the five words. If the answer is correct,

points will be added to a score which is shown at the bottom left-hand corner of the screen. In each test, 50 questions are asked and there is an option for a two-player test in which the two students take turns to answer the questions.

Unlike many similar programs, there isn't too much repetition on any of the three levels of play. To score your copy, contact the South West Software Library and put in an order for disk number 1241.

● Barnyard is a memory game for two players. The screen is split into little squares called gates behind which there are different types of animals. The aim of the game is to match similar kinds of animals.

When a gate is clicked upon, the name of the animal to be found there is displayed. Click on another gate and if the animals match, points will be awarded and the gates will be blacked out. If the two don't match, they will close – and hopefully the child remembers what was behind the gate for next time.

The music throughout the program is similar to that favourite old nursery rhyme, Old MacDonald. Yet again, Goodman Enterprises is the library to contact. Ask for disk GD800.

● Do you know (or want to know) where all the bits fit inside your body? Until a copy of Bodyshop arrived on the 'USER desk, none of us did either. This program is useful for anybody who wants to know more about the body, but is probably most useful for secondary school children.

It runs on a colour monitor and the menu screen shows a body being built up alongside a list of options. The choice of options includes learning the parts of the body or building a body. The various parts can be learnt under their common or medical names and are put on-screen at the student's own speed by clicking on the mouse to bring up a new piece. Bones, organs or both can be studied during lessons.

During the test stage, the body parts can again be referred to under their common or medical labels. The outline of a body is marked on the right-hand side of the display and parts of the body are printed on-screen and must be identified by the student. If correctly identified, the piece will move into the outline. Yep – Goodman Enterprises. ●

Where to get it...

Goodman Enterprises, 16 Conrad Close, Meir Hay Estate, Longton, Stoke-on-Trent ST3 1SW.

MT Software, Greensward House, The Broadway, Totland, Isle of Wight PO39 0BX.

Page 6, PO Box 54, Stafford ST16 1DR.

PDQ games, PO Box 38, Eastleigh, Hampshire SO5 2WR.

Public Dominator, PO Box 801, Bishop's Stortford, Hertfordshire CM23 3TZ.

SoftVille, Unit 5 Stratfield Park, Elettra Avenue, Waterlooville, Hampshire PO7 7XN.

The South West Software Library, PO Box 562, Wimbourne, Dorset BH21 2YD.

Trust PD, 18 The Park, Southowram, Halifax HX3 9QY.

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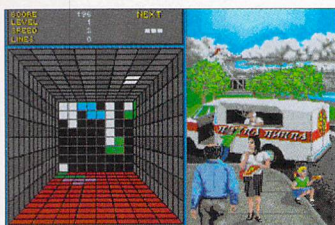
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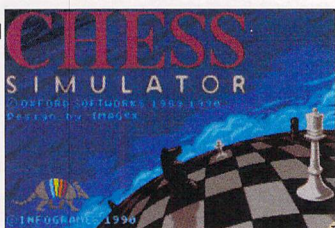
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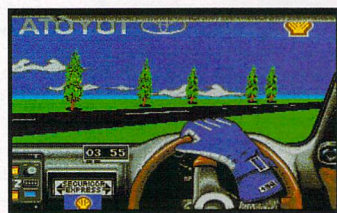
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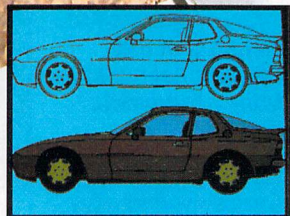
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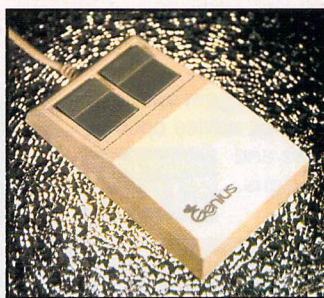


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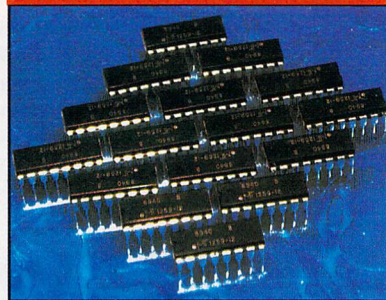
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Product: Calligrapher Professional
Supplier: Working Title (formerly Eclectron)
PO Box 4, Eynsham, Oxford OX8 1DU
Telephone: 0865 883592
Price: £139
Configuration: All STs, 1 Mb required

CALLIGRAPHER FIGHTS BACK

Calligrapher is not entirely new to the ST scene. It's been kicking around for quite some time, although it was last seen, in a previous version, almost three years ago. The program suffered various setbacks which resulted in its temporary withdrawal from the market.

Now however, all that is history, and in its new incarnation, Calligrapher Professional, it looks set to take on the best of 'em. The package consists of three disks – one for the program and the other two for fonts and printer drivers.

The installation program will copy the program and font files to a set of work disks, or a hard disk if you have one. This installation program requires a lot of disk swapping, and doesn't make any attempt to use the GEM interface.

When installation is finally completed, the computer must then be rebooted so that the GDOS and LINE_ARC programs in the auto folder will be installed.

Calligrapher is supplied copy-protected, and the user has to insert the original master disk when the program is first run. But when the registration form has been returned, an unprotected version will be sent, together with three more fonts and the overlay file that enables Calligrapher to produce tables. The program is then up and running at full speed.

A cut-down version of the program known as Calligrapher Junior, is also available. It's very similar to the parent program but has fewer features and as you would expect, carries a lower retail price.

MODELLED AND MOULDED

Calligrapher is closely modelled on programs such as Microsoft Word and MacWrite on the Apple Macintosh, even going so far as to copy some of the standard, and very useful Mac keyboard shortcuts.

Text is typed into a normal GEM window, with a ruler bar at the top. Document characteristics such as justification, line spacing and tabs are represented by icons. Double clicking on the ruler changes these.

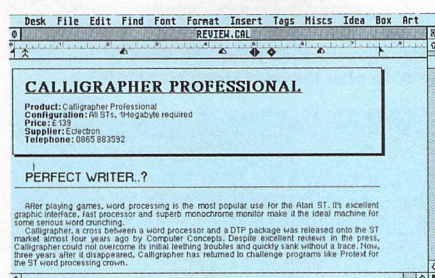
A block of text for a cut and paste operation is selected with the mouse. A selected block of text can be cut, copied and pasted in the normal way. Calligrapher uses a clipboard to store text which has been cut from a document, and text can be cut and pasted between any documents. Macintosh key shortcuts of Alt X, Alt V and Alt C are used.

Also in Mac fashion, when a block of text is selected and new text is typed in, the selected text is replaced by the newly typed words. Any operation which is performed by Calligrapher is fully buffered, so if text is deleted by mistake, a single press of the Undo key will bring it back again.

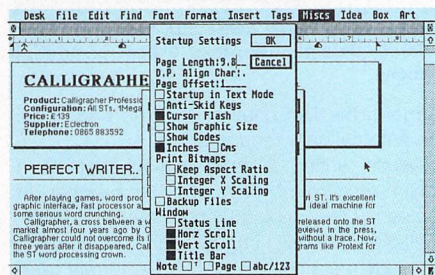
One of the most common mistakes when typing is transposing adjacent letters, typing 'teh' instead of 'the'. Calligrapher will correct this type of mistake instantly when Control X is pressed – very handy.

Calligrapher can change the case of a selected block with a single menu choice, turning all the text into upper or lower case,

After three years, Calligrapher stages a comeback. Simon Lawson assesses its chances in the word processing fight



Calligrapher Professional overcomes some of its previous problems to reappear on the ST scene. It's sure to make an impact



Every aspect of Calligrapher can be customised using this Options dialog, from page length to backup files

or even intelligently mixing the case of specific words. Individual letters can be changed to upper or lower case using the commands Control U and Control L.

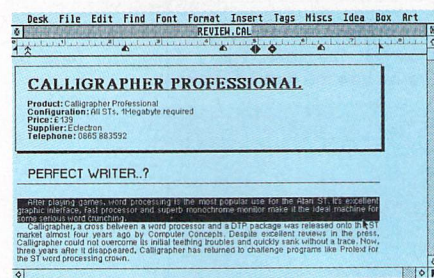
SEARCH PARTY

Calligrapher's Search and Replace facilities are a cut above the average. Any piece of text can be searched for and replaced, and the search can be made case sensitive.

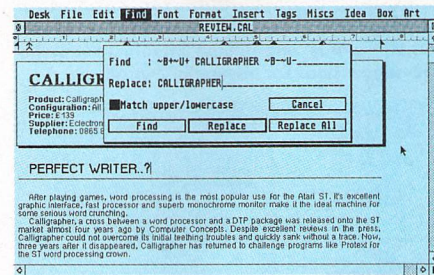
What makes Calligrapher special is its ability to search through the text for embedded format and style codes so that for instance, all the text in bold can be found. Formatting codes such as justifications, table, line spacing and markers can also be included in the search mask.

A decent spelling checker is obligatory in any program which claims to be a serious word processor, and Calligrapher possesses a fine example. The program recognises 160,000 words, and when it finds a word it doesn't recognise, presents a list of words with similar spellings.

The dictionary also recognises common mistakes such as transposition of letters and mis-keyed words. Any new words which may



Mark a block of text by dragging the mouse around it. Calligrapher doesn't use the normal GEM rubber band method



It's possible to search and replace almost anything in your document. One serious omission is the option to replace with a query

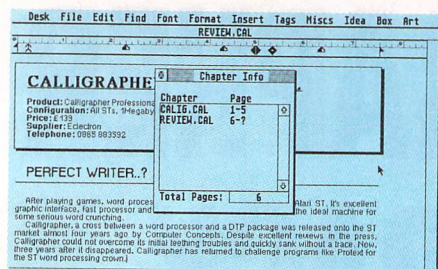
be used again can be added to the personal dictionary which is saved to disk, and can be called up at any time.

The ability to import graphics into a document has become fairly standard on high-grade word processors, and Calligrapher is no exception. IMG and GEM files are supported directly, and an extra program enables Degas and Neochrome files to be converted to IMG files. The standard DFX graphics files produced by most CAD programs can also be imported, but they too must be converted to IMG files first.

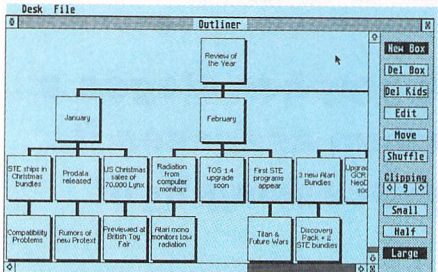
MAKE A MOVE

Once a graphic has been imported, Calligrapher allows it to be resized and positioned anywhere on the page. The Art drop-down menu provides tools for the manipulation of imported images such as lines, boxes, circles, fills and arrows. Although comprehensive, these tools are no substitute for a fully-fledged art package.

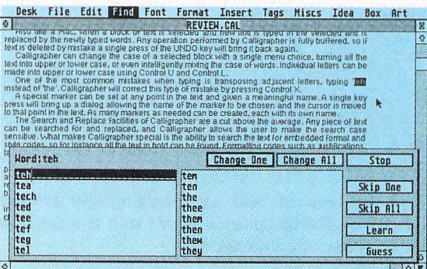
Calligrapher Professional enables documents to be linked together in the form of a book. Each document is referred to as a chapter and saved to disk as a separate file,



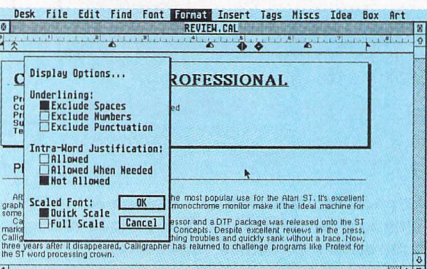
Chapters are automatically numbered. When a page is inserted or removed, Calligrapher changes all the page numbers automatically



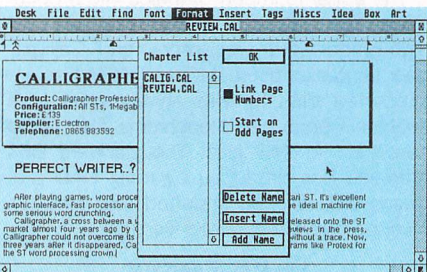
The Calligrapher Outliner can be expanded to show all the text. The outline can then be pasted into the main document



Calligrapher's Spelling Checker has over 160,000 words and makes intelligent alternative suggestions for misspelled words



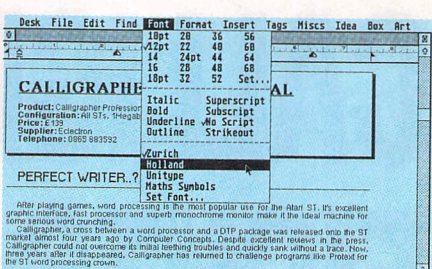
Control over the screen display is comprehensive. Underlining, justification and font scaling can all be adjusted



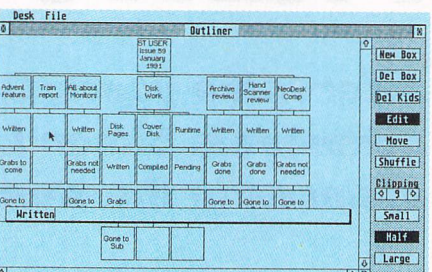
Calligrapher automatically keeps a track of all the chapters. Any new chapters can be added or inserted very easily

although for easy reference the Calligrapher Chapter Manager does keep a record of all the chapters in a document.

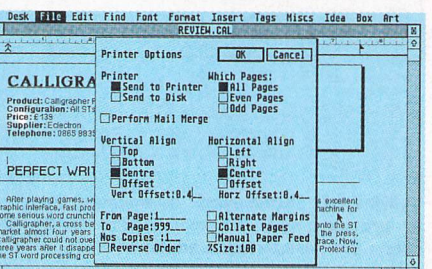
A collection of linked chapters is referred to as a book. This is very useful as you can select any page in the book, and Calligrapher will then automatically load the chapter which has been requested. Insert a



Calligrapher offers a wide range of fonts, including symbols. More fonts can be bought separately to expand the program



Calligrapher outliner is fast, flexible and extremely useful. Here the facility has been used to plan the next issue of 'USER



Vector Fonts really come into their own when printed. Calligrapher offers a host of printing options

page in the first chapter and the pages will be automatically renumbered.

When writing a report which contains a large amount of data, it's often better to present the information as a table. Calligrapher will import data from most spreadsheets using the .DIF file format, and load it into a table. Alternatively, a graph could be created and imported as a .IMG file to make the document look more attractive.

ABSOLUTELY FONT-TASTIC!

One area in which Calligrapher excels is in its excellent control of fonts. Any font in any size from 6 to 128 point can be included in a document, and as many fonts as required can be used.

Calligrapher comes supplied with two font families, these are Zurich and Holland. In fact these are standard Times and Helvetica clones offering serif and sans serif fonts.

Registering the program results in the supply of Untype (Courier), which is a type-writer-style font, Maths Symbols for creating mathematical formulae, and Ornaments, a Zapf Dingbats clone, providing circles, squares, telephones, pointing hands and the like which help to make documents such as posters and leaflets more eye-catching.

All the usual text effects such as bold, underline, italics, super and subscript are supported by Calligrapher, as well as its superb manipulation of fonts. Calligrapher is a true WYSIWYG application so these effects appear on-screen as they'll print on paper.

Calligrapher uses its own proprietary vector fonts, similar to those used by Cala-

mus, to create smooth, clean letters of any size. Vector fonts are not stored as a picture of a letter, but as a mathematical description of the letter in terms of its curve and the angle sizes.

When a vector font is made larger or smaller, each part of the description is simply multiplied by the appropriate amount, so there is no loss of clarity or definition in the finished letter. These vector fonts ensure that Calligrapher's output looks good, no matter what printer is used – the printer is always driven at maximum resolution.

GRAPHIC OUTLINER

One of Calligrapher's most powerful features is the graphic outliner tool. Several word processors have some sort of outliner tool, but Calligrapher manages to surpass them all.

The idea of an outliner is to help you to arrange your ideas into some semblance of order before you start writing. Whether you're writing a novel, a school project or a letter, getting the main main points down in order before you start will help you to write a better document in less time.

Calligrapher represents ideas and outlines in a free-form flow chart. A hierarchy of boxes is created, each box having a parent and as many children as needed. Short pieces of text can be entered into these boxes then moved around the screen so you can sort your ideas into the best order. The outline can later be pasted into the main document in the correct position.

ALL WRAPPED UP

The addition of such features as the formula and table creation abilities, coupled with typographical control and high print quality could make Calligrapher serious competition for programs such as Signum! 2. And the cut-down version, Calligrapher Junior, is sure to find its mark as well.

Calligrapher Professional however, leaves itself open to criticism in one very important area. When scrolling through a document, deleting lines or a block of text, the screen refresh rate is far too slow – often taking several seconds to reformat the screen. The new version 2.1 however, which is now shipping, speeds up the handling of graphics and also the speed of scrolling.

The disk-based spelling checker, although good, still takes a long time to check a complete document. This fault has not been rectified in version 2.1 as yet.

Calligrapher really is an excellent word processor that deserves to – and probably will – become the ST market leader. On word processing features and ease of use alone Calligrapher Professional stands head and shoulders above the competition. ●

THE BOTTOM LINE

FEATURES: Everything you could ever want from a word processing package.

EASE OF USE: Some menus arranged illogically. Scrolling too slow.

Features <div style="background-color: black; color: white; padding: 2px; margin: 2px;">Excellent</div> <div style="background-color: black; color: white; padding: 2px; margin: 2px;">Good</div> <div style="background-color: black; color: white; padding: 2px; margin: 2px;">Average</div> <div style="background-color: black; color: white; padding: 2px; margin: 2px;">Bad</div> <div style="background-color: black; color: white; padding: 2px; margin: 2px;">Appalling</div>	Ease of use <div style="background-color: black; color: white; padding: 2px; margin: 2px;">Excellent</div> <div style="background-color: black; color: white; padding: 2px; margin: 2px;">Good</div> <div style="background-color: black; color: white; padding: 2px; margin: 2px;">Average</div> <div style="background-color: black; color: white; padding: 2px; margin: 2px;">Bad</div> <div style="background-color: black; color: white; padding: 2px; margin: 2px;">Appalling</div>
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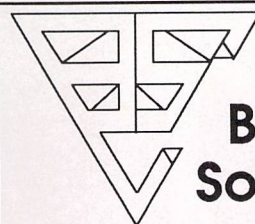
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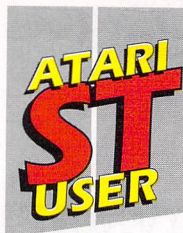
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Product: Solderless RAM Upgrade
Supplier: Evesham Micros
Telephone: 0386 765500
Price: £59.95
Configuration: All STs, not STEs

No matter how you use your ST, there will come a time when a 520 no longer has enough memory. The original STs simply weren't designed to be easily upgradable, and adding memory has always been difficult.

The new STE machines however, use Single In-line Memory Modules (SIMMs) which means extra memory can be plugged easily into the main board.

Evesham Micro's Solderless RAM Upgrade is a small board, measuring about 5cm by 10cm, with four SIMM sockets on it. These sockets are identical to those on an STE and can hold up to 4 meg of memory. Ribbon cables go to adaptors which fit over two chips on the motherboard – the MMU and Shifter.

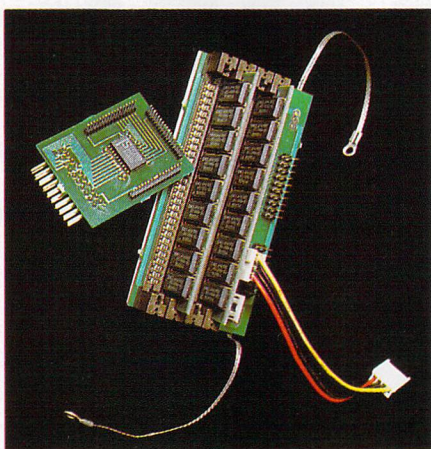
Fitting the MMU adaptor takes courage, because the pin grid must be fitted between the sockets and the large square chip. The shifter chip must be carefully pried from its socket and the Shifter Adaptor fitted into the empty space. The Shifter chip is then plugged piggyback onto the adaptor.

The SIMM board takes power from the main board, via the floppy disk drive. The power lead to the drive is plugged into the SIMM board and another lead from the board goes back to the disk drive.

Because of the way the ST manages its memory, part of the on-board memory must be disabled before the SIMMs will work. ST memory is arranged in two banks, which can be either 256K, 512K, 1Mb or 2Mb. Two

THANKS FOR THE MEMORY

Simon Lawson crams more RAM into his ST – without the aid of a soldering iron



banks of 256K make up a 520, and a 1040 has two banks of 512K.

To upgrade the memory, one bank must be disabled and replaced with the new bank of SIMMs. This involves snipping one leg off a single resistor and reconnecting it to

another part of the main board. On most versions of the ST, this upgrade involves no soldering, hence the name of the board. Some early STs however, will need two tracks to be cut on the motherboard and replaced with a wire link.

The manual explains the fitting in detail, even going so far as to list the serial numbers of the chips that must be located.

THE BOTTOM LINE

FEATURES: 512K, 2 or 4 meg on board. Easy to upgrade SIMMs.

EASE OF USE: Clear manual. Installing MMU adaptor requires a pretty firm push.

Features
Excellent
Good
Average
Bad
Appalling

Ease of use
Excellent
Good
Average
Bad
Appalling

Product: Golden Image Disk Drive
Supplier: Golden Image (UK) Ltd
Telephone: 081 518 7373
Price: £82.95
Configuration: All STs

Second disk drives are one of the most popular peripherals for the ST. A memory upgrade can be complex, especially for a 520, but with a disk drive you can just plug in and go. With prices dropping all the time, a second disk is one of the most affordable upgrades for any ST.

Golden Image, already well known for its range of high quality mice and hand scanners, is now producing a low cost disk drive. Aesthetically, the drive scores well – a moulded cream plastic case is distinguished by the addition of the Golden Image wave logo set into the top, and the unit is wider than normal to allow for the two green LED track counters on the front panel.

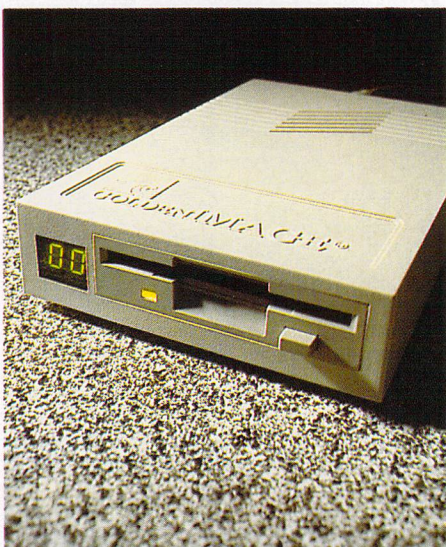
This device uses one of the reliable TEAC mechanisms, making it fast and near-silent in operation. And a track indicator shows which part of the disk is being accessed at any time. Although at first glance this may seem a bit of a gimmick, it can prove useful.

The ST doesn't deliver any power through its external disk drive port, so any additional drive must have its own power supply. The Golden Image drive is powered by a small black transformer which has long leads to allow the drive to be easily positioned.

The cable to connect the drive to the ST is also generous. In fact it is long enough to

DOUBLE DRIVE TIME

Simon Lawson adds even more action to the ST with a second disk drive for his machine



allow the disk drive to be positioned on which ever side of the machine you want. All in all, the unit appears to be well made. The track

counter may prove to be unexpectedly useful. As well as being fascinating to watch, it gives a rough indication of how much space is left on any disk.

If a disk is corrupt or gives unexplained read and write errors the track counter will show which track is damaged. Used in conjunction with a utility such as Knife ST from HiSoft, the counter is an invaluable aid to recovering corrupt disks.

THE BOTTOM LINE

FEATURES: A quiet, reliable drive with track counter.

EASE OF USE: Plug in and go. The track counter is an unusual touch.

Features
Excellent
Good
Average
Bad
Appalling

Ease of use
Excellent
Good
Average
Bad
Appalling

FROM GERMANY WITH LOVE

This month, Fielding Mellish creates some personal headed notepaper with that DTP favourite, Calamus

The ST, with its large memory, big capacity disk drives and excellent monochrome monitor is ideally suited to the task of desktop publishing. The computer which plays so many games, writes so many letters to bank managers, and keeps so many club databases, is also one of the best machines available for manipulating text and pictures to produce a coherent, publishable whole.

With the recognition of the ST's particular talents, many software houses released their own desktop publishing packages into an eager marketplace and most were worthy of the asking price.

Unfortunately, these same programs were usually fit only for the odd parish magazine, club fete program and so on. If you wanted professional-quality publishing, you had to consign the ST to gather dust in the dark recesses of your toy-box and go out and spend megabucks on Apple's financially-remote Macintosh computer.

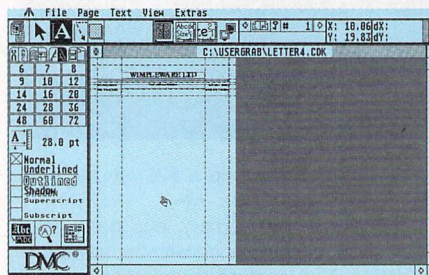
And after doing that, you had to spend another thou. or so on Quark XPress or Aldus PageMaker in order to get anything worthwhile from the machine. Until that is, the release in the UK of DMC's corking desktop publisher, Calamus.

HISTORY LESSONS

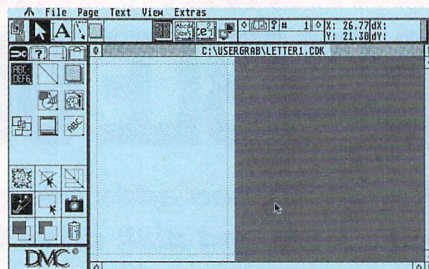
Created in the Federal Republic of Germany and originally available in the UK as a grey import, Design Marketing Communication tied up a distribution deal with popular ST product suppliers Signa Publishing – well known for marketing another useful German product, Aladin the Mac emulator – and the rest, as they say, is history.

Today, anyone who wants to create fully-featured literature for popular consumption has merely to turn to Calamus. At least, that's the theory. In practice, although stuffed to the gills with useful features, Calamus and its icon control system is not the easiest of software packages to get to grips with.

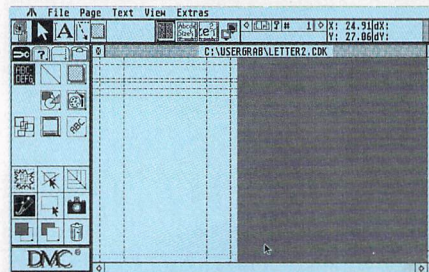
Old hands can often get stuck and as for beginners, the less said the better. Or rather, the more said the better. MasterClass this month is going to bring into the light one or



1 The finished page – good enough to grace any company document



2 The first step in the creation process is to set margins for your pages



3 Insert guides to ensure that text boxes and other elements are placed accurately

two of the program's arcane fragments so that all those who use Calamus regularly, but haven't had the nerve to plunge elbow-deep into the accompanying manual, can finally make full use of this DTP leader.

But rather than simply regurgitate the manual in a slightly more accessible way, MasterClass will explain some of the Calamus functions by using a letter head design which can be used by any good – and for 'good' read

'professional' desktop publishing package. But now no more talk, let's get on with it!

Those little name and address stickers seem to be very popular at the moment, but why not go the whole hog and design yourself some headed notepaper?

Not only does headed notepaper look infinitely better than gold name and address stickers, peeling off one corner of a sheet torn from a school jotter. It also lends quite considerable 'clout' to anything you want to say, especially if what you want to say is "please" to your friendly bank manager...

GETTING STARTED

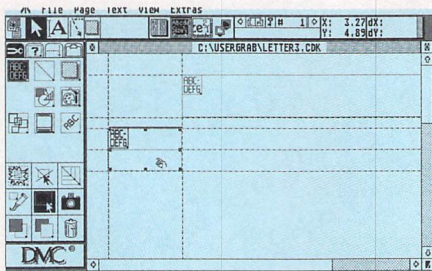
It really isn't difficult to create some very smart headings with Calamus – take a look at Figure 1. What you can create is a very professional-looking document indeed. You can have a smart heading with your own company name and the nature of your business emblazoned, in an understated way, across the top centre, your address at the left of the heading and your telephone and fax number at the right. Here's how.

Fire up Calamus by double-clicking the program's icon and load a nice serif font such as Times into the program – it's assumed you've installed Calamus onto your hard drive correctly, or you're able to run the program from floppies, and are familiar with the basics of the program such as how to load fonts, work with text frames and so on.

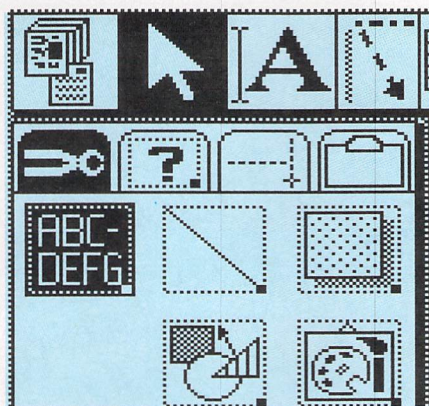
Drop down the File menu and select Create New Document. A blank page appears, replacing the DMC logo on-screen. Drop down the Page menu and select Page Layout. A huge dialog appears containing many buttons and options for you to set up page sizes.

In the middle of this dialog, at the left, you'll see four oblong boxes named Left, Right, Top, Bottom. And directly below them is a series of buttons bearing the legends Inches, Centimetres and so on.

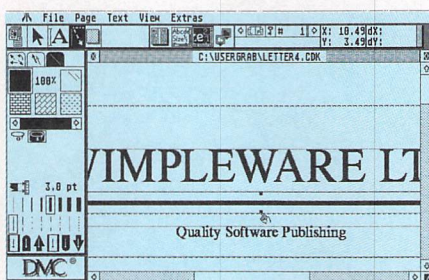
Make sure that the Centimetre measure is selected, then click in the Left box so that a cursor appears there. Press the escape key to clear the contents of the box then type a 1. Don't press Return yet or you'll be whisked



4 Text boxes can be snapped to guides to save messing around with the mouse



5 Multi-level icons are supposed to make operations easier, but in fact they are quite difficult to remember



6 Calamus provides a range of lines and line ends to add emphasis to the heading

back to the main screen. You've just set a left margin width of 10mm.

Repeat the clicking and typing process for the remaining three margin boxes, so that you end up with four margins all set at 10mm. Now click OK. You'll return to the main screen, and a page will appear bearing a series of dotted lines representing the margins you've just set. We've now determined a working page area (see Figure 2).

Now it's time to create some guidelines so that we place the heading text accurately. Look at the row of icons immediately under the menu bar. The second icon from the left, the arrow, provides access to Calamus' various frame functions.

YOU'RE FRAMED

Frames are used to create areas on-screen where text and pictures can be placed. By using frames, a page is built up piece by piece, just like a jigsaw puzzle.

Ensure that the frames' toolbox is on-screen by clicking the arrow icon so that it's displayed in inverse video. Below this top row – known as the 'Top Line' – is another row known as the Submenu bar.

To create guidelines, click the third icon from the left in the submenu bar – immediately to the right of the 'question mark' icon. When the guidelines' toolbox appears, click the horizontal guide icon so that it's displayed in inverse video – it's immediately

below the Submenu bar, between the vertical guideline icon and the trash can.

Move to your page and the arrow pointer will change to a cross-hair. Position the cross somewhere close to the top margin line, press the Alternate key and click the left mouse button at the same time. This is a shorthand method of enlarging the screen – in this case by 200 per cent.

TOOLS AT THE READY...

Now position the cross-hair directly over the top margin marker and click once. A guideline – thicker dotted line – appears over the margin. To ensure accuracy, use the x, y coordinate read-out. When the x coordinate reads 1, you're directly over the margin – because you set the margins at 10mm in from the edge of the page.

Move the cross-hair down 1cm from the guideline you've just created – using the coordinate read-out for accuracy – and click again. Move down another 1cm and click yet again. Now move down once more, but this time only a half centimetre and click another guideline into place.

Repeat the process once more, moving down the screen 2cm. If all is well, the final horizontal guideline will be on a y coordinate of 5.5cms. Return to a whole page view by holding down the Alternate key and clicking the left mouse button.

Return to the guidelines' toolbox and select the vertical guide icon (to the left of the horizontal icon). Move to the document window and locate the left margin line.

Enlarge the screen using Alt/left mouse button, position the cross-hair 3.5cms to the right of the left margin and click to position a guideline. Repeat the process 3.5cms in from the right margin.

Hold down the Alternate key and press the left mouse button to view the whole page. It should look like that of Figure 3. Now click both of the icons below the vertical and horizontal guide icons. You're doing well...

GUIDING LIGHT

This action tells Calamus to switch on the Snap To Guides function. When you create a text frame within guidelines, no matter where it is positioned, it will take on the size of the surrounding guides.

Select the General Frames' Functions toolbox by clicking on the pliers icon at the left of the Submenu bar, then click the text frame icon immediately below the pliers. Move to the document window and click twice in the large oblong 'box' at the top, centre of the screen formed by the freshly created guidelines.

The first click tells Calamus you want to create a frame in which to place text, the second click shows where you want to create this text frame. But because you've set up guidelines, the second click can be done anywhere within the guides.

The new text frame will snap to fit within the area bounded by the guides – in this case, the large, centred rectangle at the top of the screen.

Repeat the two frame 'clicks' in the two guides boxes below left and below right of the text frame you've just created (see Figure 4). Move to the Top Line row of icons and click the Line toolbox icon which is four in from the left.

Move to the bottom of the toolbox and select the middle of the three horizontal,

right-pointing arrowed lines. Return to the document window and click twice in the narrow oblong box immediately below the large centred text frame. You've just created a line below what will become the main company heading on your note paper.

Now create one more text frame below the line frame create above. Click the third submenu bar line icon from the left (it's an oblique line inside a box).

The bottom of the line toolbox will now be displaying a series of lines of different widths and a figure which is currently 0.00. Click the figure, press escape then type 5. The line will become much thicker.

Move back to the document window, enlarge the screen (make sure you're at the left-hand side), click the right mouse button to change the arrow pointer to a hand. This hand enables you to select frames without actually changing or creating anything. But you already knew that, right?

Click in the line frame to select it. Grab handles appear (little black spots at the top middle left and right of the frame), click one and the pointer changes again to an outline cross-hair. If you now move this new pointer, the frame is resized.

Drag the frame out past its left and right guide to the left and right margin markers/guides. This ensures the line occupies the width of the screen. Now take a well-earned rest, you deserve it!

STORY AND PICS

Well, story anyway – it's time to put in the text. Click on the large 'A' icon in the Top Line. Click in the large, centred text frame at the head of the document.

The pointer will change to an I-beam (it looks like two brackets back to back...). Type in the name of your company, I typed WIMPLEWARE LTD as an example. It will appear in 12 point Times text.

Move to the text toolbox and click the third icon in from the right in the Submenu bar. A list of numbers representing point sizes appears. Click on 28 point, then click on the text restyle icon at the bottom left of the toolbox.

A dialog appears informing you that you haven't selected any text to restyle and would you like to restyle the entire selected text frame? Click OK and your company name will take on massive proportions.

Next return to the text toolbox and click the text ruler icon which is the fourth in from the left in the Submenu bar. Now look at the middle right of the text toolbox. Can you see those four 'pages' which are bearing right-justified, left-justified, centred and justified text?

Move to the company name and drag the pointer over the text to highlight it. Now click the centred text icon. The company name is centred within its text frame.

Select the text frame below the line frame immediately beneath your company name. Hack in text on the nature of your business. Repeat the sizing and centring functions outlined above, with a point size of 9.

All that remains is to type in your address in the left text frame (9 point text and left-justified) and your telephone and fax numbers in the right text frame, again 9 point text but this time, right justified.

And there you have it, quick and easy, yet professional-looking headed notepaper created entirely with Calamus. ●

Calligrapher

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Configuration: All STs

A STAR WITH STYLE

So many dot matrix printers, so little cash. James Nicholson takes a look at an impressive but affordable machine

Endless production lines in Far Eastern factories churn out thousands of printer clones every day. They look remarkably similar and output quality is almost identical – so much so, that one of the main factors in deciding which model to buy is price. Now, looking for all it's worth like something from Star's wind tunnel, comes one of the most modern-looking printers around. And this aerodynamic machine has been launched at an affordable price.

The name LC24-200, makes it sound like a Boeing airliner, but there the similarities end. As you might have guessed from this secret codename, it's a 24-pin model which is suitable for most day-to-day needs. And for a mere £60 more, the colour version can be yours to have and to hold.

As far as looks go, this one's a winner. Its cream casing blends in with the ST nicely, and it looks neat, modern and smart. If any complaint must be made about its appearance, then it would be that the printer seems slightly larger than is absolutely necessary.

The power switch at the foot of the front panel is easy to find. The control panel is, as usual, situated on the top of the printer. Five buttons switch between the various functions and they've been labelled Font, Pitch, Set/Eject Park, Paper Feed and On Line. All of these names speak for themselves, and each is easy to operate.

The mains lead is fixed to the unit, so you don't get the problem of the 'kettle-lead' falling out. At the other end, the plug is moulded on to the lead but if necessary the fuse can still be changed.

When it comes down to practicalities however, all is not well with the design. The Centronics printer port is at the front of the right-hand side of the machine. This means that in most cases, the printer lead runs at an awkward angle across the desk – why not keep to the back of the printer?

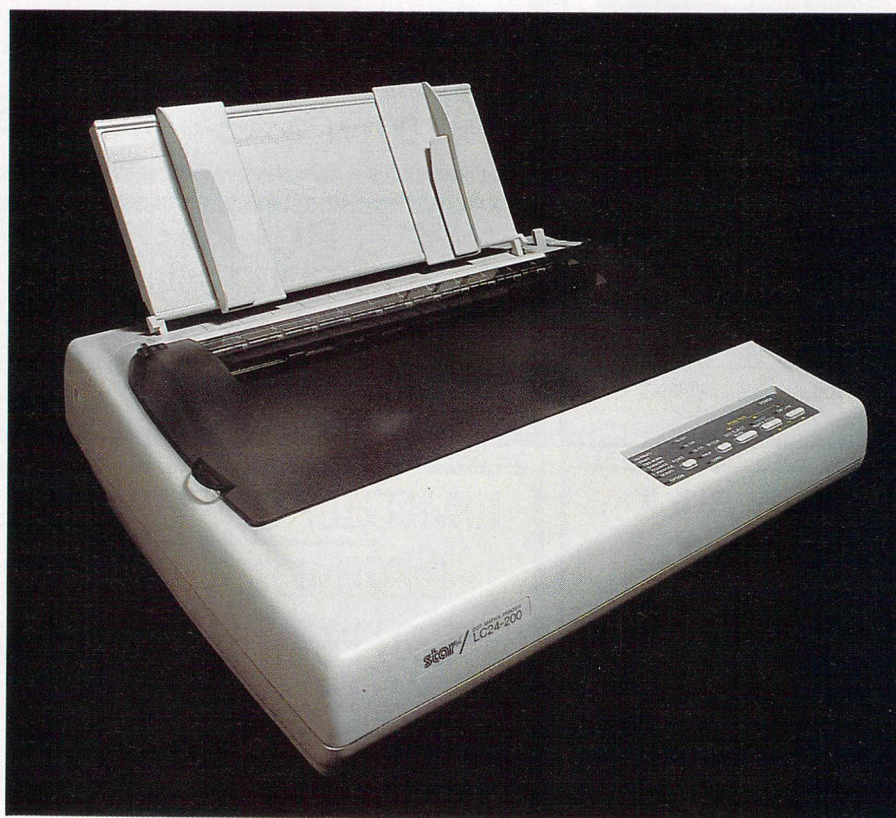
The only advantage in its present position seems to be ease of access, but once the lead has been attached there would be few times when it would have to be disturbed.

So what about the most important aspect – printing? Well, to begin with, it doesn't cause irritation due to excessive noise. It really is quiet enough to be used in an office or the home without disturbing everyone else.

There are two draft fonts, one of which is high speed. There's also a variety of letter quality faces including Times Roman, Sans Serif, Courier, Prestige and Script. In addition, all the fonts can be printed in italics and there are options for condensed, bold and double-sized print. Changing from any one of these options to another is simple.

Additional fonts can be added and the 7K printing buffer can be increased by plugging an optional cartridge inside the printer. Each cartridge costs £25 and they are available for the following fonts: TW Light, Russian, Gothic, OCR, OCRB and Bar Code 3. The cartridge interface has changed from that of earlier Star models, so unfortunately the older versions are incompatible, although Star, in its wisdom, has slashed their prices.

In high-speed draft pica (10 characters per inch), you'll achieve a print speed of 222



characters per second (cps), which drops to just over 55cps when one of the letter-quality fonts are used. In elite, or 12cpi, that speed rises to 66.7cps. Also expect to find 15 characters per inch (cpi) semi-condensed text, 17.1cpi condensed pica, condensed elite at 20cpi and proportionally-spaced text.

Paper is fed in through various routes. It's possible to keep fanfold paper loaded while printing on other paper, such as when single sheets are being used to print a letter. A paper guide which clips on to the back of the printer helps to load single sheets.

Replacing the ribbon cartridge is a very easy job and you don't emerge from the operation looking as if you've been cleaning chimneys. In the unlikely event of having problems, the manual offers clear instructions on how to solve most difficulties.

And if a simple black and white printout isn't good enough for your needs, another £60 from your bank account will buy the

colour version of the printer. Apart from adding a choice of colours – red, blue, violet, yellow, orange and green – the unit is the same as its sister model.

So, all in all, this is a printer worth buying. It's relatively cheap, performs very well and best of all, it looks the business.

THE BOTTOM LINE

Features: 24-pin, 7K buffer, five LQ fonts, two draft fonts.

Ease of use: Buttons accessible, clear manual, printer port in an awkward place.

Features
Excellent
Good
Average
Bad
Appalling

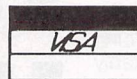
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Excellent
Good
Average
Bad
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INTERACTIVE RESCUE



BEEB DRIVE

Q I have an Atari 520STFM with an internal single-sided disk drive. A friend of mine has a 3.5 inch disk drive which he used to use with a BBC model B Micro, but which he no longer uses.

Could I use this drive with my ST as an external drive, or would I have to buy a new one designed to work an ST?

Tim Morley, Lostock, Bolton.

A You could indeed use this drive with your ST. The only difficulty lies in procuring a suitable lead with which to connect the device to the floppy port of the ST. Does the drive have its own power supply? You'll need one of those too, if it doesn't – and they're not cheap. You could, of course, replace the existing internal single-sided floppy with the 'Beeb' drive in order to upgrade your machine to double-sided, giving you access to a much wider range of software.

Upgrading the internal drive is a simple procedure – but be warned that your ST's warranty will be invalidated if you open the case. Put the ST on a table face down and undo the half-dozen screws using a Philips screwdriver. The ST will separate neatly into halves thus exposing the floppy drive.

Unplug the data and power supply cables from the back of the drive and lift it away from the ST. Plug in the Beeb replacement and reverse the case opening procedure. The job is done. Switch on the ST – the drive should spin and boot the computer. If nothing happens, check that you have correctly connected the data

and power supply cables and make sure you haven't trapped anything in the shielding or case.

CHEAPER HARD 'UN

Q I started ST computing probably the same as most people with a 520STFM and a single-sided floppy disk drive. At the time, I didn't have much software and what I had consisted mainly of public domain stuff.

Nowadays, I've upgraded to a 1040ST. It has a built-in double-sided disk drive and I've got an external floppy too. I've got a mono monitor and a rather nice colour TV for when I want to play games. "Right", you might think, "so what's the problem?" Well, after so many years computing, the one thing I haven't got is a hard disk drive. Everyone, everywhere wants a hard drive. It really is the ultimate peripheral and I'm no exception. I spend my days and nights lusting after the speed and power provided by even the smallest of hard drives. The problem, as always, is one of cash. I can't afford a drive – can you help?

I don't mean by sending me money, but is there any way I could get a hard drive cheaply? Please help me, I'm going spare!

Tim Robbins, Alton Smedley, Wilts.

A You have my sincere and deepest sympathy. The acquisition of a hard drive is probably the largest step forward in anyone's computing hobby and once you've used one, you'll never again return to the humble floppy...

All of which merely serves to make you even more desirous of a hard drive. So what's the solution? Recently, interest has been stirred by hard drive host adaptors. A host adaptor is the vital link between your

ST and a 'standard' – that is, from the PC world – hard drive. Signals from the ST's DMA port are converted by the host adaptor into those which can be used by the drive.

Suddenly, it seemed possible to create your own hard drive for a relatively small amount – hard drives for everyone, the number of available clams no longer important.

Unfortunately, in reality it isn't quite like that. A host adaptor will cost you around £75, but then you need to buy a power supply, fan, case, leads and of course, the drive mechanism itself.

All of which leaves you with a home-made hard drive that probably cost you about £250 – not exactly cheap, especially when you consider the Power Computing 'cheap' series, which can put a 20Mb device your way for £299. Makes sense to spend the other 50 clams for the genuine, pre-built article. Am I right?

So. You don't have £299 but would like a drive. Two options remain, both of them based upon second-hand equipment. You could search out (at an auction, see the weekly computer press for details) a small PC drive which you may or may not be able to connect to a host adaptor – vague, I know, but I don't know enough about what it is you're gonna buy. You should be able to pick one up very cheaply.

Alternatively you could scour the small ads in this and other mags – or place an ad yourself – for a 20Mb hard drive. You should expect to pay between £150 and £200 – hard drives don't depreciate very much.

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LEGAL BEAGLE

Q I've owned my ST for just over a year and although I got into BASIC programming almost immediately, I'm only now beginning to try to learn something about machine code programming.

I got some very good books that tell you exactly how to go about programming in machine code using an assembler and I'm gradually learning how to do it.

Now for my problem. I read that it's possible to speed up certain operating system functions by using bits of code hidden away in the ST's ROMs which are not widely known about.

The practice seems to be called 'undocumented calls', and as far as I can make out really helps to overcome some programming problems that would otherwise have to be encoded by the programmer.

Now this all sounds fine to me and is just what I'm looking for to cover the areas that I haven't learnt to program yet. The trouble is, one of my friends at a local computer club that I attend told me that using these undocumented calls is really bad and means that your software won't work on every ST – apparently, this is what happened to the STE and is why not all software would work on that particular computer.

I don't have an STE and the people I'm going to pass my software to don't have STEs either, so does that mean I can use undocumented calls without experiencing the problems my friend told me about?

I would be very interested to hear what you have to say about this subject before I go ahead and write loads of software that no-one else can use!

Asif Iqbal, London.

A Partly right and partly wrong. Most computer manufacturers – if they make their opinions on the subject known – don't recommend that you use obscure bits of code in the operating system. In fact many actively discourage would-be illegal routine users.

The reason? Because operating systems change from one model of machine to another, even when they're touted as being compatible with one another. Operating systems are upgraded and revised constantly too, and fragments of code – even jolly useful code – lurking in one version of an operating system may not be included or may be relocated in the next version.

If lots of programmers have made use of this undocumented code, when an operating system is updated, or a new, upgraded, and yet supposedly compatible model appears on the market, lots of owners will find that their machine won't be able to run existing software.

This leads to enormous amounts of adverse publicity for the computer manufacturer rather than the programmer, and prospective buyers plump for hardware from other manufacturers. That's what happened with the STE, although the situation was quickly revised.

Stick to using documented routines or undocumented standard routines – of GEM for instance – which won't change from machine to

machine. In that way, every line of code you generate will be usable by all STers. And you may be glad if you come up with some natty little program that lots of ST owners are prepared to pay good money for.

CIRCUIT BREAKER

Q I have followed your series of simple Do-It-Yourself projects in 'USER' magazine and I have a suggestion for your series. Why not publish a monitor switchbox which enables you to switch from colour monitor to mono high resolution monitor without having to unplug cables?

As I can see from diagrams, the process has to do with whether pin 4 (monochrome detect) of the monitor output port is low or high (0 or +5 volts).

It would be an easy task to use, for example, a simple logic flip-flop circuit to accomplish this, but as I am unsure if that's the whole solution to the problem. I don't want to risk anything and make stupid mistakes, so why don't you publish the circuit?

I am sure a lot of your readers should be interested in building a circuit like that and I am sure it could be done a lot cheaper than buying a commercially-available circuit from one of your advertisers.

Jan Eriksson, Vasteras, Sweden.

A We would very much like to run some more hardware DIY projects to continue the series, but the truth is we can't find anyone to write them!

If you, or someone you know, likes to build circuits that would be of interest to a wider audience, why not write to us?

You know the kind of thing. You needn't produce an add-on board for £2.50 which emulates a Cray X1 or the like, we just want simple, fun projects. And you don't even have to be a literary genius – we can tidy up anything you write.

You'll get your name in print and earn yourself some useful extra cash. Interested? Write to us now...

ST UNIX?

Q Is there a version of Unix available for the ST? I have just started a computer studies course at my local technical college which includes a whole section studying C and Unix. "Oh ho!", I thought, "why don't I do some extra practice at home with my trusty Atari ST, which I usually only use for games playing?"

With this in mind I went down to the local computer shop and asked if they knew anything about C and Unix, whether either were available for the ST and if so, how much they cost and how soon they could get them for me – if they didn't already have them on the premises, that is.

To my dismay however, the assistant and then the manager when I called for him, didn't know anything about Unix. They said it was possible to get several versions of C, although both of them seemed very sketchy when I asked for more details, such as whether I would need any extra equipment, like a second floppy disk drive and so on to run the language. I left the shop feeling somewhat confused and dismayed, as you can imagine.

Since then however, I've managed to dis-

cover by asking everyone I know – and even people I don't – that there are commercial Cs and public domain Cs and that one of the commercial ones, Mark Williams C, has a Unix-like command structure which could possibly help to make sense of the stuff I'm learning on my course.

This seems fine if it really will help me to learn and is just what I'm looking for, but it is rather expensive and as I don't know if it will help me, I'm a bit reluctant to fork out the money only to find it is no good.

Can you tell me if Mark Williams C is what I need to learn C and Unix, or if there is something else available that will help? Could you also tell me where to get these products if they are available (and not just say "from your local computer shop" because in my case, my local computer shop is crap!). If you could help I would be very, very grateful. And I am a subscriber.

Anthony Lee, Morton, Simster

A Yeah, yeah, Silicon Service Supremo helps everyone, not just subscribers. Just send your problems written on the back of a five pound note and...but where was I? Ah, yes, Unix right?

Don't buy Mark Williams C if you want to learn about Unix and C. Although MWC is an excellent C compiler and has a rather natty Unix-like front-end which simulates the Unix CLI, in fact, you won't learn very much about Unix by using it.

There is a version of Unix available for the ST. Actually it isn't real Unix as sold by AT&T, but a custom-written lookalike, programmed by that popular computer science author Andrew Tanenbaum – he of Structured Computer Organisation fame; a text known and loved by computer science degree students, and others probably, everywhere.

This lookalike rejoices under the somewhat improbable name of MINIX and is available for the IBM-PC, MAC and, I believe, the Amiga too. It is an exact clone of Unix Version 7 but without a single line of the code which appears in the heavily-copyrighted OS.

MINIX comes with full source code so that you can make changes, tinker hither and thither, then recompile the operating system to make a new non-working, but nevertheless custom version of your own. A Kernighan and Ritchie-compatible C compiler is also included with MINIX. You don't need to possess a great deal of kit either. MINIX will work, after a fashion, on a half meg, single drive ST.

Working with MINIX is to work with Unix. To all but the most discerning eye, the two are indistinguishable and using the former will teach you a lot about the latter.

MINIX costs £87.75 plus VAT and is available from the MINIX Centre, Norfolk on 095 389 345. The operating system has just one shortfall, there's no manual apart from a rudimentary affair designed to get MINIX up and running on your ST. Make sure you buy a good Unix textbook to use with MINIX. ●

datafile

**The page that points the finger
at the companies in the know**

PRICE CHECK

All prices were correct at the time of going to press and as usual, include VAT. A comprehensive buyer's guide can be found in the pages of our sister publication, ST World.

COMPUTERS

Atari 520STE Power Pack.....	£399.99
Atari 520STFM Discovery Pack.....	£299.99
Atari 1040STE Super Pack.....	£499.99
Atari 1040STE Professional Pack.....	£499.99
Atari Mega ST1.....	£589.99
Atari Mega ST2.....	£934.99
Atari Mega ST4.....	£1,279.99
Stacy 2Mb.....	£1,724.99
Stacy 4Mb.....	£2,069.99

MONITORS

Atari SC1224 monitor.....	£299.99
Atari SM124 monitor.....	£149.99
Philips CM8833.....	£310.49

FLOPPY DRIVES

Actionsoft 1Mb 5.25in.....	£134.95
Atari SF354 single sided.....	£119.99
Atari SF314 double sided.....	£149.99
Cumana 1Mb 3.5in.....	£79.99

HARD DRIVES

Atari Megafile 30Mb hard disk drive.....	£499.99
Atari Megafile 60Mb hard disk drive.....	£689.99
Supra 30Mb hard disk.....	£499.95

OTHER HARDWARE

Atari SLM804 laser printer & interface	£1,379
Atari Mouse.....	£24.99
Casio MT240 MIDI keyboard.....	£89.95
Epson LX850 printer.....	£320.85
EuroLink Modem.....	£259.95
Linnet Modem.....	£174.80
Linnet 1200 Modem.....	£274.85
Star LC10 mono printer.....	£263.35
Star LC10 colour printer.....	£297.85

BEST BUYS

Each month the editorial team selects the best five buys in one type of software package. This month, programming packages:

Devpac, HiSoft.....£59.95
68000 development tool
GFA Basic, GFA.....£45.95
BASIC language and interpreter
HiSoft BASIC, HiSoft.....£79.95
Probably the best BASIC package
Lattice C, Lattice.....£149.95
Includes C compiler
WERCS Plus GDOS, HiSoft.....£49.95
WERCS resource editor and GDOS

ADDRESS BOOK

Arnor
611 Lincoln Road, Peterborough
PE1 3HA.
Tel: 0733 68909
Fax: 0772 561071

Atari UK
Atari House, Railway Terrace,
Slough, Berkshire SL2 5B2.
Tel: 0753 33344
Fax: 0753 822914

CIX
Suite 2, The Sanctuary,
Oakhill Grove, Surbiton,
Surrey KT6 6DU.
Tel: 081-390 8446

Digital International
Black Horse House,
Exmouth, Devon
EX8 1JL.
Tel: 0395 2700273
Fax: 0395 268893

Gremlin Graphics Software
Alpha House,
10 Carver Street,
Sheffield S1 4FS.
Tel: 0742 753423

Frontier Software
PO Box 113,
Harrogate, N Yorks,
HG2 0BE.
Tel: 0423 567140

Interactive Publishing
Europa House, Adlington Park,
Adlington, Macclesfield,
Cheshire SK10 4NP.
Tel: 0625 878888
Fax: 0625 879966

Ladbroke Computing
33 Ormskirk Road,
Preston,
Lancashire PR1 2QP.
Tel: 0772 203166

MicroLink
4 Moons Park, Burnt Meadow Road,
Redditch, Worcestershire B98 9PA.
Tel: 0527 67585, 0527 69459
(sales and marketing)

Millennium
Chancery House,
107 St Pauls Road,
London N1 2NA.
Tel: 071 548 9897

Power Computing
Power House, 44A Stanley Street,
Bedford MK41 7RW.
Tel: 023 427 3000

Prestel
Dialcom UK, Dialcom House,
Brindley Way, Hemel
Hempstead, Hertfordshire
HP3 9RR.
Service Tel: 0442 237777
Sales Tel: 0800 200700

Silica Systems
1-4 The Mews
Hatherley Road,
Sidcup,
Kent DA14 4DX.
Tel: 081 309 1111

Third Coast Technologies
Unit 8 Bradley Hall Ind Est,
Standish, WN6 0XQ.
Tel: 0257 472444

US Gold
Units 2-3 Holford Way,
Holford, Birmingham
B6 7AX.
Tel: 021 625 3388

DIARY DATES

UK EVENTS

4 to 6 January 1991

16 Bit Computer Fair
Organiser: Westminster Exhibitions
(081 549 3444)
Venue: Hammersmith Novotel, London

14 to 16 April 1991

European Computer Trade Show
Organiser: Blenheim Database
(0625 879970)
Venue: Business Design Centre, London

10 to 12 May 1991

Computer Shopper Show
Organiser: Blenheim Database
(0625 879970)
Venue: Wembley Conference Centre

11 to 14 July 1991

4th 16-Bit Computer Fair
Organiser: Westminster Exhibitions
(081-549 3444)
Venue: Novotel Hotel, Hammersmith

● If your company is organising a show relevant to the Atari ST and is not listed, let us know so that it can be included in the diary.

REPAIRS

Ampower Computer Repairs
15a Alcester Road, Studley, Warwickshire
B80 7AG.
Tel: 0527 85 3374

Analogic Computers (UK)
152 Latchmere Road
Kingston Upon Thames, Surrey
KT2 5TU

Avon Micro Centre
Unit 4, Western Road Industrial Estate,
Stratford-upon-Avon,
Warwickshire CV37 0AH.
Tel: 0789 292269

Ladbroke Computing
33 Ormskirk Road, Preston, Lancs, PR1 2QP.
Tel: 0772 203166

Evesham Micros
Unit 9, St Richard's Road,
Evesham, Worcestershire WR11 6XJ.
Tel: 0386 446441

Silica Systems
Unit 10, Ruxley Corner Industrial Estate,
Sidcup Bypass, Sidcup, Kent DA14 5SS.
Tel: 081-300 3399

WTS. Electronics
Chaul End Lane, Luton,
Bedfordshire LU4 8EZ.
Tel: 0582 491949

THE 1990 ATARI ST PRODUCT GUIDE

PERIPHERALS & ACCESSORIES



FLOPPY DISK DRIVES



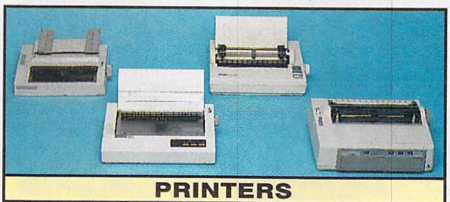
MONITORS



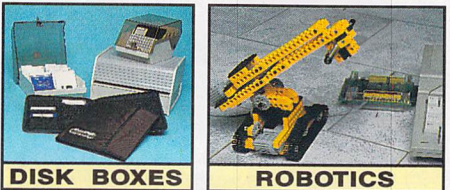
JOYSTICKS



SCANNERS



PRINTERS



DISK BOXES

ROBOTICS

A MUST FOR ALL ATARI ST OWNERS!

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If you own an Atari ST, then you will not want to miss the FREE Atari ST Product Guide from Silica Shop. This 48 page, full colour guide is packed with details of peripherals, accessories, books and software for the Atari ST range of computers. In fact, the 1990 Atari ST Product Guide is the most comprehensive product handbook available for Atari ST owners. Not only does the Product Guide provide an invaluable source of information to Atari ST computer users, it is available absolutely FREE OF CHARGE! Just complete and return the coupon below for your FREE COPY! In addition to ALL Atari hardware, the range of products featured in the catalogue includes:

PERIPHERALS:

Robotics	Clocks	Floppy Disk Drives
Hard Disk Drives	Emulators	Graphic Tablets
MIDI/Music	Modems	Modulators
Monitors	Mouse controllers	Plotters
Printers	Scanners	Scientific Equip
Sound Digitisers	Sound Samplers	Video Enhancers

ACCESSORIES:

Cables	Cleaning Kits	Disks
Disk Boxes	Dust Covers	Joysticks
Monitor Access	Mouse Access	Power Supplies
Printer Labels	Printer Paper	Printer Ribbons
Stands	Upgrades	

BOOKS:

ST Dedicated 68000 Processor General Computing

SOFTWARE - ENTERTAINMENT:

Arcade Games	Compilations	Advanced Sims
Sport Sims	Adventures	Board & Strategy

SOFTWARE - PRODUCTIVITY:

Art & Graphics	Accounts	CAD
Communications	Databases	Desktop Publishing
Education/Childs	Music	Programming
Spreadsheets	Utilities	Word Processors

SOFTWARE & BOOKS



ARCADE GAMES



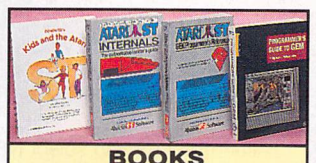
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EDUCATIONAL



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OF THE 1990 ATARI ST
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PLEASE SEND ME A FREE ST PRODUCT GUIDE

Mr/Mrs/Ms: Initials: Surname:

Address:

Postcode: Tel:

Which computer(s), do you own?

E&OE - Advertised prices and specifications may change - please return the coupon for the latest information.

Product: That's Pixel
Price: Around £50
Supplier: Compo UK
Telephone: 0480 891819
Configuration: All 1MB STs, mono only

BLACK AND WHITE ART

An art program that's out of the ordinary, and handy for DTP. Simon Lawson draws some conclusions...

That's Pixel is the new and rather unusual graphics package from Compo Software, creators of the quirky That's Write word processor.

It's mono only and resolution independent, there's not an icon in sight, and it's intended to enhance existing scanned images before putting them into a DTP document, rather than to create images from scratch. All in all, it's a very handy DTP tool.

That's Pixel supports the IMG file format, which means that a picture can be as large as memory allows. The more memory your machine has, the bigger the picture can be. The Degas PI3 file format is also supported for a normal, high resolution ST screen but this only allows the picture to be 640 by 400 pixels in size.

That's Pixel is resolution independent so the number of dots per inch (dpi) of a picture can be set to match that of your printer. As a result, the quality of images from a laser printer is better than from a dot matrix.

The program is supplied on a double-sided disk, although Compo will supply the program on a single-sided disk if necessary. Included with the program is a selection of fonts and several sample images.

DRAWING A BLANK

On loading the program, the first thing you'll notice is that unlike most other paint programs, That's Pixel doesn't use a bar of icons to access its main features. Every aspect of That's Pixel is controlled from the drop-down GEM menus. But this is not as cumbersome as it may seem.

That's Pixel opens to nothing more than a blank screen. Selecting OPEN... from the FILE menu prompts for a picture to be loaded. Either an IMG or PI3 file can be used - That's Pixel decides which is which.

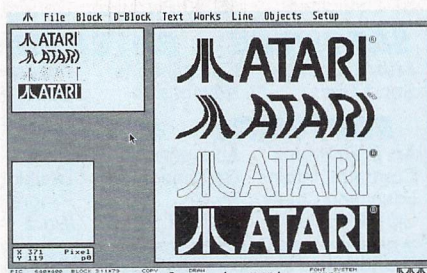
Opening a picture results in three windows being opened on-screen. The Drawing window shows a small portion of a larger image and can be scrolled to show any hidden part of the picture. Preview shows the whole picture but at reduced size, so not all the details are clearly visible. Zoom magnifies the area of the picture surrounding the drawing cursor, which allows for fine positioning of the cursor.

Alternatively, if you select NEW... to create a new picture, you can specify what size you want the picture to be. That's Pixel is not restricted to any size or aspect ratio, so it's extremely flexible and an ideal tool for users who don't want the normal restrictions of the ST's high resolution mode.

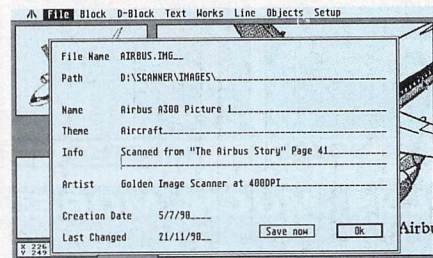
DRAWN AND QUARTERED

Pixel offers all the normal drawing tools that are expected from a package of this type, as well as some which are more unusual. Line and freehand drawing tools are included, as well as circle, ellipse and box drawing functions. Drawing tools include air brush, paint brush and pencil.

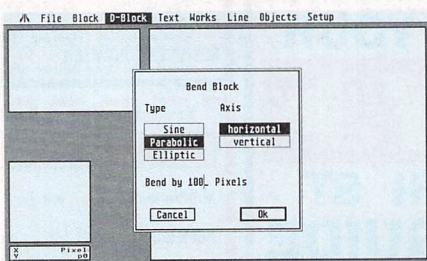
More powerful features are also offered by pixels. B-Splines and Bezier curves are both well implemented and flexible. More unusual features include the ability to create star shapes by defining the number of points,



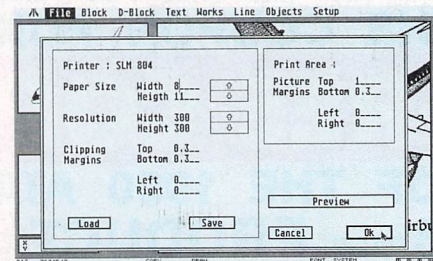
The program is very versatile. Here's the Atari Logo - normal, bent, outlined and inverted



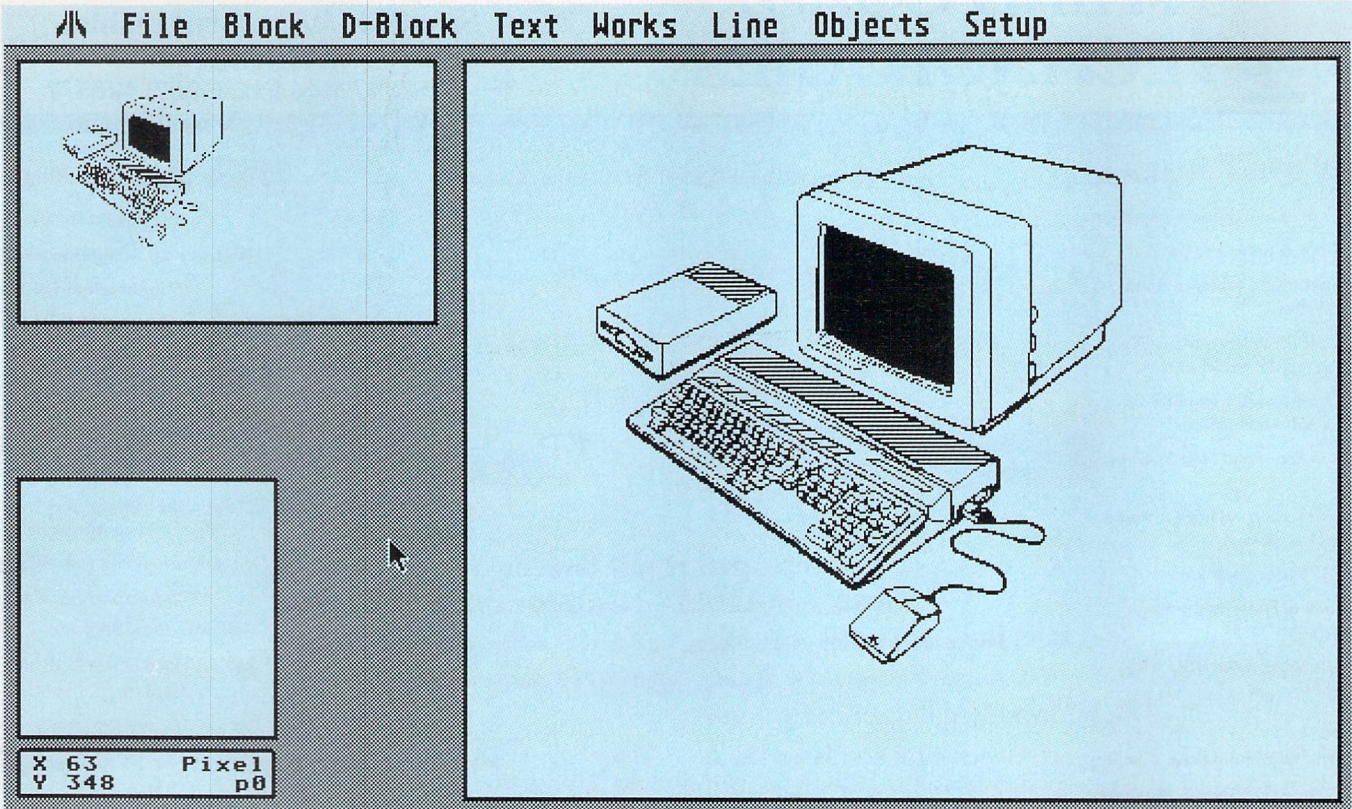
With That's Pixel, extra information can be stored with every image



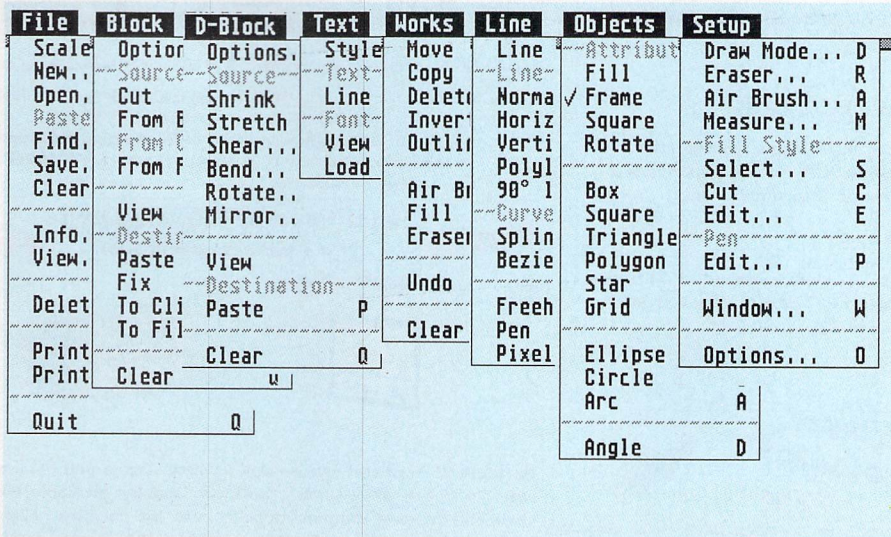
An option can be set to bend a marked block. Most other options have similar dialogs



That's Pixel can be used with a wide range of printers and resolutions



Notice the three windows in That's Pixel: Draw, Preview and Zoom. These enable complex images to be created and enhanced



With a bit of clever cutting and pasting, we can show all the options in That's Pixel. They are called up from these drop-down menus. D-Block menu offers the most features

and drawing two circles to indicate the inner and outer extent of the points. The program then does the hard work and draws a perfectly symmetrical star. Triangles, irregular polygons, boxes, squares and grids can be created with ease.

An unusual and exceptionally powerful feature is the outline system. An area of an image can be converted from solid black and white to a series of outlines. The outline can then be imported into a low resolution paint package and coloured using flood fills within the outlines.

Like the Migraph TouchUp package, That's Pixel is more at home with images that already exist, rather than creating them from scratch. Images scanned into the ST in IMG format using a hand scanner like the DAATAscan Professional are ideal for use with That's Pixel.

Central to the operation of That's Pixel is

the idea that an area of the image, or block, is marked using the normal GEM rubberband method, and then the operation is performed on the marked area.

Once part of the image has been marked using the block tool, several effects can be introduced. All of these operations are very powerful but helpful dialog boxes make them easy to use.

With Bend selected from the menu, images can be bent vertically or horizontally, either on a sine wave or on parabolic and elliptic curves. The precise number of pixels by which the block is to be deformed can also be set. This fine control means that it's very easy to achieve a large variety of different effects.

Once a block has been changed it can be pasted back to the main image as many times as you like. With this technique a collage of images can be created. Pixel also

allows marked blocks to be inverted, so black becomes white – and vice versa.

That's Pixel offers very fine control over on-screen text. The program's supplied with a variety of fonts in different point sizes – any of the fonts supplied with the Compo word processors That's Write and Write On can be used. This interchangeability of fonts ensures that you can always find a typeface suitable for your needs.

Once type has been placed on the page, it can be bent and stretched to obtain the effect you want. Type can be moved around the screen using the mouse and positioned very precisely.

JUST REWARD

That's Pixel provides a host of powerful features for manipulating scanned images and clip-art. The interface, however, is quirky and can make some of the more powerful features difficult to access.

Perseverance is definitely required to get the most from Pixel, but diligent application to the manual will be well rewarded. The tutorial in the manual is good, leading new users through the program.

THE BOTTOM LINE

FEATURES: A large variety of powerful image manipulation tools.

EASE OF USE: Quirky interface and lack of icons mean a steep learning curve.

Features	Ease of use
Excellent	Excellent
Good	Good
Average	Average
Bad	Bad
Appalling	Appalling

THIRD COAST TECHNOLOGIES

Unit 8, Bradley Hall Trading Estate,
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WN6 0XQ

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106M/Byte SCSI 15 milli auto park . . £899.99	150M/Byte SCSI 15 milli auto park . . £1250.00
330M/Byte SCSI 11 milli auto park . . £1999.00	44M/Byte removable cartridge drive . £799.99



Discovery Pack

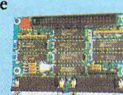
High quality, good value package based around the 520STFM computer including 512K RAM, 1MB Drive and built-in TV modulator. Also supplied is:

£279.99

STOS Game Creator Outrun Carrier Command Bomb Jack
Space Harrier Neochrome FirST BASIC Atari ST Tour
plus 'Discovering your Atari ST' Book

Hard drive DIY kits for SCSI & ST506 drives

Connect IBM PC type drives to the ST upto two drives off one controller



DIY Kits

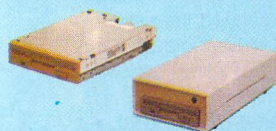
ICD DMA/SCSI Adapter (No Clock) £79.99 ICD DMA/SCSI Adapter With Clock £99.99

Complete Kit Ready For SCSI Drive £199.99 Complete Kit Ready For ST506 Drive £299.99

Omit 3527 SCSI/ST506 Controller £99.99

Complete kits include host adapter board, PSU and all features listed in hard drive advert. These kits will allow any ST506 or embedded SCSI drive to be connected to any Atari ST

Internal & External Floppy Drives



1M/Byte internal replacement offers extended track count upto 84 tracks fully software compatible slight case modification required supplied with full fitting instructions

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LC24-200 Printer (Mono) £269.99
LC24-200 Printer (Colour) £299.99
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Mega 2 & SM124 £899.99
High Resolution SM124 £114.99
520STE 1 Meg memory £389.99
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Mega 2 with 4MB £999.99
Phillips 8833 Monitor £249.99
520STE 4MB memory £625.99
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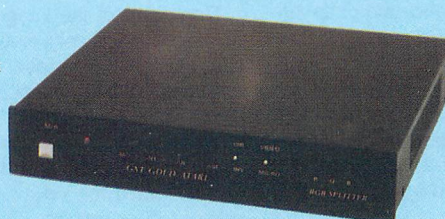
Virus protector

£9.99

Hardware virus protector offers total protection against all link virus & boot block virus. Disable switch. Plugs into your disk drive port. Never be infected again. Also supplied with virus killer & manual

Atari Genlocks

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ALL ABOUT

EMULATION

Emulation is the science – or perhaps the art – of making a computer believe that it's really something else altogether. But why, for example, would you want to make your ST behave as if it's a Mac or PC? Why not just go and buy a Mac or PC in the first place if that's what you want?

Well, there are lots of reasons – just for the fun of it, to access software which is only available for another computer, to achieve greater versatility in one machine, to save money, or perhaps because Jack next door created a Supercomputer in his spare time and won't shut up about it...

Despite the wealth of excellent programs available for the ST, such as Cubase, Calligrapher and Calamus, there are still some things it can't do as well as others. For example the Apple Macintosh still has a virtual stranglehold on the desktop publishing market and IBM PC-compatibles are still the accepted standard for business users.

THE MASTER OF DISGUISE

To get in on the PC and Apple act, the ST has become a master at pretending to be something it isn't – namely another machine. A variety of methods have been employed over the years in an attempt to get the ST to run other software, resulting in a wealth of emulators – both hardware and software – becoming available commercially and as PD.

Hardware emulation is by far the most popular means of getting the ST to run programs meant for another machine. This involves supplying the ST with a whole new set of chips, usually attached to the existing Central Processing Unit (CPU).

These new chips provide the operating system of the target machine, and sometimes a new CPU is also needed. The PC family of computers use a completely different sort of chip from the ST and Apple Macintosh, so a new CPU is a virtual necessity.

Emulating another machine can be done using software alone, but it's slow and laborious because the ST's central processor has to run some very complex instructions.

Program instructions must be converted to ST machine code in order to be executed, and then the results converted back into the language of the emulated machine. All this conversion slows the ST down to a crawl, and programs requiring really heavy number crunching are often so slow they're unusable.

Most emulators are a combination of both hardware and software, to get the best out of both worlds. Hardware provides the speed needed to make emulation an attractive proposition while the software component keeps the cost of the emulator down by using the existing system resources of the ST, such as the RAM memory, screen and keyboard.

Although almost any machine can be emulated on the ST, there must be a good reason for a company to spend time and money on developing an emulator. There must be



An ST can become almost any other computer with hardware such as Spectre GCR and AT Speed

something special about the target machine, and that something is always software.

Only two machines have ever been emulated commercially, and both emulators owe their existence to the superb range of software available for the target computers.

AN APPLE A DAY

Ever since its launch in 1984, the Apple Macintosh has been acknowledged as being the most user-friendly machine on the market. The graphical user interface called Finder is far superior to the ST's GEM Desktop, although GEM was originally based on the Apple system. (Apple actually sued Digital Research over GEM's likeness to Finder and forced them to make the user interface less similar to the Apple system).

The Mac has amassed scores of quality software packages, especially in the fields of graphic design and desktop publishing. Programs such as Quark Xpress and Aldus PageMaker have no equal on the ST, although the new colour version of Calamus may narrow the gap somewhat.

On the down side however, Apple machines have always been priced to appeal only to professional users and businesses, and are financially remote from the average ST owner.

Dave Small, an ST enthusiast from the States, came to the rescue of ST users who wanted a Mac. He introduced a plug-in cartridge called Magic Sac. This remarkable bit of hardware enabled the ST to emulate the Macintosh Plus machine with a reasonable degree of accuracy.

The cartridge, manufactured by Data Pacific required a set of genuine Apple 64K ROM chips which proved very difficult to acquire legitimately. Although part of the Apple operating system is supplied on disk,

the ROM chips were essential to the operation of the emulator. Magic Sac was never as reliable as it could have been, and gained a bad reputation for crashing at very inconvenient moments.

Spectre 128 was Dave Small's second attempt at a Macintosh emulator, and proved to be far more compatible with real Macs than Magic Sac ever managed to be. This was partly because Spectre uses the newer 128K Apple ROM chips, which most Apple software now demands. The 64K chips were considered obsolete by Apple, and later versions of the System and Finder software didn't support the old ROMs.

The emulation logic of Spectre was improved to give better support to specific areas of the Macintosh environment, such as sampled sounds. The Spectre cartridge was extremely stable and used the ST hardware to best advantage.

In fact, because the ST has a superior specification, the Spectre cartridge actually ran slightly faster than a real Mac Plus. Also, the excellent monochrome screen available for the ST is three inches larger than the Mac Plus unit, and Mac software is able to take advantage of the extra area.

LET'S COMMUNICATE

Despite its success, Spectre still exhibited one weakness. Because of the strange Mac disk format, Spectre was unable to read or write Mac disks directly. Continued work by Small however, resulted in a new version of Spectre, called GCR.

The Mac's peculiar disk format is implemented entirely under software control of the emulation logic, a feat that makes Mac emulation a viable proposition for many users. Data can be interchanged with real Macs using 800K floppy disks, rather than the slow and

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GROUP CODE RECORDING

No, it's not some new kind of CD player, but a disk format. Group Code Recording (GCR) is the name given to the way the Mac writes its disks.

When the Macintosh was being put together, the designers began to look for a way to increase the amount of space available on a floppy disk.

The Mac was the first mainstream machine to introduce the 3.5 inch disk format. In the ST, and indeed in all similar machines, the disk spins at a constant speed, no matter where the drive head is on the disk surface. In order to squeeze more space out of the disk, the Mac designers decided to make the disk spin at a different speed as the read/write heads moved across its surface.

This peculiar disk format is totally incompatible with computers like the ST and PC, and makes transferring disks from a Mac to another machine very difficult. The Magic Sac emulator devised a special disk format that was incompatible with both the Mac and ST, but could be used as a transfer medium between the two machines.

Information, data and programs were transferred from the Mac to the ST using the serial port, and then 'transverted' to the Magic Sac disk. This solution was time-consuming and difficult, but it was also the best option available.



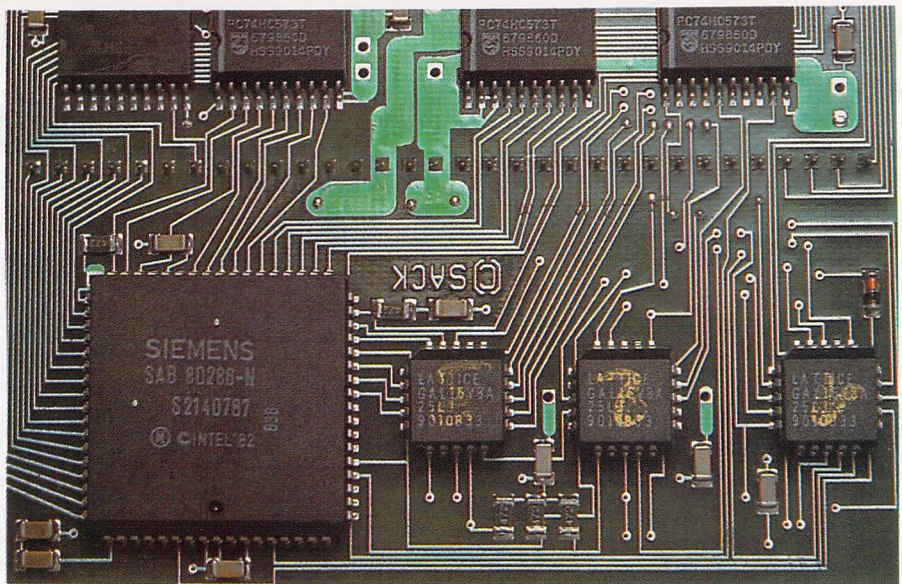
SuperCharger, the other PC XT emulator available. Due to be upgraded shortly

cumbersome methods of serial port transfer which were required previously.

THE IBM STORY

International Business Machines, IBM, is the world's largest manufacturer of computers, and its desktop machine has become a very widely accepted standard in the computer industry. The PC and its many and various clones are reported to have sold more than 50 million units since the launch in 1982.

The early machines were referred to as XT machines. They were based on the 8086 and 8088 central processors, and used the MicroSoft DOS operating system. The XT rapidly gained a stranglehold on the business



AT Speed, the new emulator from Compo, is the first to offer VGA graphics on an ST

computing market, mainly because of the wealth of high quality business software written for these machines.

PC Ditto from Avante Garde software was the first emulator for the ST, and it managed the remarkable feat of emulating a PC XT machine in software, without the benefit of hardware to take any of the load off the ST processor. Although it was very slow and only able to run older software, PC Ditto sold well.

Software emulation of the PC proved to be too slow, and soon a new breed of emulators appeared. PC Speed from Compo Software was the first emulator actually to include a PC processor – a chip called the NEC V30.

The board fitted internally to the ST by piggy-backing over the ST's 68000 chip. PC Speed could access the ST's memory, screen and RAM memory directly, so it was fast and the PC chips made it very compatible.

SPEED FREAK

Condor Computers adopted a different approach to emulating a PC with its SuperCharger unit. Like the PC Speed board, it uses a V30 chip, but it does not fit internally to the ST. SuperCharger is a DMA device, like a hard disk or laser printer, and contains its own RAM chips. It has the advantage that ST and PC software can be used simultaneously.

IBM wasn't content to sit back after the success of the first PC, and so rapidly improved the standard. The new AT class of machines used a different central processor, the 80286, which was more efficient at processing instructions and ran at a faster speed. IBM also introduced a new type of graphics display, the Enhanced Graphics Adaptor, offering 16 on-screen colours.

The ATonce emulator from the German manufacturer Vortex offers true compatibility with the AT machines. Using the newer 80286 chip, ATonce can run the latest generation of IBM PC software such as Microsoft's Windows 3, which gives the PC some of the user-friendliness of the ST or Mac.

Compo Software, responsible for the PC Speed board, has developed an AT-compatible version of the board called, not surprisingly, AT Speed. Like ATonce, it's based on the newer 286 chip and runs the new PC software without a hitch.

The AT Speed board is unique in the emulation field in offering the newest PC graphics

mode, VGA. Although VGA is capable of displaying 256 on-screen colours on a real PC, the AT Speed version will only run on a monochrome monitor. Still, it is a vast improvement on the old CGA standard. EGA is also supported.

ATonce and AT Speed are both circuit boards which must be soldered over the 68000 chip in the ST so they can take advantage of the ST's serial and parallel ports, RAM, keyboard and screen. Adaptors which are available for both the Mega and STE machines mean that for greater ease, the boards can be fitted without soldering.

MORE THAN THIS...

There are still problems to be overcome with emulation, mainly in the areas of speed and screen display. EGA is now the minimum standard for a new PC and emulators have some work to do before they can emulate this standard properly. Also, colour VGA still looks a long way off.

Most problems with Mac emulation have been solved by Spectre GCR, although the lack of AppleTalk networking means that an ST with GCR can't be integrated into a true Macintosh environment. Printer support is still less than ideal, although every new release of the GCR software makes improvements.

Emulation on the ST has come a long way since the early days of the software PC Ditto. Advances in hardware emulation, especially on the Mac front with GCR-reading Macintosh floppy disks, mean that emulating is now a viable alternative to buying the real thing, even for users with small budgets.

PC graphic modes are still poorly supported, although AT Speed makes some advances by supporting VGA, but only in monochrome. The new generation of PCs use more powerful chips that run at up to 33MHz, far beyond the range of the ST.

Emulators using the 80386SX chip running at 16MHz are said to be ready now from both Compo and Vortex, waiting only for the price of the chips to fall to an affordable level.

Spectre GCR solves the problem of the peculiar Macintosh disk format, enabling data to be exchanged with a real Mac just by swapping disks. The major omission from GCR is still the AppleTalk networking system, but there is talk of this being implemented at some time in the future.

ABSOLUTE

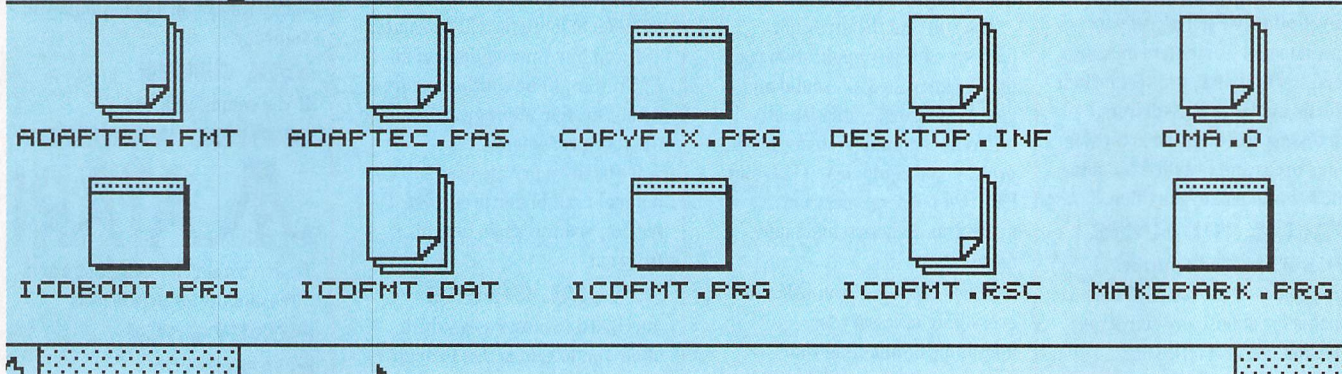


BEGINNERS

beginners

Last month we called your attention to the bar. And now we continue our lesson on what you can find there...

160828 bytes used in 14 items.



1 Dozens of icons complicate, rather than simplify, file selection on the Desktop. Keep calm – it's not as bad as it looks

At the close of last month's Absolute Beginners, we'd discussed the first two items on the menu bar, namely Desk and File. Desk provides access to those all-important desk accessories as well as general information about GEM – the ST's WIMP operating system – and control and installation of RS232 devices such as modems and the like.

We didn't tell you about the latter last month. RS232 is not a subject to be dealt with by the faint of heart, at least not until you have a few more lessons under your belt! There'll be more in the coming months.

FROM THE DEPTHS...

Under the File menu bar option, you can create folders, format disks and so on. Fine, that's a lot of options from just two menus, but wait, there's more.

Another two menus are lurking up there at the bar View and Options, and although you probably won't need them quite as much as Desk and File, they're still pretty important. Here's what you can find under the View menu:

Show as Icons
Show as Text
Sort by Name
Sort by Date
Sort by Size
Sort by Type

The options listed under the View menu decide how the ST will display your files and folders on the Desktop. Drop down View now, and you'll see a tick next to either Show by Icons or Show by Text, and a tick next to one of the other four 'Sorting' functions.

The beauty of a WIMP environment (Windows Icons Mouse and Pointer) is that it is able to display the ephemera of everyday computing.

No longer do you have to remember the names of the items, programs, data and so on that you want to manipulate. They're there for you to see, and all you have to do is reach over with the mouse and select them.

PICK 'N MIX

There is however, one slight problem. If a particular folder contains lots of objects, and your current display mode is 'Icons', then you're going to have difficult in finding what you want. A screenful of visually similar icons is not an easy thing to wade through. (See Figure 1).

And what if you want to get creation date, size and other information? Not only do you have to find the object, but you then have to pull down the File menu and select Show Info... This isn't such a problem if you do it once or twice, but after many files, you may be threatening to abandon the ST and go back to good old CP/M or another archaic command line-based operating system!

160828 bytes used in 14 items.

❏	AUTO			22-04-87	12:03 am
	ADAPTEC	FMT	5129	22-04-87	12:03 am
	ADAPTEC	PAS	6450	22-04-87	12:03 am
	COPYFIX	PRG	2038	22-04-87	12:03 am
	DESKTOP	INF	472	22-04-87	12:03 am
	DMA	O	732	22-04-87	12:03 am
	HDUTIL	PRG	17065	22-04-87	12:03 am
	HDUTIL	RSC	2882	22-04-87	12:03 am
	ICDBOOT	PRG	2816	22-04-87	12:03 am
	ICDFMT	DAT	7013	22-04-87	12:03 am

2 With lots of files, you'll find selection much easier if you view them as text

View provides a way around this problem. Instead of showing everything as little square icons, you can Select, via the View menu, to display your files and folders as lines of text, in a list within the window in which they're contained. (See Figure 2).

This makes item selection much easier if you have lots of files. And not only easier to select, but text display mode also provides alongside each object pertinent statistics such as size and creation date which, negates the need to use the File menu/Show Info... combination.

As a list, View also enables you to sort the objects by category depending upon you needs. Sort by Name lists objects in alphabetic order, Sort by Date list objects according to when they were created.

Unfortunately, this latter option isn't much use unless you have a real-time clock



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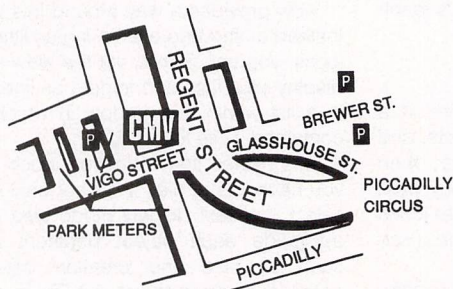
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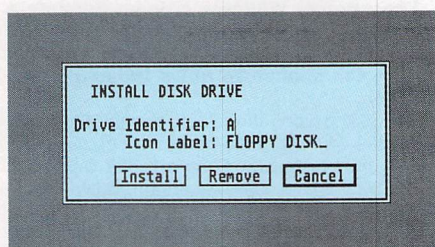
AUTO			22-04-87	12:03 am
ICDFMT	PRG	45295	22-04-87	12:03 am
MAKEPARK	PRG	27084	22-04-87	12:04 am
PARK	PRG	27084	22-04-87	12:04 am
HDUTIL	PRG	17065	22-04-87	12:03 am
ICDFMT	RSC	16768	22-04-87	12:04 am
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HDUTIL	RSC	2882	22-04-87	12:03 am
ICD800T	PRG	2816	22-04-87	12:03 am
COPYFIX	PRG	2038	22-04-87	12:03 am

3 Listing files according to relative size

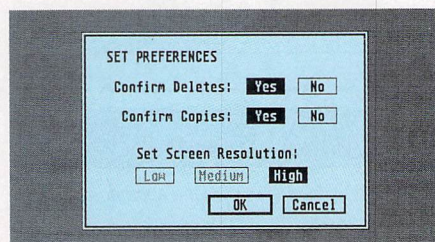
160828 bytes used in 14 items.

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ICDFMT	PRG	45295	22-04-87	12:03 am
MAKEPARK	PRG	27084	22-04-87	12:04 am

4 Listing files according to name extenders



5 It's easy to install or rename disk drives



6 Use Options to reset screen resolution

installed into the machine, or you set the ST's own clock religiously every time you boot up the machine.

Why? Because the ST, unless told differently, assumes that the current time is that which was etched into its ROMs when the machine was created (some time around the mid '80s depending upon which machine you have). Obviously, if all the objects have the same creation date (assigned to them from the ROM figure or some little time after that according to how long the machine has been switched on), then there isn't going to be much sorting!

The final two Sort categories are 'by Size' and 'by Type'. Size lists your files according to how many bytes they contain. (See Figure 3). Type lists them by whether they're programs, documents or folders, ie, based alphabetically upon their name extenders, .PRG, .TXT and so on. (See Figure 4).

Used with thought, the View menu can make all the difference between an ordered system in which it is possible to locate an object easily, and a system in which the available backing storage is a higgledy-piggledy mess of unrelated files and folders without any order.

Choose which you would prefer based

upon whether you like to find the programs easily, or wade through folders for hours, pointing here and clicking there.

OPTION'S OPTIONS

The final menu on the bar is Options. Here, you'll find miscellaneous system functions not available elsewhere. This is what you'll find under Options:

Install Disk Drive...
Install Application...
Set Preferences...
Save Desktop
Print Screen

Take a look at the Desktop. See those two floppy disk icons, one representing drive A, the other representing drive B? Those two icons are the installed disk drives that the ST knows about.

Before you can use a new drive, a hard drive for example, you must tell the ST all about it. You can't simply plug it in and expect the ST to recognise the device next time you power up. Install Disk Drive is the method by which you tell the ST just what backing storage you want to hang off the machine. It's quite straightforward.

SUNDAY DRIVERS

The two floppy drives are installed automatically and are always available, providing you actually have two drives connected to your system. With one, you'll only be able to access drive A, even though an icon appears for drive B. If you try to access B with only one drive, the ST will prompt you to insert the 'B' disk into drive A. There's a valid reason for this, which we'll explain in another episode of Absolute Beginners.

To install another drive, click on an existing icon to select it, then drop down the Options menu and select Install Disk Drive. A dialog like that of Figure 5 appears. From here you can remove (ie de-install) the selected drive, or change the information in the Drive Identifier: and Icon Label: rows, click the Install button and install a new drive.

When next you return to the Desktop, a new icon will be there bearing the name and identifier you typed into the dialog. You can cancel the install procedure at any time by clicking the Cancel button in the install dialog.

You can change the name of existing floppy and hard drives using the install dialog, if you want something slightly more meaningful than 'Floppy Drive'. You might, for example, like to call one drive 'Accounts' and the other 'Data' or one 'HateMail' and the other 'Banker', whatever suits you...

ADD AN APPLICATION

The next function on the Options menu is Install Application. Occasionally, after buying a new piece of software – usually a serious application – you'll find that rather than having to click its program icon to run it, you can simply click one of the data files generated by the program and it will run automatically, loading in the clicked data file as it does so.

For example, you may have a database program which generates data files with the extension .DAT. By typing this into the Document Type: row in the Install Application... dialog, you can run the program by clicking any file with the .DAT extender, providing they're both in the same directory.

This method of running applications improves efficiency by leaps and bounds. There's no need to rummage through reams of data files to find the program which generated them, and you don't have to undergo the tedious process of closing the blank new file which most programs open automatically, then opening the data file you actually want to use. The file is opened automatically.

Next under the Options menu is the 'Set Preferences...' function. Figure 6 shows the dialog which appears after selecting this option. Using Set Preferences... you can determine which screen resolution you would like the ST to use for its display.

High resolution is only available when using a monochrome monitor such as Atari's own SM124 – or one of the mono emulators available commercially and from the public domain. More in coming months.

Medium and low resolution are both available using a colour display such as a colour monitor or domestic television. Most games use the low resolution but many applications, especially word processors, spreadsheets and the like, make use of medium resolution in order to provide a display with 80 columns.

Medium resolution is not very legible when using a TV but is fine for short periods if you have a colour monitor. Individual preference and the needs of the software you're running will dictate which to use.

ACTIVE WARNINGS

The Set Preferences dialog also enables you to suppress the ST's warning messages, such as those which appear when you're about to delete a file. Beginners may find that it's wise to have these remain active until they're fully conversant with the workings of the Desktop.

After clicking on the options you want in Set Preferences, click OK (or cancel if you want to revert to the original settings), you'll be returned to the Desktop and the new settings will be come into force.

You might think that all of the useful system settings you've made with the menus on the menu bar are really going to improve your enjoyment of the ST. But unless you save the settings, 'all be come to nought' when you switch off the machine. To save, simply drop down the Options menu and select Save Desktop.

This function saves system changes such as those made using the View menu into a system file known as DESKTOP.INF. Next time you power up the ST, all of the changes you made previously will be there just as before.

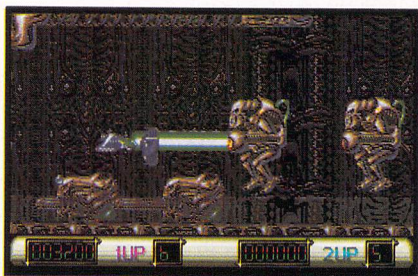
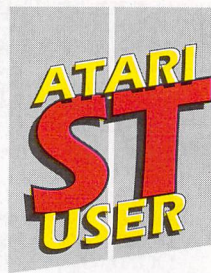
The last function under Options is Print Screen. Selecting this will send an exact copy of the current screen to your printer. You can also invoke the function by typing the ALTERNATE and HELP keys together – pressing those keys midway through printing pauses the process. Press them again to continue.

Print Screen is not quite as easy to use as might at first be thought. You must have a printer capable of bit-image graphics reproduction, such as an Epson FX-80, attached to the ST and it must be installed using a function known as Install Printer from the Desk menu.

We'll talk more about Install Printer, the many other standard system DAs, and various public domain and commercial Desktop Accessories next month.

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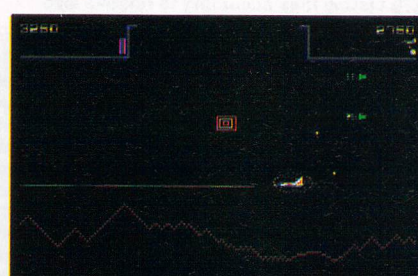


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Entries must be received before 31 March 1991 and the winner will be announced in the May issue of 'USER.

The screenshot shows the Write ON word processor interface. The menu bar includes File, Block, Type, Style, Layout, Edit, and Options. The document window displays text about the program's features and pricing. The Options menu is open, showing settings like Automatic Formatting, Automatic Pagination, Overwrite Mode, Show IMGs, Hyphenation, Preferences, Load Macro, and Save Macro.

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This is a duplicate of the screenshot above, showing the Write ON word processor interface with the Options menu open.

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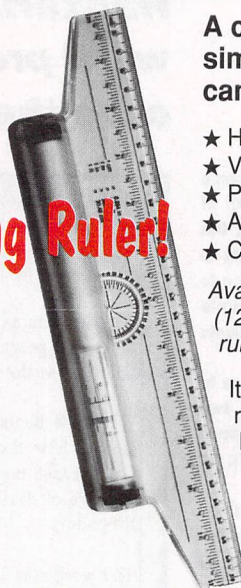
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MIDI AND MUSIC

PAGE 114

Ian Waugh brings you two fabulous pages packed with news on Patchbase, Quinsoft UK, and not forgetting Jukebox Jargon

EDUCATION

PAGE 117

Andrea Claire, the new girl in the class, goes back to school...or rather back to school software

COMMUNICATIONS

PAGE 119

Fielding Mellish digs deeper into Michtron's BBS and goes on to discover that null modem isn't as scary as it sounds

EMULATION

PAGE 121

Günter Minnerup looks through Windows 3 again to find the missing icons. He can make operating easier for you

ADVENTURES

PAGE 123

Cyclops is back to blow your minds with Captive. He also manages to force his way in to the Corporation

DESKTOP PUBLISHING

PAGE 125

Charles Michael investigates the Calamus guide, hunts for the missing graphics, then has his edges cropped

*This month,
sound storage
with Patchbase,
binaural
recording and
budget voice
editors...*

What's new in the music column this month? An extra page, that's what! If it continues growing at this exponential rate it'll only be, well, er, (grab calculator), six months before it takes over the magazine completely. And why ever not?

The extra page means more news, views and reviews. So I'll start by asking you for your letters, comments, program hints and tips, moans, groans, brickbats and five pound notes. Any suggestions about the future content of the music pages are welcome, too.

PATCHBASE 2.0

Here's a neat idea which arose, like all good inventions, out of necessity. The original version of Patchbase was dPatchbase – developed for non-commercial use in Goldsmith's College. Subsequent enhancements led to version 2 which was released commercially by the developer, Audio Integer.

The idea behind Patchbase is quite simple. It acts as a database and stores the sounds in your instruments. The sounds are filed in categories such as Pianos, Bases, Synths, Saxophones and so on.

Once the information is in, any sound can be searched for by category and then selected on

the correct instrument. It runs in hi-res, and although the disk isn't protected, each copy is stamped with the user's name which appears on the top of the screen.

There are actually two programs – one to put the data in and another to get it out. The retrieval program is a desk accessory enabling you to run it with a (GEM-based) sequencer of your choice.

There are five columns. The left one selects Patch Families and the others are Device columns. You can select another three sets of Device columns, giving access to 16 Devices, one for each MIDI channel.

A Patch Family for synths contains instrument names and sound descriptions, but you could equally well use Patchbase with a MIDI effects unit, MIDI patchbay or mixer.

To create a database, set a Device column to transmit on the same MIDI channel as an instrument. The program sends Program Change Number 0. See what sound this is on the instrument, enter it into the program and log it under a Patch Family.

To choose a sound, select a Patch Family and the sounds assigned to it will appear. Clicking on one sound will send the relevant Program Change Number out on the Device's MIDI channel.

Patchbase stores the Program Change Numbers which recall the voices in your instruments. It doesn't actually store voice data – that would be asking too much.

If you load a new set of sounds, these will have to be added to the database too (using a different Device), and any changes made to the order of the sounds would also have to be changed in the database.

One problem which you may encounter is the result of an instrument's deviation from so-called 'standard' MIDI voice

NEWS ROUND-UP

● Quinsoft, UK producer of Trax, the suite of Recording Studio Manager programs which we looked at in the December issue of 'USER, is developing a range of budget-priced voice editors especially for the ST.

Three are currently available – one for the Casio VZ range (£49.95), another for the Kawai K4 (£79.95 range (£49.95), one for the Kawai K4 (£79.95), and a Proteus Editor (£79.95) which is compatible with all versions and variations of the Proteus. The first lucky 50 VZ and K4 customers will receive free banks of sounds.

The editors also include a free program called The Incredible Dump, a generic dump utility designed to rival Steinberg's Satellite program. Other editors are in the pipeline.

Distribution is through Patchworks, Frederick House,

211 Frederick Road, Hastings, East Sussex. Tel: 0424 436674.

● DACS (we plugged their hi-tech MIDI cables last month) has become the sole UK distributor for the Jellinghaus C-Mix mixer automation system.

The controlling software (currently version 3) runs on an ST, of course. C-Mix is now so well established throughout Europe (it's already installed in over 600 studios) that it's a standard option on many consoles and is easily retro-fitted.

But excellence doesn't come cheap. A 16-channel system (including computer and monitor) will cost around £4,000 although a budget version is available for £2,400.

More information from DACS at Stonehills Complex, Shields Road, Pelaw, Tyne & Wear NE10 0HW. Tel: 091 4385585.

selection but this is likely to be a problem with instruments and software for some time.

Patchbase is ideal with preset instruments or in studios or colleges where a fairly static setup is maintained. Its advantage is that anyone can come in to use the equipment and immediately see what sounds are on offer.

Even if you continually change sounds, Patchbase could be useful with FX units, MIDI switchers or a MIDI mixer.

Patchbase 2.0 is £39.95 (educational discount available) from: Audio Integer, 7 The Woodlands, Hither Green, London SE13 6TZ. Tel: 081 698 0534.

A CHANGE OF VOICE

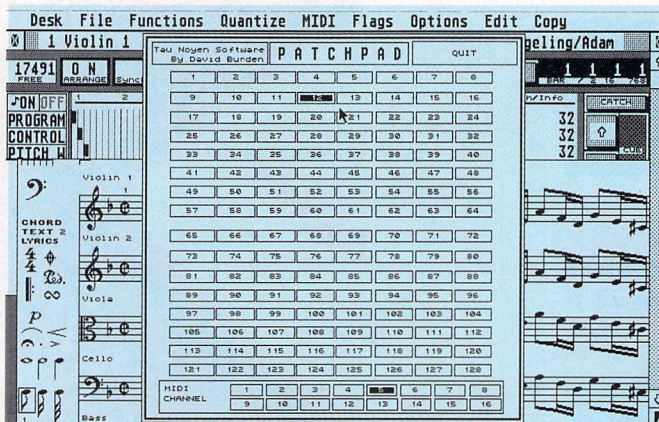
What MIDI Program Change Number do you send to select the first sound on your synth/expander/keyboard/piano/

organ? It's probably Program Change Number 0, but the question is, is the sound numbered 0 or 1, or is it Bank A Sound1?

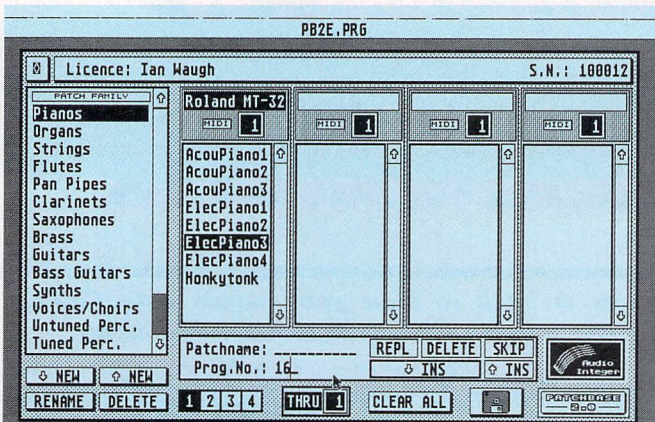
Of course, when you are using a Program Change Table, any incoming Patch Change Number can be made to select any sound.

Many sequencers let you give each track a Program Change Number which will be transmitted prior to play. If your sequencer has an event list, you may find it more convenient to insert Program Change Numbers here.

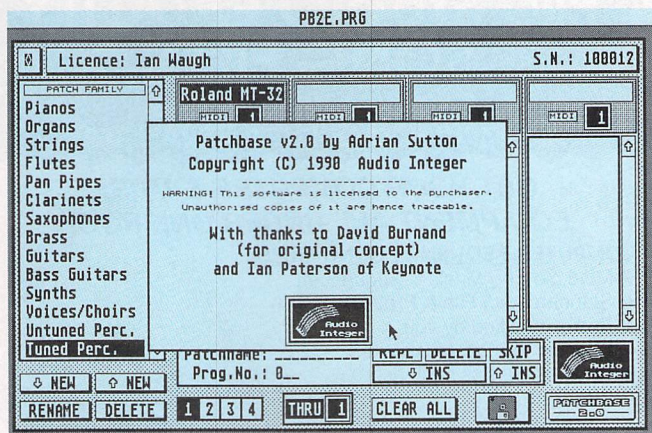
If your instrument is arranged in banks – and most are – how do you know what Program Change Number will select the sound in, say, Bank C Voice 7? The easiest way to find out is by trial and error – it'll only take a few minutes plus a pen and



Patchpad – a desk accessory for transmitting Program Change Numbers running with C-Lab's Notator Version 3



When using Patchbase five columns are shown on-screen. From here you select both Patch Family and Device



All about Patchbase 2 – the beginning of designer software?

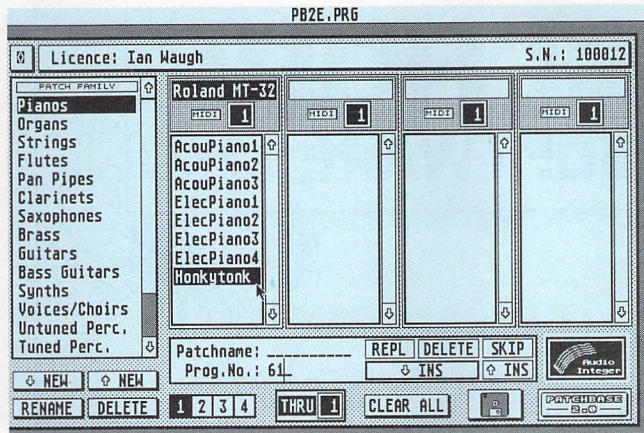
paper, and will be well worth the time and ink used.

You may find that different Program Change Numbers select the same sound. If this happens, it's nothing to worry about, it's just the way the machine has been designed.

The MIC (MIDI Implementation Chart), which is the page that looks like a manic game of noughts and crosses, should explain just what's going on.

If your instrument has more than 128 sounds, how do you managed to access them all? Again, most instruments use a Program Change Table. However, in instruments such as the SY77 which can hold 256 sounds, Yamaha has taken the bold step of using two consecutive Program Change Numbers to select some sounds.

This is fine if you have access to an event editor, but not so fine



In all, 16 Devices can be selected, one for each MIDI channel

if your software can only transmit one Program Change Number per voice select instruction, such as Patchbase.

Clearly the situation is in a bit of a mess and needs tidying up. Enter the MIDI Bank Change message. This has recently been added to the MIDI specification.

The MIDI Bank Change message enables, as you would expect, the direct selection of a

bank as opposed to a voice. Obviously, we will only see this in new equipment and software – that is, if developers decide to implement it.

There may be retro-fit kits for synths if the instructions are stored in an easily-changeable ROM, but I wouldn't bank on it!

What fun we'll have then with three different ways of selecting a sound! Isn't MIDI a wonderful and exciting innovation? ●

JUKEBOX JARGON

Program Change Numbers: The MIDI protocol supports 128 voice change messages which are, in true computer fashion, strictly numbered from 0 to 127. On the actual instrument the sounds may be numbered consecutively or arranged in banks of eight or 16 sounds.

MIDI is like a living organism which continues to grow and evolve. When its specifications

were originally drawn up, it was probably thought that 128 messages would be enough.

With the advent of more powerful programming techniques and cheaper memory, methods of accessing over 128 sounds via MIDI were required.

The Program Change Table was one of the very first developments, while Yamaha's novel approach, (see A Change Of Voice) is another non-standard

answer. The latest development is the Bank Change message.

Program Change Table:

When instruments were produced with more than 128 sounds, manufacturers devised a method of accessing the extra sounds via MIDI. This is how the Program Change Table was developed.

It's a relatively simple user-definable look-up table which

lets you assign any incoming Program Change Number to any internal sound.

For example, the first few entries of such a table might look like this:

Incoming message no:	Internal Sound:
1	4
2	16
3	7
4	140

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5. The longest bass string in a piano was 9 ft 11in long

THE FUTURE'S HERE!

After the rise – and rapid fall – of sound systems such as ambisonic, surround-a-sound, quadraphonic and so on, most of us content ourselves with good ol' stereo.

But now, Roland, manufacturer of musical instruments such as the top-range D-70 and the popular MT-32 expander, has developed a 3D sound system which you can play on an ordinary stereo system!

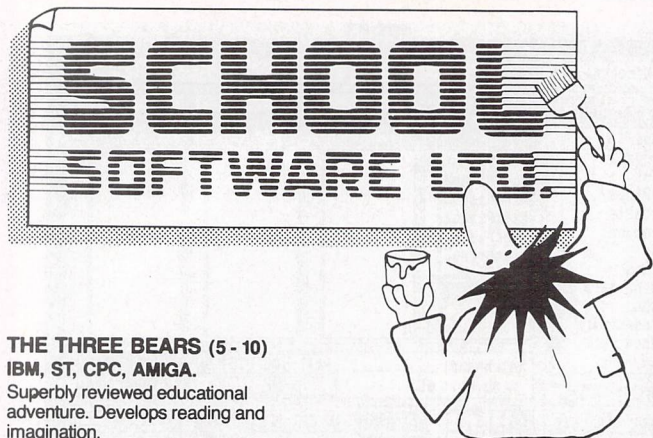
The RSS (Roland Sound Space) system is a development of binaural recording, but you can play it on any stereo system you want, not just using headphones.

Playing a binaural recording on speakers tends to introduce left/right

aural crosstalk. The RSS incorporates binaural recording plus a transaural processor to reduce crosstalk. The 3D sound image is created during recording using simple controls – no extra equipment is needed on playback.

Although the RSS is still at the prototype stage, 3D CDs which have been released in Japan and the UK as demos to the industry have met with enthusiastic response. A basic system will start from around £35,000.

RSS should be in commercial use by the end of the year. When it filters down to consumer level, there's no reason why synths could not include 3D sounds and we may even find a 3D sound chip in a computer.



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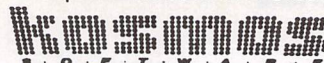
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ST Format (August '90)

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Andrea Claire throws away her chalk and plays a few learning games

With the National Curriculum and attainment targets being bandied about in the media at the moment, parents are not surprisingly confused and maybe a little worried about their child's progress in many areas of the Curriculum.

HS Software has devised a number of packages which encourage children to learn by using carefully directed play activities. These specific activities are chosen to enhance selected areas of the Curriculum, and thus enable both teachers and parents to gauge a child's progress relative to the attainment targets laid out in the National Curriculum. The range of software available includes "National Curriculum details about the attainment targets and key stages for which each program is suitable".

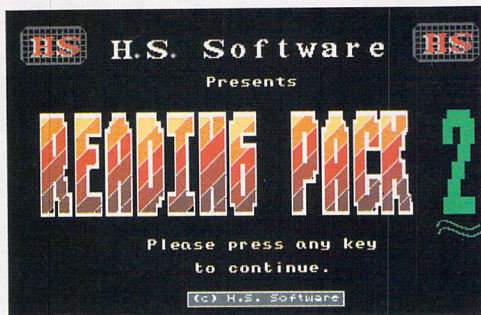
Not only does HS software produce programs incorporating spelling, basic grammar and creative techniques; it also produces a maths package devised to cover a range of attainment targets for Key Stage One (five to seven-year-olds). And its new releases include a comprehensive software package for "Primary School National Curriculum record keeping and reporting", intended to make the teacher's job that little bit easier.

LEARNING FOR FUN

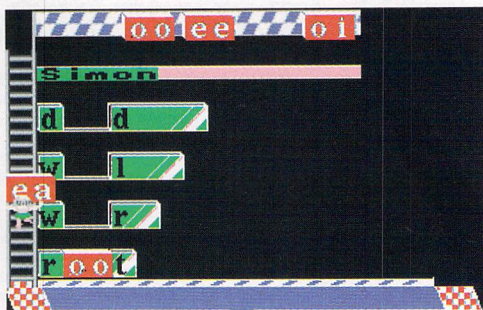
HS Software's latest packages are designed to encourage children to build upon their existing knowledge of language and reading skills, in an attractive and entertaining way. The **Read Right Away**, Package 2, for children from six to nine years (Key Stage 1/2) provides progressive follow up activities from Package 1 in the same series.

Building upon the initial phonics used in Pack 1, it progresses to simple digraphs and word building exercises. The pack contains two similar programs: **Pyramids** and **Splooosh**. Both are reasonably flexible, and levels of difficulty can be selected to suit the individual.

The first of the programs, **Pyramids**, is an extremely visual game with lots of positive reinforcement for young learners. The instructions are clear



Make learning how to read fun...



Splooosh is swimmingly good fun

and well defined, although the game would need to be demonstrated to a young audience – a repeat of basic instructions would be useful on the first screen.

You're presented with a picture of a pyramid which is only half-built, comprised of a number of incomplete words, and a team of strong men which you use to complete the building. Then you have to pick the correct digraph to complete the word – these are carried onto the screen by an obliging caravan of camels.

STRONGMEN

The strong men, controlled by the cursor keys, haul the digraphs up the pyramid to fit the word endings which are strategically placed in the side of the pyramid. This process is repeated until the pyramid is complete and fit for a pharaoh.

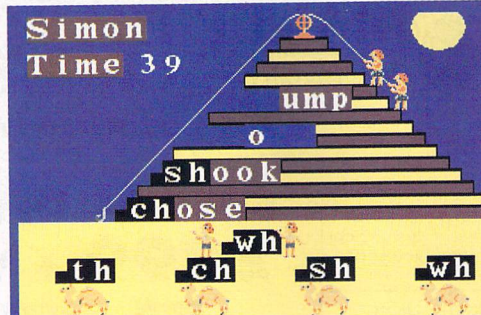
If there is too much procrastination over the choice of letters, a strong man is lost. The time allowed for thought is reduced as the level of difficulty is increased, and if the wrong digraph is selected, the player can't move it from the camel's back, making another choice

necessary. If the exercise is completed successfully, an electronic rendition of the 'Sand Dance' is performed.

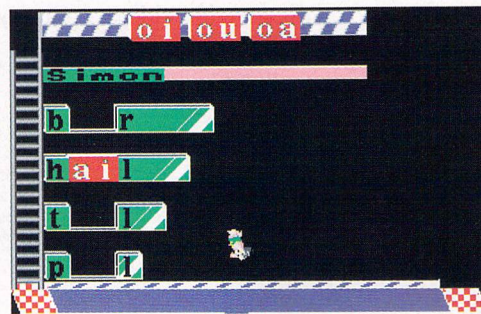
A slight bug in the program came to light in Difficulty Mode 3 when an incorrect ending (owh) was presented on-screen. This could be very frustrating for a young child – it's absolutely essential that educational programs should have all their bugs ironed out, especially if they are used without adult supervision.

The second program in the pack, **Splooosh**, also concentrates on word-building skills and digraphs, but it progresses from initial consonant blends to vowel digraphs. Again, the instructions are very clearly presented and a choice is given as to the number of players and level of difficulty. In this game, the player controls a swimmer using the cursor keys – pressing Return when the player has reached the digraph required (which is displayed on the flag at the top of the screen).

The swimmer carries the digraph down the ladder to a diving board selected by the player. Each board contains an incomplete word. Once the board has been reached, the



Pyramids holds a certain exotic fascination



Word-building games encourage reluctant learners

child presses Return to install the digraph. If it's correct, the swimmer walks to the end of the diving board, dives into the pool and swims back to the base of the ladder. If a wrong selection is made, the swimmer returns to the base of the ladder looking rather downcast at being deprived of a constitutional dip.

As the skill level increases, the number of mistakes allowed is reduced. When the exercise has been completed, the swimmer climbs to the finishing flag where the word "win" appears.

BOTH WELCOME

Both Pyramids and Splooosh will be welcomed in any class where phonic work is taking place. They are very motivational, and progress steadily from simple blends to more complex use of digraphs, and would encourage children who show little interest in reading to engage in reading and word-building activities.

As an added bonus, they encourage children to become familiar with the use of computers, therefore covering those other basic attainment targets which are laid down in the National Curriculum document for Information Technology. ●

HOW ABOUT IT BOYS!

I notice that last month's edition of *The Teacher*, the venerable organ of the NUT, carries an ad for dare I say it, the Commodore Amiga. "What's that?" I hear you say. "Dissension in the ranks?"

Well nearly – the boffins at Commodore have put together a rather nifty education pack comprising an Amiga 500

with a half meg upgrade, *Deluxe Paint 2*, *Deluxe Print 2*, *Pro Write*, *Infofile*, *Music Mouse*, *Let's Spell at Home*, *BBC emulator*, and *TV Modulator*, plus an introductory video.

So where is the ST's education pack?, Come on boys, how about it? Don't let the competition grind you down!



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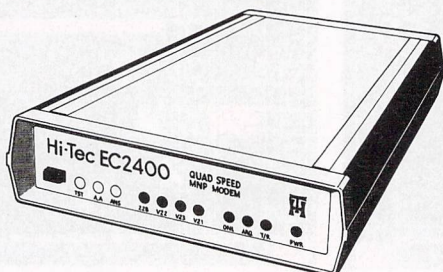
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STU60

Michtron: marvel or menace? Also two-way comms with null modem

Last month I was in the process of setting up a bulletin board using Michtron's popular BB package Michtron BBS (by Michtron!) and promised to relate more of my adventures, and perhaps report some of the pitfalls along the way.

Is the Michtron BBS worth your blunt? Should you shell out hard earned in order to use what you could – almost – get for free from the public domain?

Setting up the board is fairly straightforward. After locating the set-up utility MAINT, creating your board is a simple matter of naming the board, hacking in stats detailing your modem and so on.

One of the best features of the Michtron BBS is the 16 SIGs you can set up. SIGs are Special Interest Groups and enable you to assign distinct areas of your board to the varying interests of your callers. This adds a great

deal of extra enjoyment to a BBS because something is provided to cater for all tastes.

But the good features don't stop there. One of the problems of setting up SIGs is that you have to work hard to keep them up to date and interesting – at least you do with other bulletin boards.

Michtron however, enables you to assign Sysops – as opposed to the complete system masters, Wizops, which is what you are – to each SIG, allowing them to control its input and content. All the benefits of SIGs but none of the hard work.

All that really remains to do before putting your BBS on line is to create a mail area (using the simple menu options provided by MAINT), decide on the prompts your board will display to callers, do a bit of advertising then sit back and wait for the punters to come a-rolling in.

Michtron BBS is excellent. Version 3 provides so many features you'll have the best board on the block – unless all the other kids have Michtron too, but then, since it's so flexible, your board won't look like any other.

Next month, I'll be comparing some of the better PD alternatives to decide which offers best value for no money...

```

Console [0] Waiting for carrier          0:00/0:00
Modem 1 [0] Waiting for carrier         0:00/0:00
Chat enabled -----CONSOLE

MichTron's Multi-User BBS, Version 2.10
Copyright (c) 1985,1986,1987 MichTron Inc.
Program By Timothy Purves

Checking files and directories

Checking Download folder C:\DOWN1\
Checking C:\BBS\USERLOG.BBS, User Log file
Checking C:\BBS\MAIL.BBS, Mail Data file
Checking C:\BBS\LASTCALL.BBS, Last Caller file
Checking C:\BBS\DOWNLOAD.BBS, Download file
Checks complete

Waiting for a call on Console █
    
```

To begin, double-click on the BBS program. You will be greeted with a loading screen while Michtron BBS locates the data files it needs to operate successfully. It then loads these files

```

Console [0] Logon                        Fielding Mellish  0:00/0:00
Modem 1 [0] Waiting for carrier         0:00/0:00
Chat enabled -----CONSOLE

MichTron's Multi-User BBS, Version 2.10
Copyright (c) 1985,1986,1987 MichTron Inc.
Program By Timothy Purves

Logged on to Console

Username: Fielding Mellish

Can't locate you in the user log - is Fielding Mellish your name (Y,N,D) [N] ? █
    
```

After loading, the next step is to log on at the Console, otherwise known as your terminal, and provide a user name. The BBS runs a search to determine whether or not you're a registered user

NULL MODEM

If you have computer owning friends, you may sometimes want to be able to transfer text and other files between your ST and their machines.

This is an easy task if your friend's computer uses a disk format similar to the ST's. The disk format used by IBM PCs and clones for example, is almost exactly the same as that used by the ST – there is only a one byte difference.

The PC uses this 'extra' byte to determine whether it is accessing a 180K, 360K or 720K drive, and whether that drive is a 5.25 inch or 3.5 inch device.

If however, the files on the machine you want to communicate with are stored in a format that can't be read by the ST, a Mac or Commodore Amiga for example, then the only course of action is to resort to something known as a null modem cable.

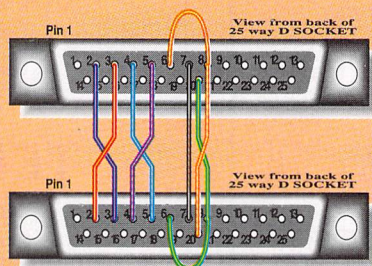
That's right, null modem. You've probably all heard mention of it, but how many of you know exactly what null modem is or how best to make use of it?

Rest easy, null modem isn't quite

as horrific as it may at first sound. In fact, null modem means just that – nothing is modulated or demodulated by a device attached, usually via 'phone lines, to two machines.

Instead, a simple reversed RS232 cable connects both computers together, cutting out the modem/telephone line intermediaries. The result is fast, reliable communications between any two computers with serial ports and comms software available.

How do you construct a null modem cable? Simple. It's exactly



Virtually the same as a standard RS232 cable, the transmit/receive and request to send/clear to send lines are reversed so that communication can proceed...

the same as an ordinary RS232 cable with one important exception, pin 2 on one end is connected to pin 3 at the other end, and pin 3 at the first end is connected to pin 2. In this way, one machine transmits via its TX connection directly into the other machine's RX connection.

Direct cabling such as null modem enables computers to use very fast data transmission speeds, because there is little likelihood of data being corrupted by line noise as there is with transmissions across the PSTN.

If you're not especially handy with a soldering iron, buy a pre-constructed standard RS232 cable, open up one end, desolder wires 2 and 3, resoldering them to pins 3 and 2 respectively. The result is a null modem cable.

To perform a data transfer, set the communications software of both computers to the highest speed – around 19,200 baud – and equivalent parity and word length.

Select a file transfer, set the other machine to receive and the file will zip across the cable.

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A second look at Windows 3, the Mac's answer to AUTO folders and missing icons

A couple of months ago I was raving about Windows 3, after having tried it out with Supercharger. Supercharger is a V30-based, XT emulator, so I was hoping that the distinct sluggishness of Windows would be cured once I had installed one of the new AT emulators with its Intel 286 chips.

After a few weeks of windowing with both AT-Speed and ATonce, the improvement has indeed been noticeable but to my own surprise, I keep finding myself going back to plain DOS.

Part of the reason for this

regressive tendency on my part must be that there simply aren't enough Windows applications available yet. I personally think, however, that the problem goes deeper.

I am quickly coming to the conclusion that nothing less powerful than a 386 chip will do for comfortable work in the Windows environment.

Maybe a true 286 would fare better than ATonce and AT-Speed which, after all, can't quite match a genuine AT for performance because of the 8MHz clock rate imposed by the ST's architecture.

But to take full advantage of Windows 3, especially in its Enhanced Mode, not only a 386 chip but also as much RAM and hard disk space as possible are required.

I resent the fact that Windows gobbles up over 4 megabytes of my already crowded hard drive, and then frequently complains about insufficient disk space to

start modest little non-Windows DOS applications. All this, I suppose, is a salutary reminder of the huge overheads required for graphical user interfaces.

We often forget this on STs and Macs because their architecture is better suited for graphics than the low-end PCs, and because much of the operating system and user interface is built into ROMs.

The lesson for owners of PC emulators on the ST is that while Windows will run and be quite usable, the demands of a multi-tasking graphic environment are too much for a system driven at a comparatively tame 8MHz.

It makes for a particularly impressive demonstration of the compatibility of the emulators, but in the end can be little more than a curiosity which is extremely wasteful of precious hard disk space.

As far as I'm concerned, it's back to DOS 3.3 until I have a TT on my desk.

QUESTIONS AND ANSWERS

Some of the mail I've received recently reveals how difficult it can be to commute between different operating systems.

Hardened ST users tend to be utterly confounded when things won't work in the way that TOS and GEM do. My heart, for example, still stops whenever I eject a disk by dragging its icon into the trash can in Spectre GCR.

I have sympathy then, for Steven Baxter of Littlehampton who is very worried about the disappearance of his program icons from their folders once they've been dragged to the desktop.

Steven is used to NeoDesk which simply puts a duplicate copy of the icon on the desktop, whereas the Mac's Finder actually moves it lock, stock and barrel.

This can be confusing when a desktop icon is hidden by a window and you want to run the application from its folder only to find that it has gone AWOL.

Don't worry though, it's still there somewhere...

CDEVs AND INITS

There can be few ST users who do not have a number of little utilities in their AUTO folders - GDOS, screen savers, RAM disks, all kinds of little hacks designed to make work easier or iron out the wrinkles in the operating system.

Newcomers to Mac emulation may not immediately realise that a very similar facility is available in Apple's operating system.

Take a quick look at any seasoned Mac user's system folder or control panel and you'll find little things called CDEVs and INITS.

Essential CDEVs, or Control Panel Devices, are supplied with every system disk to enable you to set the mouse and keyboard speeds, the Desktop background and loudspeaker volume, but there is plenty of additional public domain and shareware available.

Perhaps the best-known is Vaccine, which gives some protection against the viruses so common in the Mac scene these days, but my favourite is Stepping Out which gives you a 'virtual

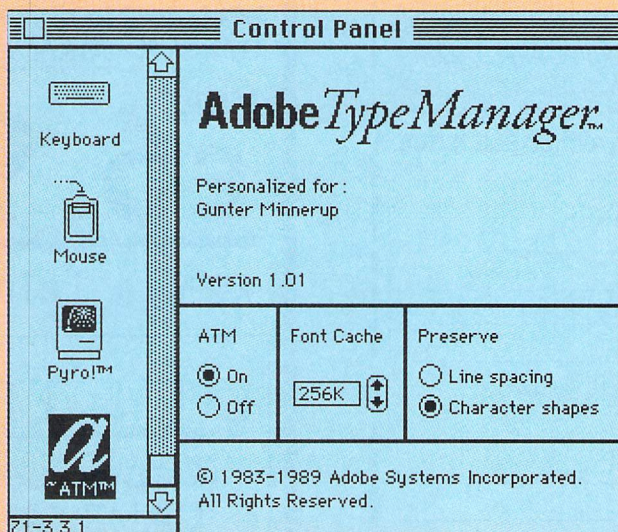
screen' upon which your monitor acts as a movable window. It works very well indeed with Spectre GCR, too.

INITS are very similar, and like CDEVs are installed by copying them to the system folder. They are loaded automatically on boot-up.

Often INITS announce their presence to the user by briefly displaying an icon at the bottom of the screen while the start-up sequence is in

progress. I've now grown rather weary of INITS because they tend to be mutually incompatible and it can be difficult to track down the culprit when those inexplicable crashes occur in the system when it has been overloaded with INITS of dubious PD origin.

Some however, are positively indispensable - such as the Adobe Type Manager which gives scalable outline fonts on-screen and on paper.



The indispensable Adobe Type Manager, the greatest INIT of all which gives scalable outline fonts both on-screen and on paper

WRITE ON!

Your agony aunt in matters PC, Mac or even (if you really insist) CP/M can be contacted by snail mail via this magazine, or electronically as 'gminnerup@cix'.

All questions, comments and suggestions are very welcome, as long as they're honest, truthful and legal.

Speaking of legality, I will just slip in another warning about those 'public domain' Mac emulators I come across every now and then, even in otherwise fairly respectable PD libraries - there can be no such thing as a public domain version, because software-only emulators require an image file copy of the Apple ROMs in order to work and these are definitely not available in the public domain.

In any case, all the ones that I've seen are quite blatant rip-offs of Aladin, Magic Sack or Spectre 128, and so are doubly illegitimate. Remember - you have been warned.

Classifieds

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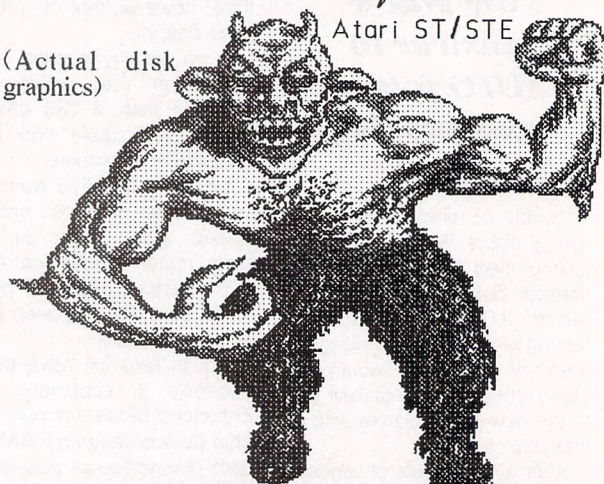
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*Cyclops,
in a bit of
a foul mood
this month,
lets fly*

"Alright Marines, get ready to rock and roll! I want two men at the rear with automatic weapons and two men in front with battlegloves and magnums. Look sharp, keep it tight and be warned the last mother into Star Base Five is a Wimp!"

Whoeee! is **Captive** a game or is it for real? Four hard-assed droids versus a zillion monsters in a mammoth bug hunt – and this time, no Flight Officer Ripley to back you up.

Maybe the electronic gadgets could make life easier, but as I'm only a simple grunt I have yet to figure out how to use them – once I do learn, then watch out!

What I have finally managed to figure out is how to use the land mines and they are just great. Watching a group of stupid critters blast lumps out of themselves with mines as they chase my rear down a mined corridor is enough to bring tears to my eyes – you should try it, it's unreal.

I warned you last month that this game is really addictive, and sure enough when I contacted Mindscape I found that they are being besieged by game-players who need help.

It all reminds me of the early days of **Dungeon Master** when Mirrorsoft almost ground to a halt because of all the telephone calls it was handling from wild-eyed addicts.

Fight dirty or you will never survive. In the early stages,

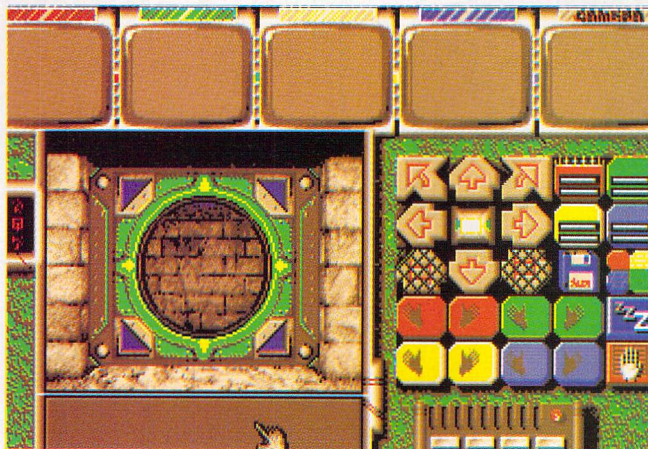
charge up the mouse pointer icon with power from the wall sockets and use this to fire bolts of power down the corridors to fry monsters at long range.

My own problems have only arrived at the door to the fifth Star Base. I suspect I've out-smarted myself by having had too much fun in head-to-head punch-ups in the early levels and then having to spend all my cash repairing damage. Now things are getting serious and I'm facing hordes of heavy competition with only a pea-shooter in my hand. That's it Man! Game over Man! Aaaargh...

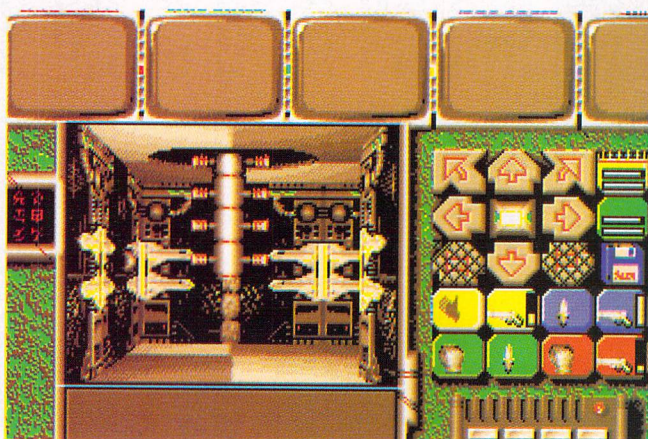
Cyclops' Rule says: "Real Adventurers don't draw maps". This means I take a little longer to cover the ground, but I meet a better class of disaster that way. Friends say I should have to pay twice as much for adventures because I spend all night walking around the same pillar, but you may be made of weaker stuff. I prefer it my way.

Games like **Xenomorph** and the **Bloodwych Data Disk** can reduce grown men to tears if their spatial awareness is anything short of perfect. Fear not, complete maps for these, and almost every other adventure game, can be had on disk for a measly £2.50. Write to Sue Medley 9 Warwuch Rd. Sidcup, Kent DA14 6LJ and she'll fix you up, (say Cyclops sent you for a good time!)

I'm also trying desperately to break in to the **Corporation** game. The rest of the Press keeps raving that it's a really great game and it's annoying the hell out of me that I can't seem to get off the base-line. All I know is that something keeps knocking me off and I can't even catch sight of what it is that's



Having finally opened the first door in Mindscape's smash-hit game **Captive**, you now need to have the guts to get in there and do some serious hacking. Just what are those electronic gadgets for?



This may look like a periscope, but it's really a ladder for ducking and diving between the levels. Time your moves correctly and you could squash the opposition first. But make a mistake and...

doing it. I spend all of my short life jumping up and down in corners firing wildly in the hope that I'll clear the room of the annoying swines.

Some nasty, clawing thing did drop on my face at one point which scared the hell out of me I can tell you, but apart from that the invisible man seems to be

my biggest enemy. Those of you who have made better progress (very clever!), will be pleased to know that Core Design has created additional data disks which it will be selling very soon.

These promise to increase your enjoyment, but they'll only double my despair. Rats! ●

NEW RELEASES

Leisure Suit Larry fans no longer need visit W H Smith's in a dirty mac to get a few extra thrills. It appears that the nerd has written his own 228 page book called *The Official Leisure Suit Larry Book* (£14.95).

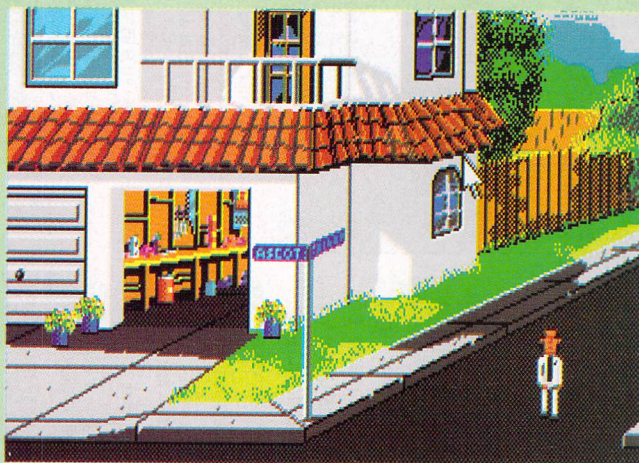
A complete breakdown of all the Larry games are included, plus the explanation for lots of the secret jokes which are to be found in the games. Did you know that the man in the barrel in Larry I is supposed to be Steve Wozniak from Apple Computers? Sounds like the ideal present for the nerd in your life. Do you know any Amiga owners?

The Delphine team which brought you *Future Wars*, (pretty music and graphics – dodgy puzzles) and *Operation Stealth* (maddening arcade sequences) is back with *Cruise* for a

Corpse. This is a murder mystery set in the 1920s aboard a yacht belonging to a Greek shipping tycoon called Niklos 'Papadapolopolotosos' or something like that – it's all Greek to me!

It sounds like a French version of Agatha Christie's *Death On The Nile*. Sierra has a similar game called *The Colonel's Bequest* which also involves interrogating and eavesdropping on the murder suspects.

Since Sierra's game was about as exciting as watching paint dry, I'll reserve judgement on this new French treat. Sierra had better stop producing expensive, turgid dogs and get back to fun and thrills or I just might start getting physical with whoever is destroying my favourite adventure company.



If you loved following the nerd's adventures on-screen, you'll get just as much fun from his newly released book which charts Leisure Suit Larry's rise from obscurity to a media mega star

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830 - SUPERBOOT V5 - ST boot prog, choose desktop, ACOs, Auto prgs to run DESKTOP-INF, GDDOS, ASSIGN.SYS, etc.

384 - LABEL EXPERT a great label maker, has preset formats for disks, video, & tapes.

884 - AMC GDDOS Atari's replacement for GDDOS, used the same, ARC SHELL v1.98 make ARC.TPP user-friendly, DISKTOOLBOX v2.03 check boot Sector etc. HYPERFORMAT v2.56 upto 929K bytes. VILLER 2.2 detect & disable viruses, fully docs + MORE

321 - Great selection of 6 high quality Degap pics, + some prgs for converting Degas to Neo & vice-versa.

322 - MEGACHROME ART PACKAGE Great colour art utility & 5 high quality pics.

375 - FONTEDI V3.0, Editor & loaders for Ram'd downloaded fonts. Fonts Inc., font data disassembler & Meta util giving access to alternative character set.

390 - EPLAN CAM, stock list facility. A great CAD package from Germany, Schapli, Electronics package with Star 10 & C-hub port drivers. * M *

391 - COLUMBIA, Drawing prog with some 3D elements & co-ord display, Studio (1 meg Ram), menu driven drawing package. Both prgs from Germany.

397 - DODDLE, Original Mono & Col versions. Also MEGACHROME v0.6 + more!P2P10

376 - FONTS2, 7 screen & desktop fonts, Columbia, Devroll, Hudson, Saturn, Spokane, Thames & Universal Roman.

537 - DOUBLE SENTRY accounts.

539 - TYPING TUTOR (1)

539 - TYPING TUTOR (2)

393 - THE ARTIST, Great drawing package with all the normal options. * M *

394 - PICMORIS, Utility to enlarge, reformat & manipulate pics up to 3 times normal size. * M *

820 - SHOOTY, 25 cartoons + display prog. * C *

540 - PUBLIC PAINTER

310 - 3 versions of ST Writer wordprocessor, Full docs & a printer installation program, + template & quick ref files.

526 - American trademarks from the 1920's & 1930's. Some very atmospheric images from Logic Logic USA.

541 - INVENTORI PRO

339 - Disk utils - a formatter that plays music to relieve the boredom of formatting. An Epson compatible disk labeler, a fix prog for baddisks & over.

MORE.

836 - Mono Emulator, ARC file compiler, BICLOCK to set time/date without using

ACIO slot. Coder enables to set up your printer from desktop. Degapcon converts Degap pics to Hi-Res & outputs to printer. FONTRIX loads an 8 bit font & make it GEM difficult + MORE

881 - 100% IBM compatible formatter that formats 3.5" or 5.25" disks for DOS or TOS comes with source code. ARC SHELL v1.91, Megamatic, Mono emu v3.0, STARINGEN for GEM GDDOS ASSIGN.SYS, etc.

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883 - MX-2 v2.3 a multi-tasking & multi-user environment. Up to 7 concurrent tasks such as compiling, printing, etc. Designed for use with GEM (included). Has network drivers. * D *

382 - Archive utils, including ARC, EXSOUZ, SQUEEZE, STPACK, STSQ, UENCODE & TAU a text archiver.

809 - AIM v2.21, image processing package. Has different facilities to read & write different graphic formats such as NEO & DEGAS & process colour images. Demo macros & plenty of docs. From the Delft University, Holland. * DX

876 - DELUXE FONTMASTER V2.0, Lay out text & print it with a large choice of different & original fonts on an Epson, IBM or NEC compatible printer. Plenty of fonts inc. or create your own. * MD *

879 - PALETTE MASTER, ARC package that offers the user up to 512 colours. Features such as airbrush, spraycan, fills etc. Docs in IST Word format. Demo pics. * C *

880 - COLOURBURST 3000 V0.3, Add different colours to pics from other packages. Up to 50 palettes per screen. There's a choice of 3375 colours. PICSWITCH Import screens from most packages & then modify. * CX *

520 - CLIP ART, Various fonts, pics of famous people, old & new. Seasonal logos, images & cartoons.

524 - CLIP ART, Children's whimsical font, elaborate font & Christmas card images.

328 - Formater, calendar, clock, dir printer, Disk Manager with format, copy file, disk free and rename folder options, + MORE

829 - This disk is packed with various programs for printing all kinds of labels.

857 - DISKMECH a powerful disk analyzer/archiver/editor, edit bytes, edit tracks and analyse disks etc. With full docs. CPANEL is an improved

control panel, F1P210

561 - GENESIS, Fractal landscape generator. FORMAT 10 is a 10 sec/80 track formatter.

VILLER, PCOMMAND, file utility command driven like MSDOS, + MORE

886 - DIV DEMO, Make demos featuring a title screen and scrolling message, without any programming skills

842 - DEC edit clone, Disk engineer v3.01 Do almost anything to a disk via GEM, such as providing a complete report on any disk, format, copy, listings & FAT info.

824 - ADDRESS LOG, On this disk, there's a limited address book & label printer, an auto disk catalogue that prints labels & a label prog for printing all types of labels + MORE

843 - AUTOGEN automates any Gem prog boot, XFORMAT, extended formatter, VC Spreadsheet a non-GEM spreadsheet.

564 - MOUSE TRICKS, a ACC that gives extensive control over mouse movement & menu style. Range of special effects. QUICK ST speeds up output in any use but has limitations + more

808 - FRACKTAL, A fractal drawing program from Germany - comes with Mono & colour versions, + Fractal landscape prog and 'loads a demos.

888 - AM-ST, Formerly the commercial package AEGIS ANIMATOR, which qualified at £79.95 !! A HIGHLY PROFESSIONAL, quality animation system. Loads of features, comes with full docs & has examples that you can examine & modify.

336 - MASTERPAINT, Drawing package with superb features. Works in Mon & Col. LITTLE PAINTER is a drawing prog.

521 - CLIP ART, Various human figures, different cartoons, Tiles & more.

522 - CLIP ART, Sports figures of high quality, July 4th logos

524 - CLIP ART, Food images, Atari ST & Fuji logo etc. Disks, Computers, Robots & other Sci-Fi.

525 - CLIP ART, Faces & Eyes, concentrating upon expressions, Horses, Building plan symbols & some different Christmas images.

527 - CLIP ART, Various borders, films etc. High art & cartoons - Picasso to small fluffy animals.

580 - LEAGUE SONGER, Play the full league programme. Watch your selected game with reports & text commentary. * D *

581 - TOP OF THE POPS, Climb up the Top 50, gamble on new or experienced groups.

583 - CENTAURIAN, shoot'em up attacking craft coming at you, thick & fast, FS1 FSBLACK DRAGON, an almost complete text adventure. Most of the hard work is done You need STMC to finish it off.

352 - FAMON is an Adventure game writing system, implemented in GFA Basic, is needed if you want to write your own games. Comes with 5

games that can be run without GFA.

868 - CHESSNUT is a 3D chess game with full Docs. SPYBOOKS is a great PACMAN clone. BELLUM INTERNACNUM is a fast action destruction game.

361 - A 68000 Assembler and a selection of prgs in FORTH-83, ST Logo, ST Basic and OSS Pascal.

305 - CPM EMULATOR, This is a CPM-86 version 2.0. Runs all 2 megabyte.

300 - CPM UTILITIES, Use with disk 305. This disk is necessary as it has all the DOS commands for 305.

334 - C COMPILER, Comprises boot up utility, ram disk, & command line interpreter. Compiler is processor, parse & code generator all in one.

613 - PROGRAMMING EDITORS, 3 editors, CONTEXT v2, PRO-ED & P-EDIT. Plenty of features & documents.

316 - XMODEM, file transfer util. MODEM 7, a multiple file transfer utility that - transfer the whole contents of a disk in one go. Full help docs.. VT100 terminal emulator & STERN a comms package.

366 - UNITERM v2.0a with auto-dialler & phone book, X & Y-modem, Kermit & ASCII protocols. VT200, 102, 100, 52, Tektronix 4010 & DCM term emulation. Docs included + MORE

536 - CASIO CZ SOUNDS & EDITOR, 2 Casio CZ series synthesizer editors/librarian prgs, with random patch generator. Also patch librarian program for Yamaha DX100/21 series synths. About 200 sounds on disk, prgs also allow storage of sounds to disk SAMPLE FILE CONVERSION PROGRAM v1.00 by C. Flint.

859 - RENUS WRITER, Superb program to design & print Rebuses - a 'code' in which pictures & symbols are used to represent words. Very easy for children to use & lots of fun. Examples included. F1P210

341 - BARNARD Game requiring the pairing of animals from memory. Smoothtalk, demo of Fliry Byte educational programs with synthesised speech. * C *

536 - WANGUICH, Studio 2 - Art package. **557 - SPELLING** made easy.

558 - MATHS made easy.

559 - KIDGONG, Numeric Go round, Kidpublisher, No Maze.

562 - INVASION, adventure.

563 - DARKNESS is forever, adventure.

564 - CHUNNEL, French tutor game * C *

565 - SKIDPAL, racing game * C *

566 - DIE ALIEN BLOB, shoot'em up game * C *

835 - 1ST WORD wordprocessor. Comes with a printer configuration utility & Docs.

309 - ADVENTURE WRITING SYSTEM, Full docs for writing text adventures. Includes Columbus, a sample adv.

351 - Hack I is a Dungeon & Dragons text adventure with graphic maps.

347 - SPACEWAR, arcade game. FIRESTORM, you're on a mission of mercy, uses mouse. AZARIAL addictive shoot-em up. Beat the invading threat.

508 - ATOMS, for 2-4 players. Take turns to place atoms & to dominate the screen. KILLERCHES is a fast & furious game which is down to speed.

AMMOTRACK Superb Master game.

349 - SOUTAIR with 3D graphics. Macgan is like Pacman, Galaxy and Sprengmeister re strategy games. * M *

529 - STOCKMARKET, Wheel & deal on the Stock Exchange. GALACTIC WARRIORS, a good shoot'em-up.

887 - SOTZOBON C, Probably the best PD C compiler with full K & R compiler support. Bit utilities, structure assignment, etc. Includes utilities. Make and a shell. Only a text editor is needed.

826 - DATABASE 1, GEM driven database. Easy to use & learn. Online help screens. Max field size is 3000 characters. Max file size is 320K bytes.

830 - HOME ACCOUNTS v1.0 by David Pullin. Allows a different statements in memory at once, & upto 100 entries per statement. * C *

827 - ST SHEET, A good quality spreadsheet written by Neil Smith. Can be used as a Desk Acc. * C *

825 - COMPOSER, music creation prog utilising the ST's soundchip or via midi interface, with drum kit & many features.

535 - ACCOMPANIST 3.2, 'Full featured midi sequencer program that run on all STs. 16 voice 96bpm resolution. Visual display of notes recorded, internal /external metronome signal. Some song files included. * C *

802 - THE PLANETS, A slide show around the planets with plenty of pictures, facts and figures. * D *

833 - YOUR SECOND ATARI MANUAL, 250 kbyte text file of version 4 of the book. A must for all ST users.

545 - UPSTART, game * C *

546 - SLIDER, game * C *

547 - ADDITION, game * C *

548 - ENGLAND team manager * C *

549 - FOOTBALL pools predictor

551 - FOOTCOP playable demo (2 disks) * C *

552 - BERMUDA race 2. * C *

553 - 1ST SERVE tennis. * C *

554 - NPOLEON * M * F5

555 - WELCOME to Chemistry

363 - ST WRITER ELITE V3.8, the latest release of ST WRITER now GEM orientated. It's a superb PD wordprocessor with text files & docs

837/841 EASY TEXT PLUS Fully working Desk Top Publishing demo prog. Use the WYSIWYG presentation. 21 page manual on disk. The only difference between this & the commercial version is that this only prints 1/4 of a page at a

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543 - WGDATA, complete database system.

542 - TREASURE HUNTERS, platform game with tutorial form.

832 - ST TOUR, guided tour of the ST showing use of Desk Accessories, menus, windows etc. in tutorial form.

873 - B/STAT V2.01, Sophisticated graphing & stats analysis prog. Various types of graph & analysis available. Input your own data or load it from various spreadsheet prgs. Printer & metafile output. * D *

540 - FLYING START, a standard RS232 comms pack. 7 option menu for various formats of data transfer. VANITERM 3.71 a great PD Comms package.

365 - WORLD mailbox program v3.3 with standard configuration files for TAPR, TMC1, TMC2, PAC-COM, TMC20-0 & TMC22-0. AFA PK80, PK87 & PK323, MFJ1270 & 1274. Docs included.

839 - Nigel Smith's ST 68000 Ref. guide v2.0 A pop up guide to Assembly language of the 68000 processor. Runs as a Desk Acc.

874 - OPUS V2.2, GEM based spreadsheet & charting prog. It's fast, powerful & easy to use. GDDOS support. Full docs. Plenty of examples. * DX *

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873 - B/STAT V2.01, Sophisticated graphing & stats analysis prog. Various types of graph & analysis available. Input your own data or load it from various spreadsheet prgs. Printer & metafile output. * D *

540 - FLYING START, a standard RS232 comms pack. 7 option menu for various formats of data transfer. VANITERM 3.71 a great PD Comms package.

Hunt for the missing clip-art and discover better graphics. Then be guided through Calamus

A 300 page paperback guide landed on my desk the other day. It's all about Calamus DTP and is cunningly titled *The Guide to Calamus Desktop Publishing*. It's written by Bonnie Robinson and is published by Ditek International, a Canadian company.

The book is divided into main text and the appendices, and both parts take up roughly equal space. The bulk of the book concentrates on Calamus, with helpful appendices covering outline art, the font editor and a preview of Calamus 1.1. The main text begins

with a tutorial on the use of the program. It then switches to a discussion of the concepts of good page design. Fifteen pages later comes the explanation of the main menu options within the program and this makes up the guts of the book, covering about 120 pages – all interesting stuff!

Although it partly duplicates what's in the Calamus manual, it throws some new light on tools and techniques in a helpful, unpatronising style. It includes the occasional pearl of wisdom, like a complete listing of the key bindings (short cut keys).

The appendices do much the same thing for the Calamus accessories, but also include a complete set of preview sheets for the fonts in the Compugraphic range. This is either a very helpful addition to the book or just a splendid bit of padding, depending on your outlook and requirements.

In all, there's lots of useful information although its organisation is questionable and there's not as much included as at first appears. *The Guide to Calamus Desktop Publishing* carries ISBN 1-550-84-000-2. ●

MOUSE ADD-ON

A new ST accessory has just been released onto the market which could help to improve the graphic content of your DTP pages.

Basically it is a small clear-plastic lens marked with a cross-hair. With this gadget, which is called Tracey, velcroed to the side of your rodent, you can trace a sample drawing directly into a graphics or DTP package.

As long as you don't skew the mouse while tracing, you can transfer a pretty good copy of a drawing onto your ST screen. The Tracey performs best in medium or high resolution modes and can produce some respectable tracings.

A graphic tablet isn't, but then at £7.95 it's not priced like one either. If you're interested in the Tracey just send a cheque to Sidewise, PO Box 4, Totnes, Devon TQ9 7EN.

SOME DAY MY PRINTS WILL COME

In response to my plea for clip-art, Anna Dayton wrote in and enclosed a couple of gappy looking print-outs which she'd taken from her Amstrad DMP 3000 printer. The dumps contain some interesting clip-art and characters from the Chinese horoscope. I say 'some' interesting clip-art, since in each of the samples, there were graphics missing.

Anna uses Timeworks DTP and has noticed the problem on several occasions. The missing graphics are in no way consistent; they don't always take leave at the bottom of the page, for instance, and other graphics on the same page print out without problems. None of the graphics are corrupt themselves – some of them just don't print.

This isn't a problem which I've ever come across before, but after a quick call to GST technical support it was suggested that the problem might be due to a shortage of memory. Anna is using a 520ST and the files are fairly hefty bit-maps. When Timeworks prints, it reads in an overlay from disk to handling the printing.

It may be lack of room for certain information about the graphic that stops it from printing. In normal use, without the print overlay, there's plenty of room and the images will show on-screen correctly.

The only advice I can offer then, is to ensure you haven't any unwanted desk accessories running. If that doesn't work, it's down to the ST shop for half a meg of memory, I'm afraid.

I'm still interested in any clip-art you may have collected so keep sending it along with any questions, points of interest and answers to: Charles Michael, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP.

MADAME LA GUILLOTINE

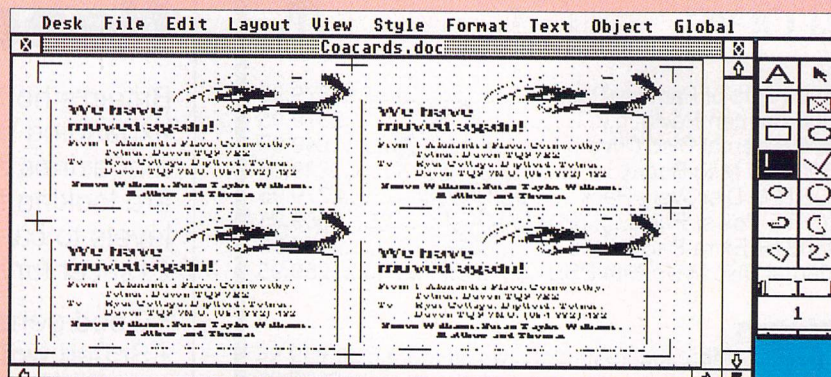
I've recently moved house and produced a wodge of change of address cards using PageStream. I've become very fond of this program recently, since I used it to design all the document samples in this month's DTP feature. This really highlighted all the different facilities available with this flexible DTP package.

The cards looked very much like the samples in that feature and I took them along to the local copy shop to have them

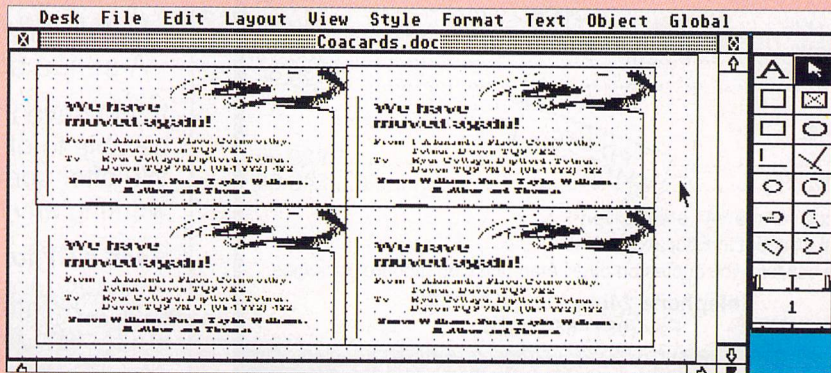
photocopied – a pleasant shade of brown and cream (sounds lovely Charles – Ed)

What all this is leading up to is that the shop found it very difficult to guillotine the cards accurately, and as a result left some of the guidelines showing.

An object lesson: if you're going to print several copies of an image on a single sheet for trimming later, use accurately positioned crop marks outside the limits of the image, rather than drawn rules.



Four cards with complete outlines are difficult to crop without leaving some outlines



Use crop marks on the corners and mid points to achieve a more professional result

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I Want To Work For Atari ST User,
The Editor, Interactive Publishing,
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NEVER AGAIN

I went to the Atari Computer Rail Show (sic) at Glasgow Central Station as I am the proud owner of an Atari 520STFM. However, after looking forward to going to my first ever computer show – as most, if not all of them are in England and I can't afford to travel there – I did not have too pleasant a visit.

The first thing I did at the Show was to buy your magazine, 'ST USER' at the reception desk, but while trying out the Lynx machine, someone stole my magazine. I asked at reception if anyone had handed it in, but of course, no-one had. Worse still, I could not buy another as they had sold out.

I then decided to go in to the town to do some shopping before returning to the station for my train home. However, on returning to the station I had some time to wait for my train, so I decided to go back to the Show until my train was due.

But this time, someone stole my wallet from my jacket pocket. Not only did I lose all my money, but my train ticket was in the wallet also.

So I doubt if I will be going to any more computer shows – they don't seem to be very lucky for me.

Barry Jones, Saltcoats, Scotland

That's some hard-luck story. It's like all your worst nightmares come true – your copy of 'USER is stolen and you find that it's sold out, and then you can't buy another one from somewhere else because you haven't got any more money due to the fact that your wallet has been stolen, and then you find you can't even get home, and...

Stop, stop! I can't take any more! Here take this copy of a truly spiffing game – perhaps it will help to ease the pain, and you won't have to leave the house to play it either.

And whoever stole Barry's wallet, magazine and train ticket – give them back you fiend, they're not yours are they?

MONEYBAGS

I discovered the August edition of 'USER and read it from cover to cover – it was riveting. I am waiting for the TT.

A reader, Mr C W Philpott – asked for advice on the best system for computer aided design. Part of the answer was that Mr Philpott had "neglected to mention a price ceiling".

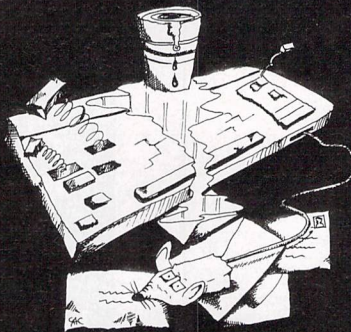
The Atari ST is not a pussycat. It can do solid work for which solid software is needed. There is no point in blinking at paying a solid price for that software.

If your magazine sees a product for the ST, then evaluate it and tell us the prices. Your readers expect 'USER to point them towards value for money. Do not confuse that with cheap. We don't need patronising comments about prices. Prices are relative – your readers will decide what is too expensive.

The Atari is a superb computer platform. Note that I said "superb" not "perfect". It is up to 'USER magazine to show us the difference.

Chris McEwen, Canberra, Australia

Who's a moneybags then? Lucky devil. Yes, you're right about the abilities of the ST, but perhaps you



mail

The dry wit and humour – well we like to call it that – which has been missing for the last couple of months is back with a vengeance. Can you breach the Walls of 'USER? Read on...

**Send your missives to:
Atari St User, Europa House, Adlington
Park, Macclesfield SK10 4NP.**

haven't noticed that we do give the prices of products in our reviews, and if a product isn't up to scratch, we say so.

We don't intend to patronise readers by making judgements about prices and affordability. But at the same time, we don't like to assume that all our readers have unlimited resources.

Trust us. At 'USER we suffer from the strapped-for-cash syndrome.

THE PLOT THICKENS

I read with interest your article entitled "Oh My Stars!" regarding astronomical software. However, some time ago I was fortunate to view a rather amazing astronomical software entitled Skyplot.

It was crammed full of incredible details, including the facility to view the night sky from anywhere in the world, both in the past and in the future, to magnify the sky to give greater detail and to include (or exclude) such delights as planets, nebulae, open clusters, planetary nebulae and galaxies. In

addition, you could 'click onto' any 'star' and it flashed up details about it.

I remember that the program was written by a German but have been unable to secure a copy.

The purpose of my writing is to draw your attention to this piece of software which, from what I remember is far better than the software you reviewed, and to seek your help in finding a supplier.

Finally, as a newcomer to the world of computers, word processing, etc, I applaud your column for people such as me. It is refreshing for a specialist magazine to recognize that a large number of people are beginners and cater for their needs.

Well done, and I hope that you can help me in the same way.

S R A Wright, Unst, Shetland

Don't mention it.

Sure, Skyplot is a groovy program bursting at the seams with astronomical statistics but it doesn't quite have the stunning animated graphics of the commercial software

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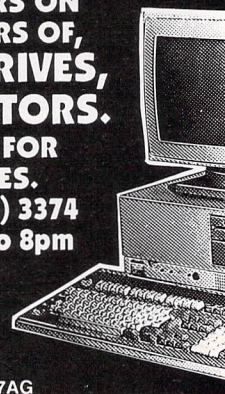
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we reviewed and consequently, because we were trying to interest those readers who would otherwise be turned off by the mere mention of astronomy programs, we decided to leave it out.

Skyplot is an excellent program, available from all good public domain libraries. Take a look at our PD pages for a suitable supplier.

RECORDER BREAKER

My grandchildren own an Atari 800XL which has been very good, but unfortunately the data recorder was broken. We took it to Atari World in Manchester, where they kept the recorder saying it would be easier to buy a new one. Since then I hear that the firm is no longer in business and we are unable to get a recorder anywhere.

Could you tell me where I could get one, preferably locally, and also is there a word processor available, and could you give me the address of our nearest repair shop?

Mrs H Cottam, Adlington Nr Chorley, Lancs

Silica Shop should be able to produce the goods. Although they're located in London, they have an efficient mail order service, and will be able to provide you with a wide range of products and services for your 800XL.

Call the London Shop on 071 580 400, or write to Silica Shop, 52 Tottenham Court Road, London W1P 0BA.

LANDROVER BLUES

Unfortunately at the moment I do not own an Atari ST but I bought about 40 copies of 'ST USER'. I bet you're thinking that I'm stupid, buying that many when I don't own an Atari ST. Well, up until recently I was going to buy one (a 520 STFM) when we hit financial problems. My dad has a Landrover which needs a new chassis (the bit that holds everything together) which will cost around £2000. So bye, bye Atari 520STFM.

This would have been nice to have seen as I have all the CoverDisks. I have started my new school and I am also a keen piano player and play it quite well. I have seen a lot of music programs that would be quite useful (issue 56). I would love to try out new games for you, but I can't (I've heard that saying somewhere).

Altogether it will cost me £350 and I only get £1.50/£2.00 spending money. I like the sound of the Discovery and Explorer packs. Would they be better for me or not? It will take me ages to save up for one. By the time I've saved up enough money I'll be an old man.

Thanks for your time.

Name, age and address withheld at correspondent's request (so his mother doesn't find out it was him).

Another sad tale of impecunious youth. Do you lot out there think we're just a soft touch, or what? Stop! You're breaking our hearts.

If we had a spare 520STFM to give to you, we would. But we don't. Still, maybe there's some wonderful, generous person out there who has one for you - contact us if you do and we'll pass it on.

But don't hold your breath - things like that usually only happen in fairy

tales. Sorry to hear about the Landrover. Damned fine vehicle that.

VIRUS-LOVING PC

As a new STE owner I would like to congratulate you on producing such a good magazine and I am especially looking forward to your forthcoming explanations on how to use your CoverDisk to the full. Also I'm not convinced that GEM is a more friendly interface than MSDOS (or Domestos, as we call it).

Have I stumbled upon some profound discovery? Using 'Antidote' as supplied on one of your CoverDisks identifies a virus on disks formatted on my STE, which can be read by my PC at work. Killing the 'virus' renders the disk unreadable by the PC. The only way to be sure of having a virus-free disk is to use the 'Multiformatter' as supplied by your good-selves. I suppose you will have to send £5 to that nice chappie who wrote it.

Just in case you are wondering why I want disks capable of being read by a PC, it's simple. I cannot afford a printer so I use the one at work where necessary.

Even though you have a good mag, I must tell you off for those naughty photographs you printed! In your article on repairs you rightly mentioned the importance of being earthed when you open up the Atari. However, no-one in your photograph was earthed! (Go on, tell me they were earthed from their ankles.)

Other than that, keep up the good work and I hope you resist the temptation to go overboard on games reviews, like certain other rags I could mention, (I won't call them publications, that's being too generous).

Stephen Bovis, Hightcliffe, Halifax

Yep, they were earthed by their ankles.

ADDICTIVE HABIT

I don't know where else to turn. The Atari 800 still remains a breakthrough as far as I'm concerned. It is the ONLY computer I know of that has FOUR joystick ports usable by durable, inexpensive joysticks. It's important because I and the neighbourhood gang can't get enough of four-player games. Competitive or cooperative, arcade-like or strategy, we love them to death! We starve for more!

Please! Tell me how/where I can get more four-player games. Any multi-player games will do also. Print my address if you have to! These games are tough to find. Not to mention Atari 8-bit software as a whole. In summary, I would like any info on public domain, commercial, shareware and any other -ware multi-player games for the Atari 800. Please include cost and ordering info also. Your help is desperately needed! Thanks!

Larry Nocella, 112 Beech Ave, Woodbury Heights, NJ, USA

Well, you heard the man, folks. He's just waiting to give you his life's savings to get his hands on some of the hard stuff.

If you look in our Public Sector pages, you'll find the names and addresses of PD libraries who might be able to help you. Apart from that, you're on your own.

CHAOS THEORY

It's Thursday, the pulse is quickening - today's the day. A quick trip to the Newsagents and there it is. Atari ST User is

on the shelf. Then spending agonising hours sitting at my desk, waiting for the close of business to rush home and try out all the very latest goodies. Wondering if there's enough information either in the magazine or on the disk to get the programs up and running.

In goes the disk, scroller.prg - that looks like a good one, double click andit bombs out! Oh @\$**@!! Never mind, such is life. But what's this? I will see a change next month, new Disk Editor - great!

And there was a change, yes there was - now two programs won't run. What an improvement! So off it goes, yet another disk to Stanley Precision, another four week's wait.

Don't get me wrong. The magazine's great, the disk superb (when it works) but I object to spending hard earned dosh on something that doesn't work properly. And yes, I know there are bound to be some errors in copying, but why does it always seem to be me?

Neil Willson, Poole, Dorset

You must be just about going around the bend by now. Starting to feel paranoid yet? ("They're out to get me, I know it".)

You have our sympathy, but there's really not much we can do. It's got something to do with Einstein's theory, and the laws of probability. On the other hand, perhaps it has more to do with Chaos theory - that seems to be fashionable now.

Whatever it is, hopefully your hassles are over, and you can look forward to problem-free CoverDisks. Look at this month's - it's a corker!

NEW-THINGY-DON'T-WORK

I read in magazines about bad service and the like, so I thought you might be interested in another example of first class service.

Last month I purchased your special offer Rombo Vidi-ST, which duly arrived 21 days after I sent my order. I set my system up, prepared some videos, then booted up.

What I got was not a shot of one of Robert Palmer's Addicted to Love girls, but a computerised Northern Lights display. Being in the electronics trade myself, I see the 'brand-new-thingy-out-of-the-box-and-don't-work' routine quite a lot.

I rang those people at Rombo and what really surprised me was their pleasant attitude and helpfulness. Not one ounce of the patronising, despotic attitude I got from a certain Dutch-originated electronics company!

After a friendly chat with Colin Faulkner (who did the hardware side of the Vidi), it was decided that the hardware was at fault and without any further ado told me to return it direct to them for repair or replacement within 24 hours. True to his word, the Vidi-ST was back in operation on my STE on time!

I hope this letter will inspire those readers who have been thinking about buying a Vidi-ST to go ahead and do it, because the back up does indeed match the product and with today's technology, it's essential.

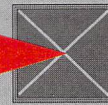
Stephen L Jones, Tamworth, Staffs

You don't happen to work for Rombo, do you? No, probably not.

It's encouraging to receive letters from readers who are getting good service from companies. There are lots of them out there doing the job properly - and they deserve an honourable mention from time to time. ●



CLOSE BOX



SPOT THE DELIBERATE MISTAKE

OOPS!

Here is an entry from one of our readers in the Band-in-A-Box competition. Spot the deliberate mistake. The postmark on the other side reads "The Royal Society of Chemistry, Exeter District". Sorry, no prize this time...

Band in a Box Comp.
Answers:-

1. Manchester
2. I Should be so lucky
3. Guitar
4. One
5. Band on the Run
6. Bonzo Dog Doo Dah Band
7. Band Aid
8. Tom Robinson Band
9. Band of Gold

A BORING LIST OF WINNERS IN OUR SURVEY COMPETITION

Thanks to everyone who replied to our unintentionally 'creative' reader survey. Perhaps you didn't notice, but there were several different ways to answer some of the questions, and you lot tried them all. Next time we'll try a different approach to survey writing and design.

Anyway, we promised some prizes to 30 lucky readers with the patience to answer the questions and send them in. So, here they are.

These five people won a free year's subscription to 'USER':

John Luby, Duns, Berwickshire
M Godbsici, Manchester
Mike Donnelly, Salford
Bob Freeman, Nuneaton, Warks
K B Walker, Birmingham

And these 25 people won a Gasteiner mouse each:

Peter Gunning, The Tryst, Edinburgh
Keith Blackwell, Romford, Essex
Roger Phillips, Sidcup, Kent
Vinay Dhanani, Hoddersdon, Herts
P F Swift, Crumpsall, Manchester
Al MacNeish, Elgin
Ian Butterworth, Sidmouth, Devon
Les Rolton, Weymouth, Dorset
David Bedford, Lightwater, Surrey
B B Carter, Neath, W Glamorgan
Mandy Flower, Timsbury, Bath
J C Ingate, Bexleyheath, Kent
G A Bawtree, Redhill, Surrey
G S Butler, Wood Farm, Oxford
G Humphreys, Falmouth, Cornwall
Dave Lascelles, Green Lanes, London

B Lesslie, St-Brelades, Jersey
C R Carroll, Hull, Humberside
Eric Longford, Tobermary, Isle of Mull
D Boyes, Leeds
P Budge, Cheadle, Staffs
K P Pugh, Hinckley, Leics
J C Toler, Nottingham
F J Fee, Newport, Gwent
D C Pryke, Basildon, Essex

YET ANOTHER BORING LIST

And here are the names of the 20 winners in our Band-in-a-Box competition. Hold tight, your prizes are on their way.

K Leahy, Sheerness, Kent
Tim Hull, London
Bill Basten, Cold Ash, Berks
Mark O'Neill, London
Stephen Haisley, Witney, Oxon
Alan Patterson, Aberdeen
David Ainslie, Sheffield, Yorks
Robin Renshaw, Nettleham, Lincoln
Paul Cross, Southall, Middx
K Anderson, Edinburgh
J H Boerman, London
B Stockton, Northwich, Cheshire
Adrian Gillespie, Uxbridge, Gillespie
David Hunter, Sunderland
John Ward, Norris Green, Liverpool
Keith Mole, Bedlington, Northumberland
S R Halsall, Newport, Gwent
Kevin Webb, Congleton, Cheshire
Fran Westwood, Brierley Hill, W Midlands
Nathan Davies, Sutton Coldfields, W Midlands

IN NEXT MONTH, BUT KEEP IT TO YOURSELVES...

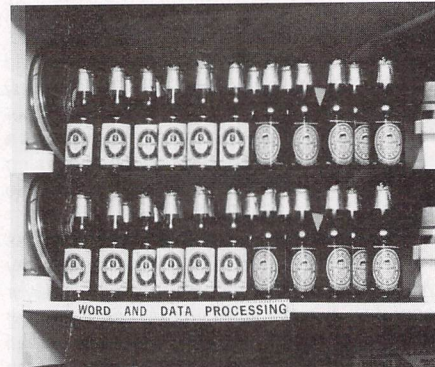
The ST is developing all the time - improvements are made and new versions come out. But at certain stages in its development, the changes become so dramatic and overwhelming that a new machine can be considered to be part of a 'new generation'. In our next issue, we'll investigate what the next generation of STs will be like.

But you'll also want to know how a program is developed, so look for our second feature. We'll show you the ins and outs of it all, step by step!

Also in the March issue, we'll be beginning our brilliant new series on 3D graphics on the ST. We'll show you how to do it yourself. This one's a real scoop!

Then, of course, there are 19 pages of games reviews, games news and tips, the latest news on the ST scene, a Masterclass on word processing and reviews: That's Write, ATSpeed, PageStream and much more.

Don't miss it...

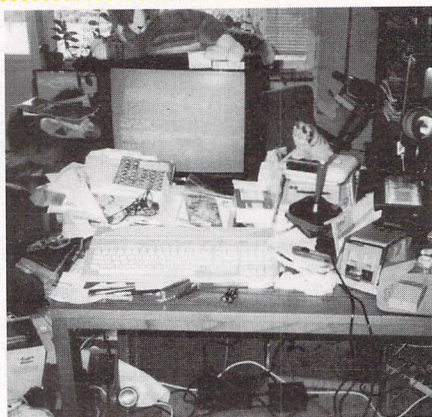


This is the editor's secret emergency resuscitation kit. Show us yours...



GUESS WHO?

Write and tell us which member of the team you think this is. Sorry, no prizes but we will print the answer next month...



DICKY DESKTOPS

This month's winner, and in fact, probably the all-time winner of our Dicky Desktops competition is Eric Rowley, from Stockholm, Sweden. (Eric from Sweden?)

Rarely has 'USER' seen it worse than this. And we'd like to go out on this high note of utter disorganisation - this is the last Dicky Desktop we will print. Take a look at next month's Closebox to find out what dreadful or imaginative things you'll have to do to your ST to get it pictured in our next competition.

Introducing...

Wordflair™

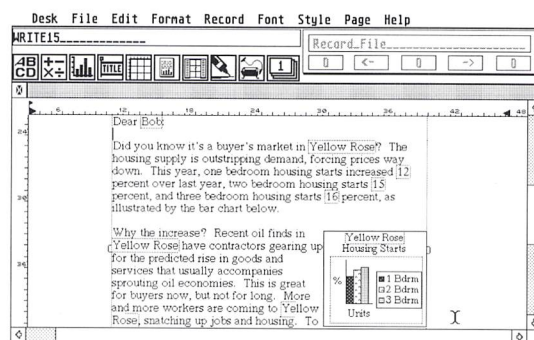
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Wordflair is a new concept in word processing for the Atari ST.

Of course, Wordflair provides all of the features that you would expect from an efficient, modern word processor but then Wordflair goes further, much further ... allowing you to combine text, graphics, calculated regions and data so that you can create eye-catching documents without having to switch from program to program.

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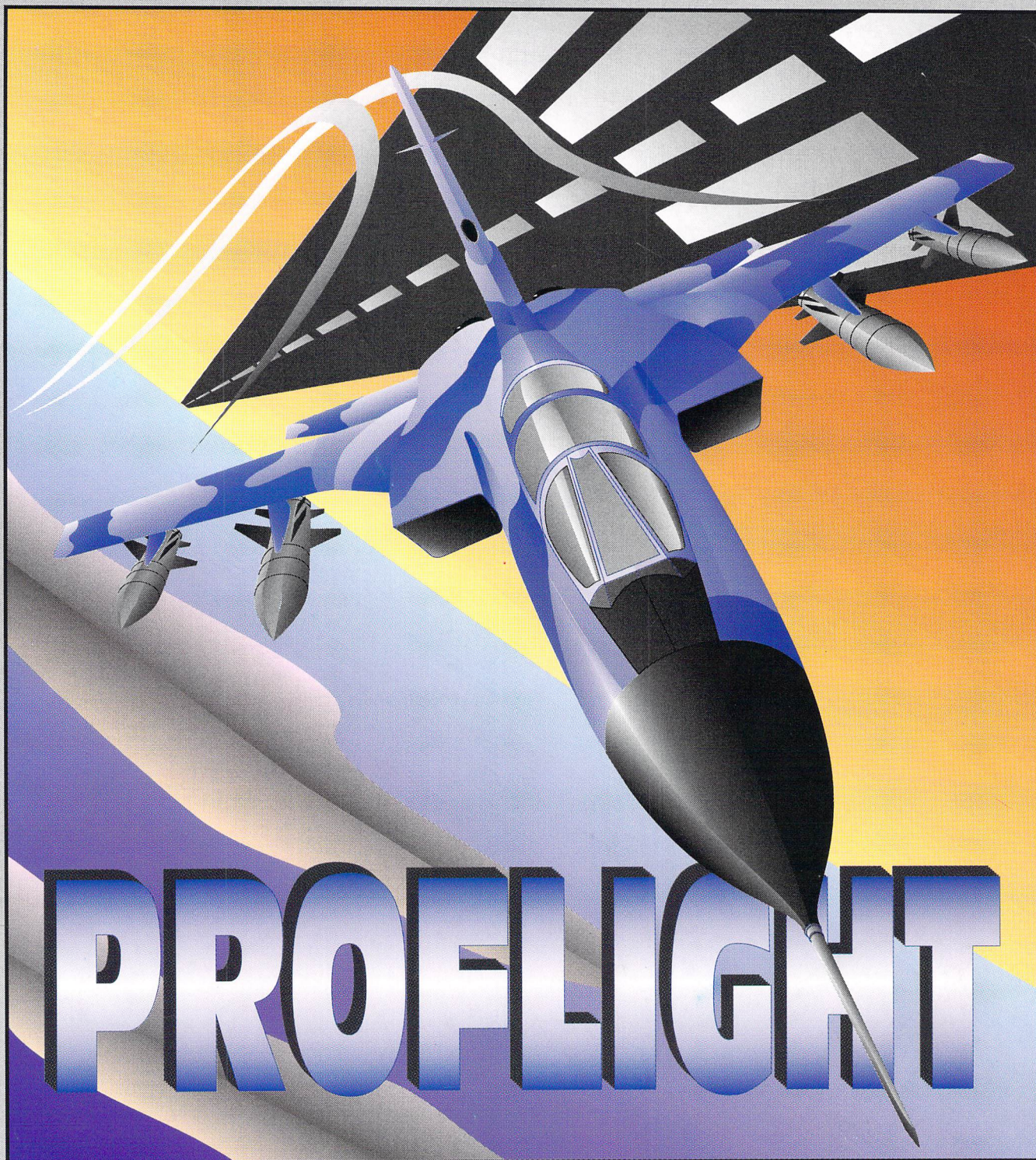
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Wordflair costs £79.95, inclusive of VAT, and is available from all good computer shops. In case of difficulty you can order Wordflair directly from HiSoft at The Old School, Greenfield, Bedford MK45 5DE. Tel: +44 525 718181, Fax: +44 525 713716. Access and Visa accepted.

The Tornado Flight Simulator for your Atari ST



HiSoft is delighted to announce, at last!, the immediate availability of ProFlight.

ProFlight; a supremely accurate simulation of the Panavia Tornado military aircraft, a plane that is the fastest aircraft in the world at ground level (Mach 1.2) and one of the fastest at any level (Mach 2.2) with advanced swing-wing technology that gives it a truly multi-role capability. ProFlight uses complex and exact flight equations that allow you to fly this powerful fighter just like its pilots.

Everything is there ... you can fly peaceful reconnaissance missions or roar into full attack with cannons, bombs, heat-seeking Sidewinder and radar-guided Sky Flash missiles.

ProFlight comes complete with a professional 170-page, ring-bound flight manual which details every aspect of flying this exciting aircraft together with a pull-out specification sheet of the Tornado.

ProFlight is available from all good computer stores and costs only £39.95 inclusive (UK only); if you have difficulty locating your copy, please call HiSoft on 0525 718181 and ask to speak to Julie.

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