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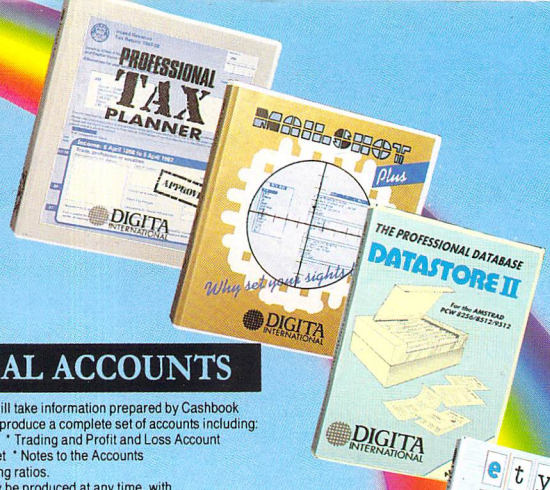

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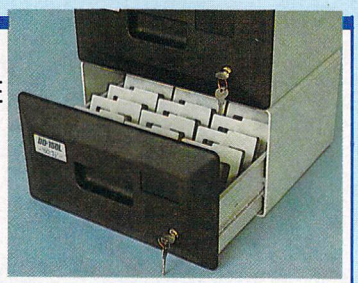

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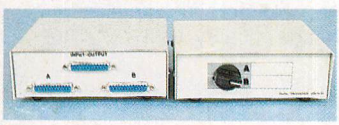

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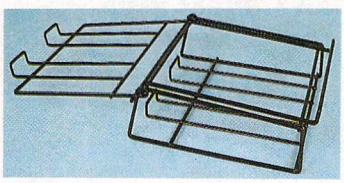

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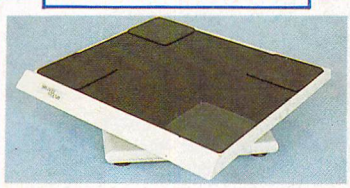

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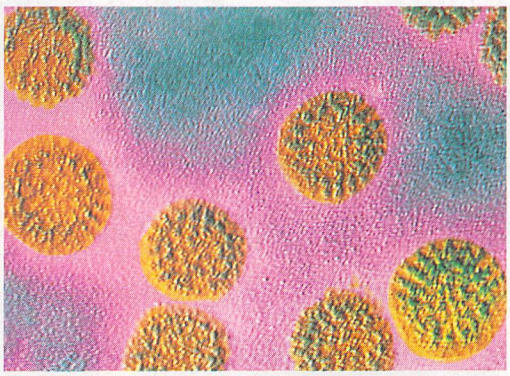
FEATURES

LICENCE TO PRINT MONEY?.....17

Dad's gone darn the dog track, Muvver's at the bingo...

THE UNSEEN INVADER.....69

Infection's in the news again. A recent Friday 13th produced scores of virus-laden trash-bound floppies. Save your sanity with some sound advice





SCAN-TILY CLAD.....97

Flat-bed, hand-held and a combination of both, scanned and delivered!

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GFA DRAFT PLUS.....63

Want to be responsible for the '90's answer to tower blocks? Get designing with GFA's cheap package

MEGAPAINT.....65

Another fantastic pixel-pummeller vying for your clams

TOWER POWER.....86

Put your silicon where the Sun don't shine with a replacement case from the prettily-named Radio Service Company.

BOOKS! BOOKS! BOOKS!.....89

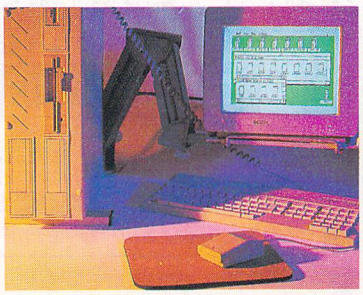
More DTP manuals than you can shake an electronic paste-up board at (strange imagery, right?)

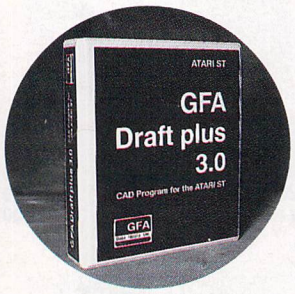
520 TO 1040ST RAM UPGRADE..117

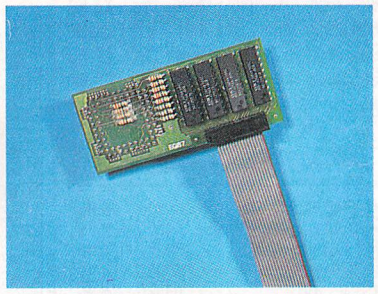
Bin your soldering iron and measure up with the big boys, with Third Coast's solder-less upgrade

HYPERCHART.....117

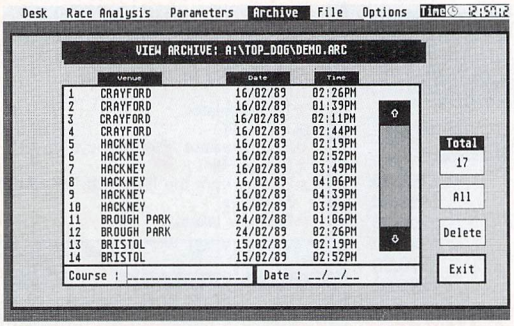
Presentation graphics were never like this! Roland goes into wow-factor 10...







USERDISK september...25



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REGULARS

NEWS **8**

Real and in-the-flesh, Dave Stewart brings you the news from tommorow, today! (sale day at the cliche store again...)

WORLD SCENE ..... **??**

Look, JJ Leiberwitz Jnr is very similar to someone who may have lived at some time and who might just have been American - OK? (Anyway, Ma Leiberwitz is filling in this month.)

PLAYTEST **33**

I remember when you could get two pair 'o boots and a half dozen of the best games for a ZX81 and *still* have change from a florin. Decide before you buy with PlayTest...

ART-WORK! **76**

Henrik Schroder guides your electronic paint-brush on a tour of the pixels

PUBLIC SECTOR **81**

Head of all Staff Writers John Crumpet Butters gets it for free!

MASTERCLASS **91**

Produce stunning parish news-letters, stamp club brochures and the like using 1st Word and some tricky DTP wrinkles

INTERACTIVE RESCUE **103**

Ye...ye...ye...yes, M...M...Mr Tracy

ALL ABOUT **111**

Want to see how one poor journalist can write 2000 words about a mouse? Turn to page 111...

DO IT YERSELF **118**

Playing with yourself was never such fun. John Kennedy provides an electronic Scalextric opponent

MAIL **113**

The laundry lists laughingly passed off as mail which grace our unfortunate pages month in, month out. I was just saying to Madge in the high street, it's a disgrace...

ASPECTS 129

Get into the rhythm with Drumbeat in **Music and MIDI**...tune to Teletext and get on your Sysop Soapbox with **Communications**...The story of graphics and the file transfer along with supercharger upgrades in **Emulation**... When is an RPG not an RPG? - find out in **Adventures** ...pròblems with running text around your images? don't despair read **Desktop Publishing**.

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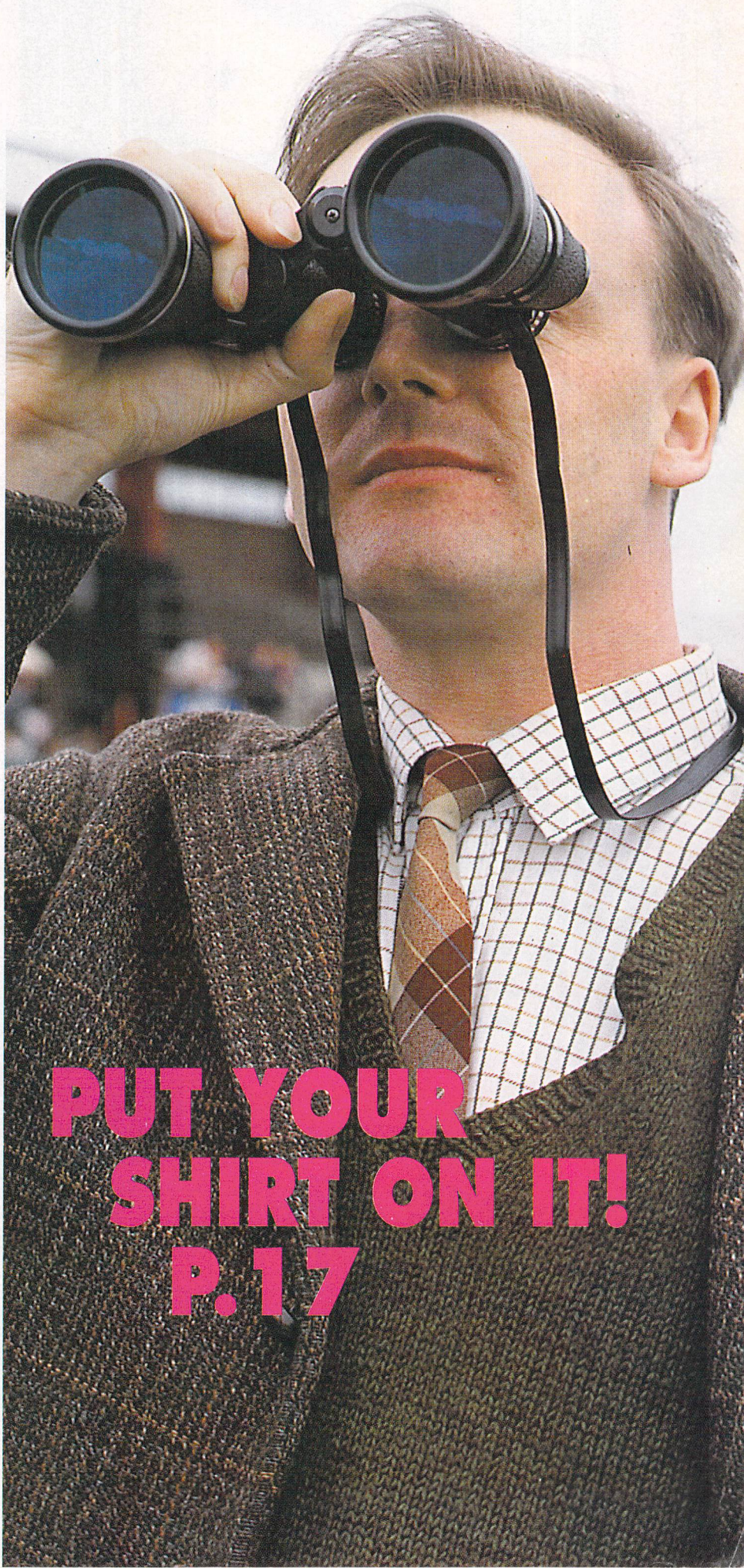

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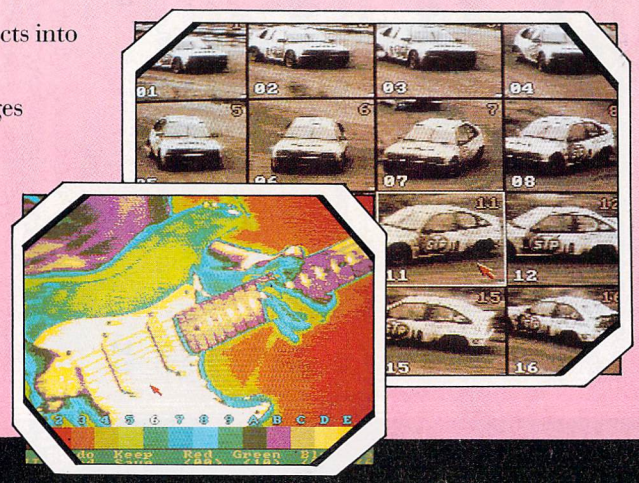

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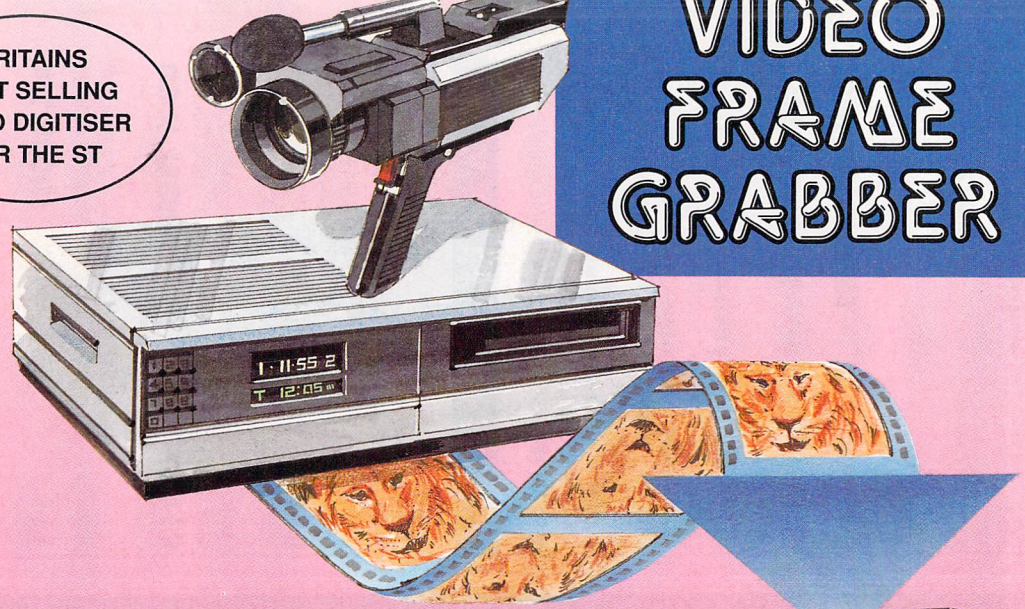

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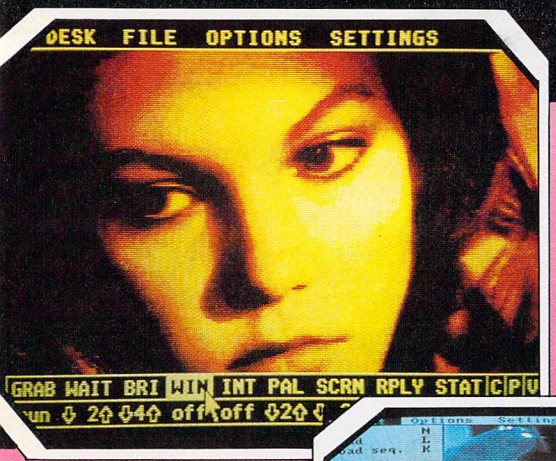

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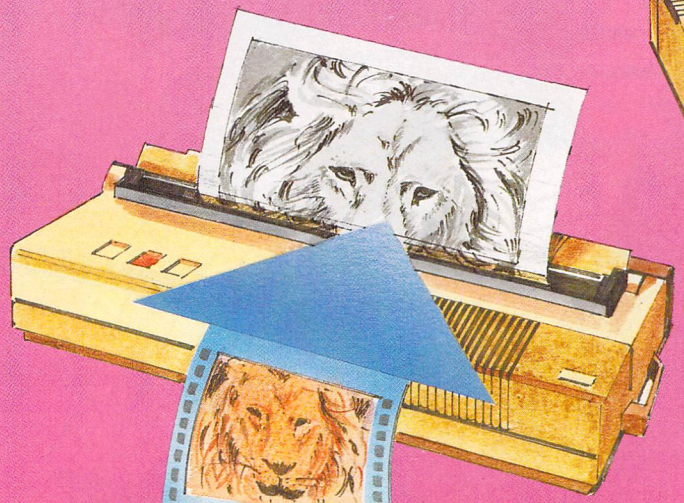



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ARChive

Let's be honest, there was just so much packed into last month's news that we simply didn't have room for the ST ARChive. This month, however, things are a little quieter as many of the people involved in the ST scene jet off for their summer hols - so our fascinating trip into the ST's history returns once again...

The Atari ST has been around since 1985. There have been plenty of changes since then so now, 'USER presents the only Atari ST archive of news, views, quotes and major events taken from the years that have shaped the lost-cost high-performance personal computer scene.

FOUR YEARS AGO

PCA reduced its £500 ST graphics package to a more reasonable £199.95... Atari announces that US software giant Microsoft, is to produce an ST version of their Macintosh document processor, Microsoft Word. The ST package, to be called Microsoft Write, was said at the time to signify the ST's arrival as a serious business tool... Top programming software house HiSoft, moves to larger premises. The company went on to become one of the leading ST software houses in the UK... Atari shows a new ST model at the 1986 PCW show: the 4160STF. This looked like a 520STFM but contained 4Mb of RAM. The machine never made it although the Mega range of 2 and 4Mb machines was launched some time after...

THREE YEARS AGO

Atari announces that it is to drop the price of the 520STFM bundle by £100 to £299 as of September 1st 1987. The trade gets nervous because of existing stocks bought at a higher price, but Atari manage to stabilise the situation... AB Software emerges as one of the first software developers to produce low-cost ST software. Quick-List ST, a disk/file cataloguing utility, is released for £4.99... Kuma produces an Occam (a transputer language) compiler for the ST. This could be used in conjunction with Kuma's K-Max transputer add-on...

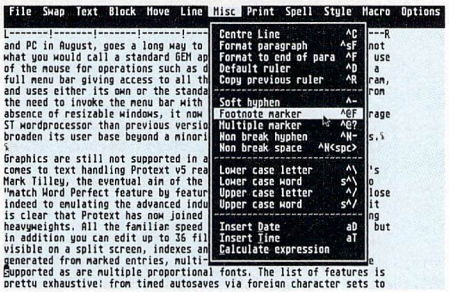
TWO YEARS AGO

ST owners wishing to program in the elderly business language COBOL, find that a CP/M-80 version of the Nevada COBOL compiler can be obtained from HiSoft for use with the ST's CP/M emulator... Arnor's powerful WP Protext, gets upgraded to version 3.6. Among the many improvements is access to the GEM menu bar so that desk accessories can be used... Sophisticated document processor Signum II, finds a new market for the ST as a multi-lingual word processing system thanks to Gate Seven Computers who produced a range of beautifully-designed foreign font sets...

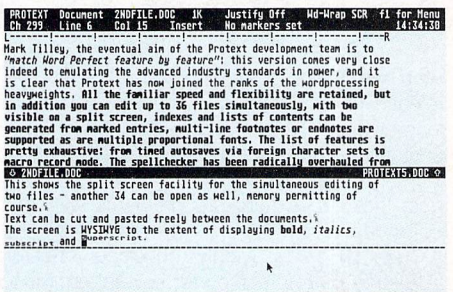
ONE YEAR AGO

Atari launches the new 68030 TT at the Dusseldorf Atari show in Germany... The typing tutor with artificial intelligence, Mavis Beacon Teaches Typing, receives UK distribution through Mindscape... The South West Software library introduce an ST version of TEX, the PD document processor and typesetting system designed by Donald Knuth... The incredibly realistic model aircraft simulator, R/C Aero Chopper is introduced into the UK. The software comes in cartridge form...

NEW PROTEXT 5 COMBINES POWER WITH EASE-OF-USE



A near WYSIWYG display with two document 'windows' on the same screen. Users of the previous Protext versions will be able to slip into the new features as and when they please



It's not true GEM but with it's new drop-down menus, file selectors, and dialog box forms you'll find a powerful new Protext which is much more friendly

Arnor's Protext has always been the odd one out among ST word processors for its shunning of the GEM user-interface. Driven by an MS-DOS-style command line interpreter and menus, it quickly acquired a reputation for unusual speed, power and flexibility, but the absence of the familiar GEM file selector, drop-down menus and multiple, resizable windows limited its mass appeal to the ST community.

The long-awaited Version 5, simultaneously released for the ST, Amiga and PC in August, goes a long way to correcting some of the program's few remaining shortfalls. This is still not what could be calledl a standard GEM application, but Protext now makes full use of the mouse for operations such as defining text blocks, provides a full menu bar giving access to all the major functions of the program, and uses either its own or the standard GEM file selector.

Apart from the need to invoke the menu bar with a right mouse click and the absence of resizable windows, Protext now feels much more like your average ST word processor than previous versions did, and should therefore broaden its user base beyond a minority of committed cult followers.

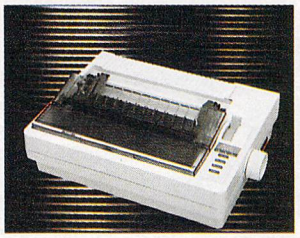
Graphics are still not supported in any shape or form, but when it comes to text handling, Protext V.5 really flies. According to Arnor's Mark Tilley, the eventual aim of the Protext development team is to "match Word Perfect feature by feature". This version comes very close indeed to emulating the advanced industry standards in power, and it is clear that Protext has now joined the ranks of the word processing heavyweights.

All the familiar speed and flexibility is retained, but in addition you can edit up to 36 files simultaneously with two visible on a split screen, indexes and lists of contents can be generated from marked entries, multi-line footnotes or end notes are supported as are multiple proportional fonts. The list of features is pretty exhaustive: from timed auto saves and foreign character sets, to a macro record mode. The spell checker has also been radically overhauled, now using a 116,000 word dictionary licensed from Collins, with fast phonetic look-up.

Until October, Version 5 will be available direct from Arnor at a special launch price of £125 (full price £149.95), with upgrades at £49.50 (£60) for existing users of Protext 4.2 and £64.50 (£75) for users of earlier versions. Contact Arnor on 0733 68909.

Citizen launch low cost 24-pin

Because so much software on the ST is graphics-oriented, art and drawing programs, document processors and DTP, you need a good-quality printer to bring out the best in your work when the time comes to commit it to paper.



24-pin quality at 9-pin prices from Citizen's 124D

The cheapest way of achieving this quality has been via the 24-pin printers with their high resolution output. Unfortunately, these devices have always been expensive to positively wallet-wilting degrees, but prices have fallen steadily.

Citizen has come to the rescue with its low-cost 24-pin dot-matrix printer which offers all of the pins you need, driven by a choice of the most popular Epson LQ or NEC 360 by 360 dpi print modes. This means that you'll get the quality you want and the compatibility with your ST software, all for around £320.

The 124D prints at a speed of 120 cps in draft mode and 40 cps in LQ mode. Not especially fast by modern standards, but as an entry into the 24-pin printer market, it will no doubt serve the needs of many ST owners wanting to have the extra pins at their disposal. Find out more by phoning Citizen on 0895 72621.

• Worried about compatibility? Changing your printer shouldn't be a problem because most major ST software packages come with a wide selection of drivers so you're unlikely to find a printer that isn't catered for. Any program using GDOS, such as Timeworks DTP or EasyDraw, can also drive most 24-pin printers without trouble.

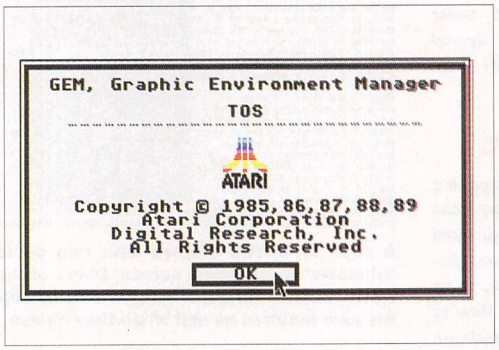
ATARI SNEAKS OUT NEW RAINBOW TOS RELEASE

Atari has surprised everyone again by slipping a re-release of Rainbow TOS into new STEs and the long-awaited TOS1.4 into 520STFMs. STE ROMs containing version 1.62 can now be found within increasing numbers of STEs and some reports suggest that again there are problems with both OS upgrades.

The STE was widely criticised after it first appeared on the market, for several operating system irregularities that caused an alarming number of programs, particularly games, to fail to run on the new machine. Although most of these problems - over hyped by certain sections of the ST press - were caused by programmers disregarding official Atari guide-lines, a couple of problems were down to Atari, almost beyond dispute.

One of these is the famous medium resolution bug which causes the STE to ignore the resolution flag in the DESKTOP.INF configuration file. The result being that it was not possible to get the machine to boot up in medium resolution. Atari was quick to issue a patch program to pop into your AUTO folder, so there was at least, a temporary fix.

The new release of Rainbow TOS version 1.62, only carries a few minor changes and bug fixes including a fix for the medium res boot-up problem. It is not clear exactly why any program should break after such a minor revision, but the complaining is sure to die down, as was seen with the initial TOS1.6 scare. User-installable Rainbow TOS 1.62 upgrades are not expected to be offered to existing STE owners although official TOS 1.4 ROM kits should soon be available to owners of non-STE machines.



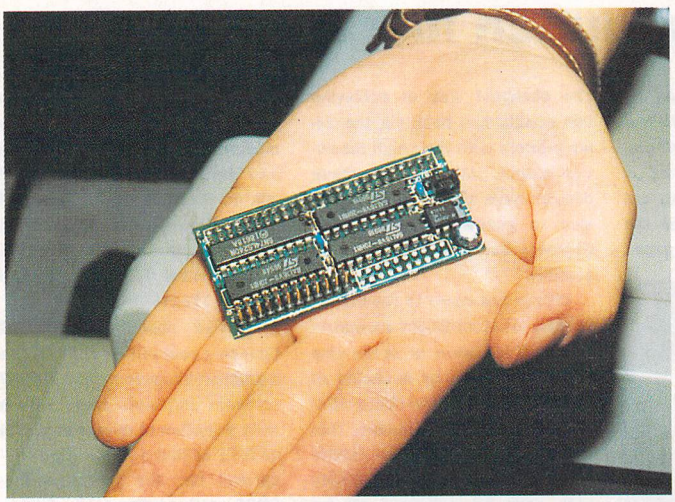
Atari US surprises everyone with a new release of Rainbow TOS - 1.62

Silica takes on ICD

Silica Systems has taken on distribution of the ICD range of hard drive products including the SCSI host adapters and ICD's range of complete and ready-to-run hard disk drives.

New from ICD is a space-saving SCSI host adapter of remarkably modest dimensions measuring a tiny 3.3cm by 6.8cm - normally, these host boards are at least three times the size. The Advantage Micro ST can be plugged straight into the 50-pin socket on the back of most embedded SCSI hard drive mechanisms and then into the DMA chain of the ST, although it doesn't have a SCSI 'out' socket.

The ICD Micro board is intended for interfacing internal hard drives to Mega STs and is actually supplied with everything you need for the job, except for the 3.5 inch embedded SCSI drive mechanism which you buy separately. Using the Micro ST board allows any Mega to house a hard drive without any external wiring or modifications to the case.



You can't get a more compact hard drive interface than ICD's Micro SCSI host adapter. One of the new products from the ICD range now available through Silica

The function of a SCSI host adapter is to convert the ST's DMA signals, which are a sub-set of the industry-standard SCSI set, into a true SCSI-compatible interface that you can plug into almost any standard hard drive mechanism.

For regular external hard drives, ICD has produced the Advantage Plus SCSI host adapter featuring a DMA out socket and a battery-sustained clock. Both of the ICD SCSI host adapters use the same software supporting 64 hard drive partitions per drive and 128 total partitions per system. Each partition can access 256Mb if you're lucky enough to have a drive that big, and owners of TOS1.4/1.6 STs can access 500Mb per partition.

Also available from Silica will be the 'official' ICD built hard disk drives which naturally enough, use the ICD host adapter and software. Although these are not the cheapest drives around, they do look good and carry a competitive specification. The FA-ST hard drive will cost you £573.85 for 40 megabytes. Other capacities, likely to be 30Mb and 60Mb, are expected to be offered as well but Silica are unlikely to actively market a wider choice of capacities in the ICD range, although ask for a specific quantity of megabytes, you'll no doubt be able to strike a deal. For ICD equipment, contact Silica Systems on 081 308 0888.

• Silica has also taken on distribution of the German Vortex range of hardware products.

16-Bit timewarp

A number of Sharp-eyed readers have pointed out that in last-month's news item about the 16-Bit Computer Fair moving to the Hammersmith Novotel, we incorrectly quoted January 1990 as the date for the show. This would be a remarkable feat of time travel and we're sure that most of you realised that we were referring to the 1991 event, which isn't too far away now. The dates themselves were correctly quoted: 4th-6th January 1991.

The Organisers have since reported that turnout for this year's June/July show was a healthy 21,000 people visiting a total of 125 companies. Expect the Novotel event to be even better. Westminster Exhibitions are on 081 549 3444.

First Lattice 5 upgrade released

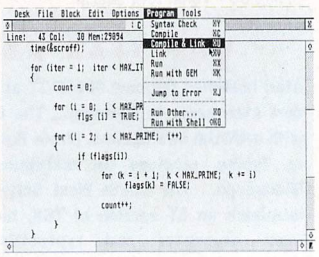
Less than three months after its initial launch, HiSoft's Lattice V.5 C development system has already been updated and version 5.04.01 is now available.

Most of the changes come as the result the continuous in-house development and user feedback - the source of several bug reports highlighting minor discrepancies in the various software components of the Lattice 5 release.

Don't be alarmed, this is a natural course of evolution for computer software and it should be pointed out that Lattice 5 has fared remarkably well considering the size and complexity of the package.

Upgrades cost £5, but if you've already reported a bug, HiSoft won't charge.

The full package costs £149, and version 5.04.01 is now shipping with all new Lattice C sales. HiSoft cab be contacted on 0525 718181.



The highly acclaimed Lattice C V.5 compiler has already advanced from its original release version

Silence that laser



This device is being touted as an 'ST virus protector'

Virus protection racket

A prize for the most unusual product of the month goes to this curious little add-on which is being touted as a virus protection device. It doesn't know a virus from a tin of beans, but flicking a switch mounted on the end of this little gadget will instantly write-protect your floppy disk drive.

What's wrong with using the write-protect tab on the floppy disk? I hear you ask. Absolutely nothing, but having the virus protector permanently plugged into the external floppy port does afford you the luxury of being able to reach for that switch the instant you suspect a virus is about to strike.

For the ultimate in floppy disk write protection without having to eject a disk, phone Third Coast Technologies on 0257 472444 and pledge your £9.95.

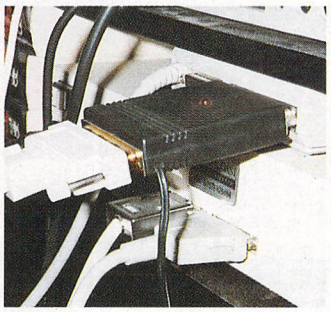
Computer fairs fuel bargain frenzy

Competing almost head-on with the successful 16-Bit Computer Fair, the All Formats Computer Fair looms large with it's two summer '90 dates at the Royal Horticultural Halls in London. You've probably missed the 4th and 5th of August dates, but it's all happening again on 1st and 2nd September this year.

Although this event covers all home and personal computers, the pre-show marketing hype promises a large selection of ST hardware and software available for trial, and you can bet there's a stack or two of bargains waiting to find a slot under your arm for the journey home.

If you've ever looked upon SLM804 laser printer owners with envy, spare a thought for the environment in which they have to work. The SLM is a noisy animal at the best of times and the whole problem boils down to the fact that if you're using a hard disk drive, you have to keep the thing powered up and ready to roll or the hard drive won't work.

So owners of this otherwise very desirable printer have been condemned to either put up with the roar of the laser's fan and the electricity bills caused by its continuous operation (not to mention the possibility of a reduced life span through unproductive wear and tear) or propping open the rear flap to force it off-line.



Save electricity and your sanity with this Atari Laser adapter which enables the SLM804 to be turned off. A bit wobbly, but it does the job

Help is now at hand in the form of a little gadget from Germany which is inserted between the controller box and the laser. Everything now works as it should: the printer need not be on at boot-up, and the on/off switch can be operated at any time with impunity. This device really works and should be available soon in the UK from Gasteiner Technologies. The one drawback is that it occupies yet another power point. Laser owners can save their sanity by phoning Gasteiner Technologies on 081 365 1151 for more information.

EASY SIMM UPGRADE FOR ANY ST

Increasing the RAM capacity of most ST models has always been a tricky business. This is one good reason why the move to fit SIMM (Single In-line Memory Module) sockets to the new STE was such a big step in the right direction for Atari when the company revamped its 16-bit workhorse.

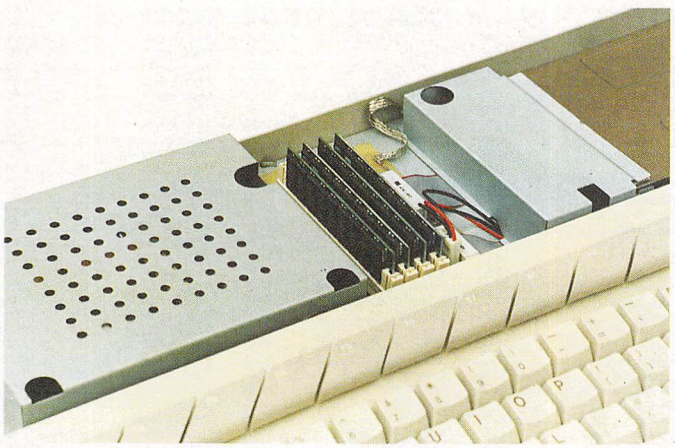
Several third-party RAM expansion systems have also had the ability to be upgraded, but it usually means changing chips and jumper links, and in some cases, even changing the RAM board itself.

Evesham Micros has just released a SIMM-based expansion system (a concept first mentioned in World News, 'USER 53) for use with any model of ST. The idea is that you install the SIMM motherboard via the MMU and shifter chip adapters common to most RAM boards, but once the board has been fitted you can plug-in SIMMs with amazing ease, as if expanding an STE.

The SIMM motherboard - so far the product has not been given a name - is a solderless installation compact enough to fit in one of the few free spaces under the hood of an ST, between the PSU board and disk drive. It won't be any easier to fit than other RAM expansion boards, but will give you 1Mb, 2.5Mb or 4Mb of RAM with quick and easy plug-in convenience (SIMMs are cheap too!)

Prices start at £59.95 for the unpopulated board, £99.95 fitted with 1Mb RAM, £199.95 with 2Mb (giving 2.5Mb in total, 512K pinched from the ST's on-board RAM) and £339.00 for the board fitted with a full 4Mb of RAM. Supplier Evesham, offers telephone support and the kits come complete with fitting instructions. For more information 'phone 0386 765500.

● SIMMs are an industry-standard RAM board design used by most major computer manufacturers such as Apple and the PC clone makers. Because of their commonality with other widely-used computer equipment, SIMM supplies should be stable and prices competitive and this can only be good news for ST owners with a SIMM expansion capability.



Add this SIMM motherboard to any non-STE machine and you've got quick and easy plug-in RAM expansion

Go for games at CES

Like it or not (and most ST owners do like it...) the computer entertainment industry is still booming despite a slow-down after the frantic mid '80s. So it's no surprise that an entertainment show has been introduced to serve the joystick worshippers.

The CES, or Computer Entertainment Show, is taking up the slack after the demise of the PCW show of old, a traditional haunt for the entertainment market. CES kicks off in mid-September and is sponsored by EMAP in conjunction with Childline, the official show charity.

The event will cover the whole spectrum of entertainment including the latest 16-bit hard and software, consoles and the latest on new developments.

CES also marks the start of the first ever National Leisure Computing Week. The show itself will be held at Earls Court, London, on the 15th and 16th September. As you might expect, trade visitors will have the 13th/14th to themselves.

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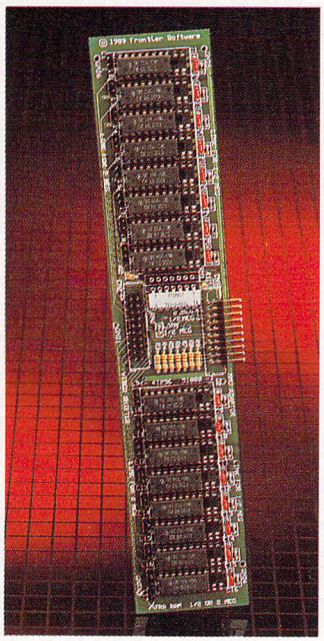
2.5MB XTRA-RAM TUMBLES TO 189

Frontier Software's highly successful RAM expansion board, Xtra-RAM has fallen in price by over £100 to a highly competitive £189.99 for the 2Mb populated board (giving 2.5Mb of usable RAM). The product is also available unpopulated or with 512K RAM fitted and these cost £64.99 and £79.99 respectively.

Xtra-RAM was launched over a year ago accompanied by a heady asking price of £399 for the 2Mb version, largely a reflection of the DRAM memory chip shortage which has since eased. Soon after this, and with a major change in circuit board design, Xtra-RAM dropped to £299.99 and it's popularity began to snowball as owners of 512K and 1Mb machines lusted for more RAM to fuel their memory-hungry graphics, sound, and DTP applications.

Xtra-RAM is a solderless upgrade featuring a compact circuit board which can take either 512K or 2Mb of RAM, robust connectors, and an illustrated installation guide.



The ST's most successful memory expansion board is now more affordable than ever

Also down in price is the Xtra-RAM STE range of SIMM/SIP boards.

These plug-in cards have revolutionised the ease of memory upgrade for STE owners. The price drops to £69.99 for the 512K RAM set and £169.99 for the 2Mb set.

Frontier claim the price reductions have been made possible by increased availability and reduction in price of DRAM chips, coupled with the economies of volume production. Xtra-RAM exports have already topped 1000 units. Frontier are on 0423 567140.

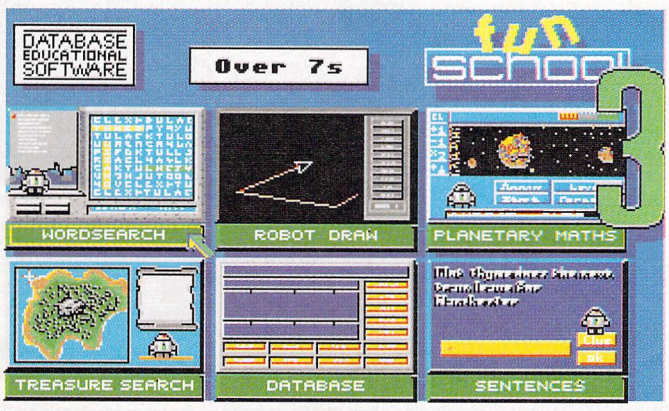
- Frontier is so confident of Xtra-RAM's future success that the company is expecting to sell over 10,000 units by the end of the year - that puts over ten thousand megabytes of RAM in the hands of ST owners.

Fun school 3

Educational software for the ST has often been of variable quality and worth, but there are some good products if you know where to look. One of the better (if not the best) examples is Database Software's hugely successful Fun School 2 which sold over 150,000 copies in a variety of computer formats.

The latest development is an even better Fun school 3 which is aimed at three different age groups designed to fit in with the National Curriculum. The suite of three programs is aimed at the under fives, fives to sevens, and over sevens.

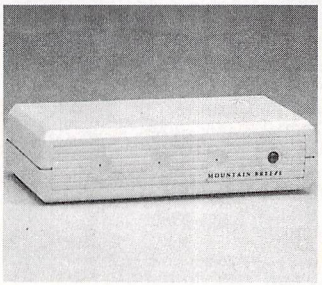
The 'lessons' are presented in the form of entertaining puzzles and games built around a selection of different scenarios with a definite educational slant. Database Software has been careful to ensure that the content of these games has been pitched to teach valuable numeracy, word skills and comprehension, yet remains fun to play. Educationalists and teachers have been brought in to see that the entertainment remains good and wholesome while imaginative use of sound, graphics and animation - almost up to video game standards - ensures that attention is grabbed and held.



Fun School 3 is colourful, fun and above all, well thought out. This screen shows the variety of 'learning' games on offer and this is just the over sevens collection

If you want your offspring to have fun with the ST and develop some useful skills in the process, you'll probably find Fun School 3 will more than earn its keep at £24.99 (available by the end of August). French and German versions will follow. Database Software is on 0625 859444.

Comfortable computing- it's a breeze



Healthy computing with a mountain breeze ioniser

With the recent surge of concern among computer users about the dangers of their working environment, JOLAC Data Media is encouraging the use of Ionisers for computer users looking to improve the quality of the air around them.

The most serious concern at the moment is with radiation emissions from computer monitor tubes, although a different hazard - increased positive ion levels - can also contribute to general discomfort and even illness.

Ionisers work by pumping out negatively-charged air molecules, using what is known as a corona discharge, from several metal needles to which a negative voltage is applied.

Electrical equipment, particularly computers and VDUs, generate a high static charge and form a barrier of positive ions around themselves.

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Ionisers cost very little to run and make a noticeable difference to the localised atmosphere once operating.

Positive ionisation created by computer equipment is said to cause a number of physical and psychological ailments including: eye strain, headaches, moodiness, irritability, stress, allergies, asthma and increased incidence of colds.

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The room ioniser will set you back £39.95 and a range of bigger devices is also available - reasonable when the improved quality of the environment is taken into account.

JOLAC's Paul Bankier maintains that he "would not be selling the ionisers if they didn't make such a big difference".

To find out more about comfortable computing, phone 0695 32382.

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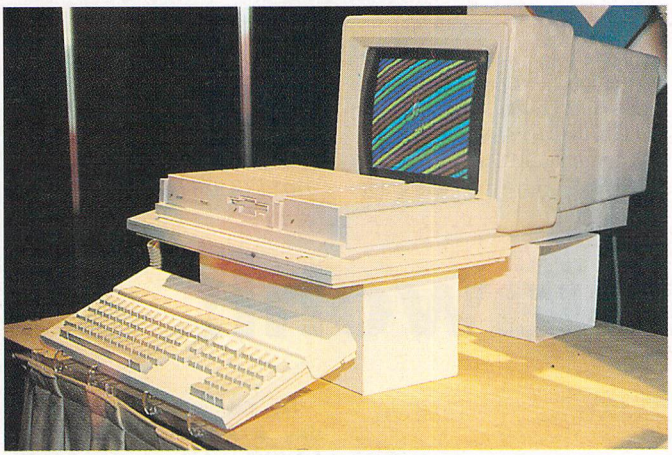
TOMMY UPSET BY TT DELAY

Criticisms of Atari's marketing strategies have never been difficult to come by, but when a German software house with the track record of Tommy Software - of MegaPaint and SoundMachine fame - goes as far as publicly announcing a boycott of the major show-case event in the Atari world in protest, things are starting to look less than rosy.

Tommy will not have their own stand at this year's Dusseldorf show, and cite the "incomprehensible manoeuvring with which Atari have thoroughly unsettled the ST market". In particular the statement goes on, "the TT computer, continuously heralded for three years now, has still not appeared".

While not abandoning the ST, Tommy Software has just launched MegaPaint II PC and intend to increase its efforts in the DOS market. This only goes to show how badly the TT is needed to revive an increasingly stagnant non-game ST scene - even in Germany with its large established Atari user base.



TT performance is needed to keep Atari at the forefront of high technology personal computing

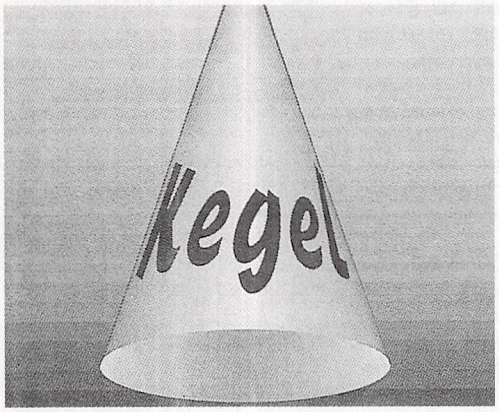
Word perfect stay with the ST

Mammoth word processing package Word Perfect, has almost been forgotten in the UK. In fact the last couple of years have seen a dark cloud lingering over the product with some question as to whether or not its development and support would continue. As it turned out, there was no official announcement to even suggest the demise of Word Perfect on the ST. Either way, the product has not been actively marketed in the UK.

Talk here in the USA points to the fact that Word Perfect Corp. will continue to support the ST derivative of it's WP package, currently at version 4.1 (functionally equivalent to MS-DOS version 4.2). There is even talk of further changes and an upgrade adding a few new features to the package. It seems that Word Perfect's ST sales have been good enough, particularly in Europe, to warrant a continued commitment to the product.

Outline art to PostScript

Even the greatest admirers of Calamus and its vector graphics companion program Outline Art, often have cause to regret the not so splendid isolation of the ST's leading DTP system from the industry standard PostScript page description language. It was a pleasant surprise therefore, to receive a copy of CONVERT2X from the North American Calamus distributors Ditek International, who bundle this small but extremely useful utility with every copy of Outline Art sold on the other side of the Atlantic.



One of the familiar Outline Art sample graphics, but printed here entirely without the aid of Calamus, using the UltraScript PostScript emulator

Although it's a TOS application, the program cannot be run from the Desktop in the usual way. Instead, it is installed through the install application dialog in the Desktop's Options menu by linking it with the file extender .CVG. The converter will then be automatically launched whenever you double-click on an icon of a Calamus vector graphics file as produced by Outline Art.

Either straight PostScript or 'encapsulated' PostScript (EPS) files can be generated, the latter is particularly useful for exporting to Mac software running under Spectre GCR or into standard ST DTP programs such as Fleet Street Publisher and PageStream. Ditek can be reached at ISD Marketing, Inc. 2651 John Street, Unit #3, Markham, Ontario, Canada L3R 2W5, Tel. 416 479-1880. For details of UK availability, try contacting Signa Publishing Systems on 0252 341600.

Jarre

Mid-July saw another Jean Michel Jarre audio-visual circus...er, extravaganza, this time on home territory in Paris. But why should this be of interest to ST owners? Well, the synthesiser guru himself has rather taken to Atari's MIDI marvel and a small army of the things were used in the preparation for a massive Paris concert staged in mid-July this year.

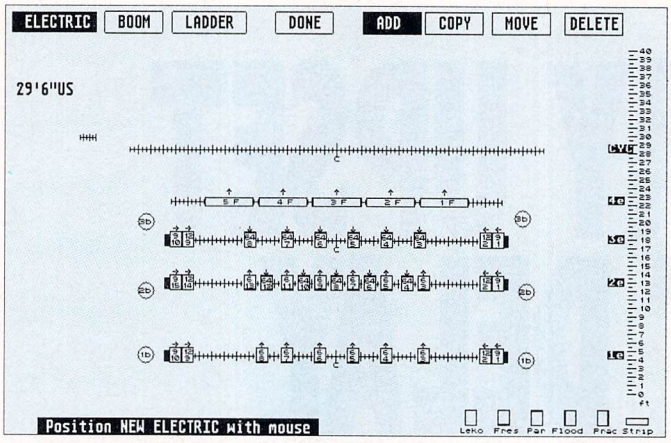
Not only was much of the music produced with the ST, but stage designs and story-boards for the show were also reputed to have been mapped out using the STs. Jarre makes heavy use of C-Lab MIDI software, in particular Notator and Creator, and many of his classics - including Oxygene, the 10-million seller from '76 - have been brought into the relatively young MIDI environment. Jarre has also used STs and C-Lab MIDI gear in the creation of his 1990 album, "En attendant

GOT A LIGHT MAC?

LEKO LEKO is one of those obscure programs that could absolutely revolutionise someone's life, and the chances are that this person might not even own an ST yet. It's all about planning stage lighting for theatrical shows. The program works as a kind of hybrid CAD or drafting package in which you place predefined components or symbols onto a grid to form a complete graphical plan.

You can place lights, spots, dimmers, booms, ladders, electrics and there's even provision within the program to manage other relevant information such as Wattage, colour, focus and shop order. There's an awful lot more to this program than we can tell you here, so if you're in this particular line of work, or you're just involved in local theatre for pleasure, you should get in touch with its designers, Water Fountain Software, who claim that LEKO LEKO can reduce the work time needed by a lighting designer by some 80%.

Apparently, Disneyland USA and the Royal Shakespeare Company in London are already showing an interest in the product for which there is no UK distributor at present. Water Fountain Software can be reached on 0101 212 929 6204.



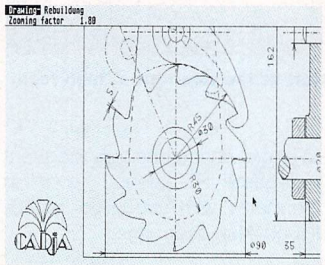
Plan out stage lighting configurations with LEKO LEKO, a truly obscure program which could be invaluable to someone

CADjawohl!

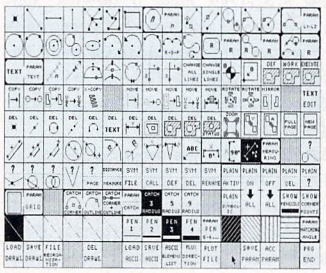
Computer-aided design (CAD) software may not have quite the same appeal as word processors and databases to the average ST owner, but neither is it still confined to the world of industrial R&D bureau or the pioneering AutoCAD on IBM PCs. Our favourite 'games computer' has an increasing number of quite capable CAD programs to its name now, of which Ditek's DynaCADD (distributed by Expressworks in the UK) and GFA Draft Plus are best known in the UK.

The uses of CAD in engineering and architectural contexts are well known and obvious: using a computer for technical drawing reduces the drudgery of manual drafting by making symbol libraries and macros available, and designs can be quickly and easily revised to suit a customer's needs. Powerful CAD systems can be employed to translate designs straight into control information for machine tools, and beyond the capacities of most personal computers there are the immense possibilities of three-dimensional design work.

CADjA is plainly aimed at small business categories and the program has been written especially for the ST, but offers many of the features found in more expensive systems while still being capable of productive work on standard set-ups with an SM124/125 and 24-pin or laser printers rather than the professional-standard large-screen monitors and heavy-gauge plotters.



A right mouse-click brings up more icons than even Calamus would fit into one screen, but these will soon become second nature. For maximum accuracy,



The main drawing screen remains uncluttered by tool boxes and menus, leaving only the useful status lines with information about the currently active function

The absence in the present version, of import/export facilities in AutoCAD's industry-standard DXF file format betrays its modest origins, although DXF is to be added to an imminent upgrade.

The dongle-protected CADjA is not cheap by ST standards at DM 698 (about £270), but it's still a far cry from the sort of prices you'd pay for similar, high-end PC programs.

Technical drawing is object and not pixel-based - it has to be for easy, accurate zooming - and can therefore be slow. CADjA offers quite an impressive general operating speed when redrawing the screen, except with large areas of hatching. Ease of use is equally important with this type of software, and here CADjA scores with its simple two-screen approach.

Clicking on the right mouse button switches to a screen full of icons from which all functions are instantly available, leaving the main work-screen uncluttered and free for your drawing except for a couple of status lines at the top.

The version peeked at here has been largely anglicised, but there appear to be no plans for active marketing of CADjA in the UK.

If you want to know more, the program's creators can be contacted at Computer Technik Kieckbusch, Baumstammhaus, D-5419 Vielbach, Tel. 010 492626 78336.

Calamus house journal

The extent to which Calamus has established itself as a professional DTP system in Germany is perhaps symbolised by 'Cicero', a glossy journal dedicated to DTP with Calamus and related products on the ST

Named after the traditional German typesetter's measure for a point and published by DMC, Cicero is of course produced entirely with Calamus and therefore represents as good an advertisement as any for the power of the software. DMC do have the advantage of having a few weapons at their disposal, such as unpublished versions of Calamus with colour separation.

To give you a flavour of the journal - which is available at newsagents and computer shops in Germany - the latest issue includes articles on electronic image and colour processing, an interview with Adrian Frutiger, a profile of a professional Calamus typesetting bureaus in Germany, a review of the TT, and a tutorial on Outline Art. Cicero is available for DM 9 from DMC, Postfach 89, D-6229 Walluf, Tel. 010 496123 71250.



World Newsdesk...

Gunter Minnerup: Hailing from the home of the sausage, Gunter is ideally placed for news from the ST scene

Ma Leiberwitz: Mother to Harvery and JJ and filling in for the guys this month

John Molsen: Other interests include brewing, bugling and making holes in doughnuts...

Pierre Poupee-Conflable: With an inflated knowledge of the French ST market, Monsieur Poupee-Conflable wears the yellow jersey...

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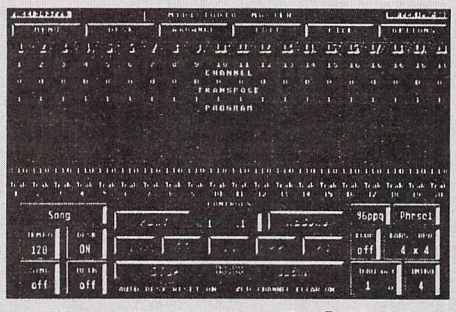

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ONLY POOLS AND HORSES!

Roland needs a wheelbarrow to get his wad home at the end of the month, and the rest of us? Reduced to putting our collective shirts on 'dead certs' (and you know where that can lead). To even up the odds in our favour, we spent a day at the races accompanied by some of the best betting software around...



You probably think it's a gas right? Playing the latest games all day long, mountains of free software around the 'USER office and invites to all the best soft and hardware launches and actually, it is! But being extremely greedy, we want a salary too. Unfortunately, publishers being what they are, we're expected to do all the hard play...ahem work, almost for free.

So in order to afford the necessities life (Mega ST, hard disk drive, colour and mono monitors), we recently decided on a little scam to generate some gelt. Why not do a cover feature all about gambling, using all of those fantastic horses, dogs and football pools programs promising massive winnings - pretend to be working while making a fortune on the dogs, sounds pretty good, huh?

We decided to put all the football pools predictors, dog and horse racing tipsters to the test. Everyone likes a flutter on the horses occasionally, even if it's only once a year on the Grand national. If the odds are weighed in your favour then there's even more incentive to try your luck. Adverts for flat and national hunt racing tipsters seem almost irresistible as they proudly display banners proclaiming "The program the bookies tried to ban", "Over 60 per cent strike rate" and "The punter's winning guide to success".

Who can pass an advert that claims to dramatically improve your chances of hitting the jackpot on the pools? Claims that you'll be doubling even trebling your winnings and enough plans and perms to last a lifetime are very seductive.

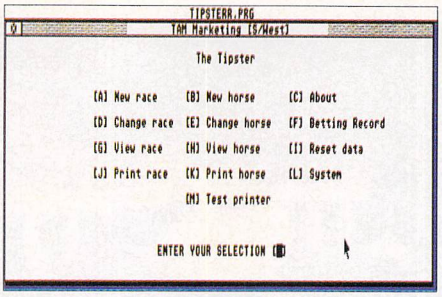
Horses, dogs or football teams all the software works in a similar manner. To achieve any degree of success a vast amount of data has to be entered into the program's database on a weekly or even daily basis. Soccer teams' points, matches played, wins, draws, losses and so on. Horses' race form, the going, starts, wins, places, age and the like.

You'll need patience, determination and a great deal of stamina (plus ultimate faith in the software), if you're to keep up the data entry.

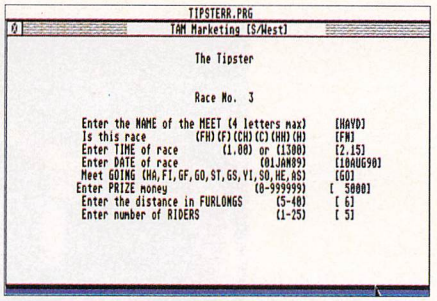
The more data the software has to work with, the more accurate will be the predictions - at least, that's the theory. Some programs require more data than others and with the most demanding ones, you need to spend several hours each week updating positions and entering the week's results.

Once the data has been entered all the hard work is done. The programs print out their predicted winners and all you need to do is trot down to the bookies and hand over your gelt, or fill in the pools coupon and bung it in the post.

Did we win that elusive pools jackpot? Are we writing this on the beach in the Bahamas using Stacy lap-tops? Were we able to fleece the bookies? Read on...



main menu screen is has comprehensive information and is similar to Punter's



Entering the reams of data for each race can be tedious

Product: The Tipster
Supplier: T.A.M.
Telephone: 0392 215485
Price: £29.95
Configuration: All STs, colour only

If you haven't been lucky enough to win the pools with T.A.M's The Punter, how about trying your hand at the horses? The Tipster is a comprehensive horse racing tipster that claims to be able to pick out the winners from the zebras and donkeys you usually put your hard earned cash on.

Racing statistics and betting forms are slightly more complex than football data so the manual is more detailed, giving you a helping hand when digesting the facts and figures.

You'll need a good racing paper like the Racing Post which prints all the relevent race

£ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £

Product: The Punter
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Telephone: 0392 215485
Price: £29.95
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With the new football season about to start, what better time than now to start filling in your pools form. The Punter from T.A.M is a comprehensive football pools predictor that claims to improve your chances of winning. The odds against collecting a jackpot are stacked at millions to one against so The Punter suggests that you stand a better chance of winning a few thousand pounds by selecting six aways or 12 homes.

The package is nicely presented. There's a video-style case containing a manual clearly explaining the data entry procedure and some A4 sheets of sample data and printouts. To prove that the software really does work, there are photocopies of dividend cheques from Littlewoods pools.

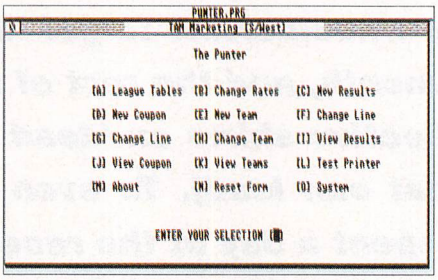
The software boots into medium resolution colour and presents a menu (not GEM-based) with five options. You'll need a newspaper which prints league tables containing facts and figures such as the position, number of matches played, points gained, goals for and against, matches won, lost and drawn at home and away, and so on. All the information is entered before you start the predicting.

A special form figure can be assigned to each team and this changes the final rating. It's a bit of a fudge factor that can be used if there are any non-league teams on the coupon, or if there's a local derby match, between Liverpool and Everton for instance.

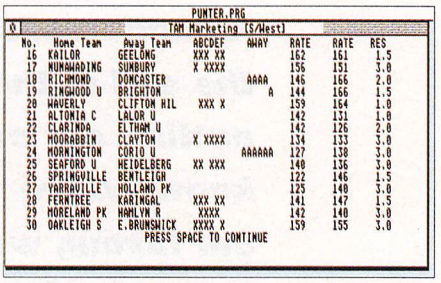
When all the data has been typed in for a match, the program calculates two figures (one for the home and one for the away team), which show the chances of a win, draw or lost game. The difference between the two figures shows which of the three events is most likely.

'Punter is fairly easy to use, but like all pools programs, the data entry phase is incredibly tedious. You need the patience of a saint to sit at your computer and type in the vast amount of facts and figures required. If you do strike it lucky however, it'll be worth it.

Verdict? We became tired and disillusioned after a few weeks and returned to our original random selections.



'Punter's main menu screen showing the options. Shame it doesn't run in monochrome



League data tables - Australian teams are shown in the summer version of the software



TIPSTERR.PRG
TAM Marketing (S/West)

The Tipster

The race is the 2.00 at AYR, it is a H/cap Chase.

The race is over a distance of 25 furlongs, for a prize of 3525 pounds.

The going is GS (5), with a total of 6 runners.

The PRIZE GRADE is (3), the JUMPS GRADE is (3).

Press Space Bar To Continue

Displaying the race data gives valuable information for race-goers

data because this has to be entered into the program's database before it can make any predictions.

It's a long hard slog typing in all the bits of information the program requires. Facts such as the course and type of race (flat, hurdles or chase), date and time, the going, the value of the first prize, the distance, number of horses in the race, the horse's age, its handicap and race history, number of days since its last run, the jockey and trainer…and so on.

You can keep adding horses or reset the data after each day's racing. Once the program has all the data about a race, it can be asked to make a prediction. The information displayed about a race shows the course winner, distance winner, the beaten favourite, handicap, position of a horse in its best and last races, the jump difficulty and so on.

And at the bottom of the list, 'Tipster awards a score for each horse and the higher this is, the better chance the horse has of winning the race. Therefore all you need to do, is to print out the data for each horse in a race and see which has the highest score.

The Tipster keeps track of your betting record, how much you've lost to the bookies and how much you've won. Data can be displayed on screen or sent to a printer.

If you're prepared to spend enough time entering the data each day, T.A.M. claims you'll soon be showing a profit. You do however, need to be totally dedicated to racing and betting in order to get the best from the package.

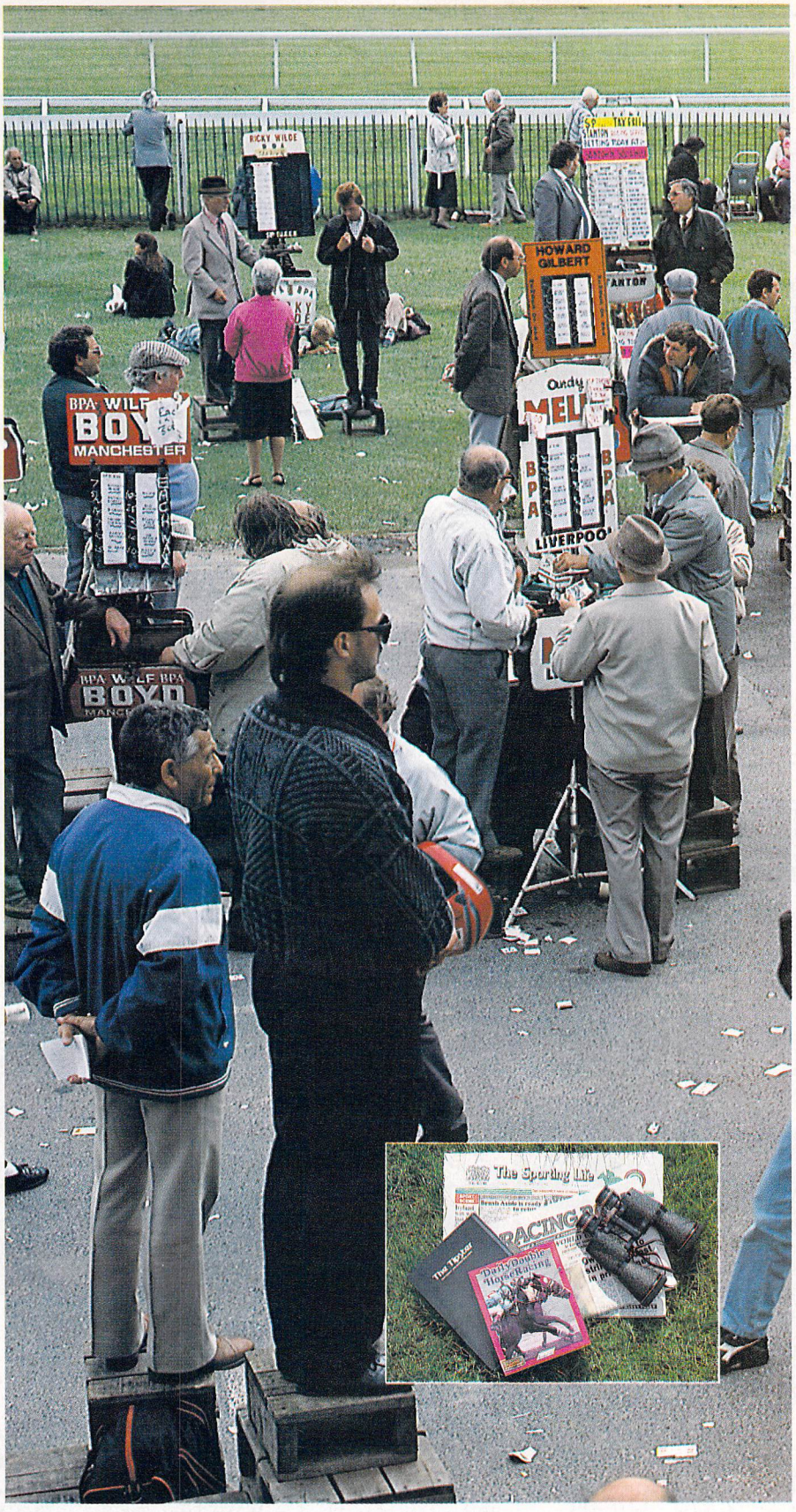
After losing at lots of races, we found it difficult to summon up enough enthusiasm to squander the rest of our meagre funds.

TIPSTERR.PRG
TAM Marketing (S/West)

No.	HORSE	SCORE
1	MONANORE	142
2	SOLARES	141
3	CARRICKHILL LAD	209
4	SAMFEN	182
5	KILLONE ABBEY	176
6	BROWNHILL LASS	173

Press Space Bar To Continue

Tipster's predicted placings for the race at Ayre based on the data we typed in





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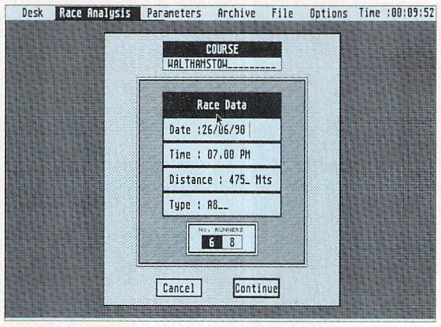
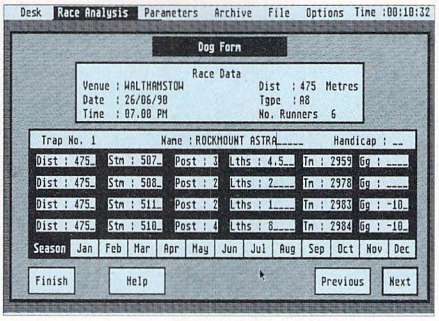
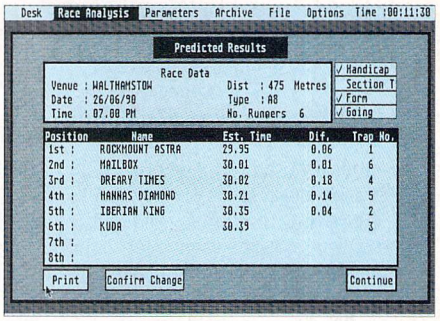


Race details are entered first



Each dog's form is found in the daily racing newspapers



Put your money on Rockmount Astra to win!

Product: Top Dog
Supplier: Forecast Software
Telephone: 0222 766905
Price: £49.95
Configuration: All STs, mono and colour

As its name suggests, this program aims to pick out winning greyhounds from the rest of the pooches running. A single disk comes with the standard VHS video tape box and has a cover proclaiming "The program the bookies want to ban" and "The best way for successful gambling" - heady stuff, how did it perform?

When you boot up Top Dog you're asked to enter a series of security numbers. It's annoying enough to have to pick up a manual and find one key word or number but six, is a little over the top!

A 55-page A5 manual provides clear instructions on how to enter dogs' form into the program, and how to calculate the best selection for each race. Help, such as an explanation the form facts and figures to be found in racing newspapers, is also provided by the program. All the necessary information can be found in either of the two main racing newspapers - the Racing Post or the Sporting Life.

Entering data is very easy. Select a track then type in the form of each dog in the race. There's nothing to confuse you and it's simply a matter of entering the information as it appears in the newspapers. Top Dog realises when it has enough data to make a prediction. Once 'Dog has analysed the information, it lists the greyhounds in the order the program thinks they'll pass the finish line. Top Dog estimates the time between each dog (how on Earth does it do this?).

Race information can be saved, edited or printed ready to be taken along to the track in the evening. By choosing preferences from drop-down menus, results can be presented in various ways, such as in trap number order.

To test the performance of the program, we provided information for a day's racing at Walthamstow from the Sporting Life. We're glad we didn't put our collective shirts on the program's selections. The dogs it predicted to win were real dogs! Most struggled to come in last and the those 'Dog claimed to have no chance whatsoever won in fine style! However, we know of at least one person who uses the program regularly and claims that it's a huge success over a period of time.

£ $ £ $ £ $ £

Product: Daily Double Horse Racing
Supplier: CDS Software
Telephone: 0302 321134
Price: £19.99
Configuration: All STs, colour

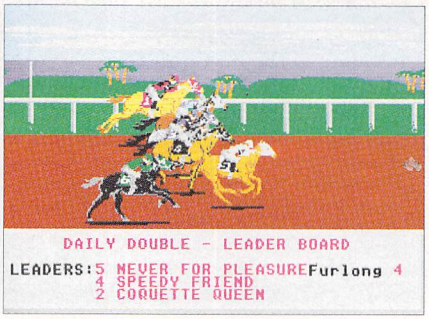
The other programs we've looked at claimed to increase the chances of beating the bookies. It's been tried many times before of course, but no one has ever achieved it, even with CAB (computer aided betting). There is however, a safe way of having a flutter on the races and that's with CDS Software's Daily Double Horse Racing.

Rather than betting real cash on *real* nags, Daily Double is a horse racing simulation which accepts bets then shows the horses careering about on-screen.

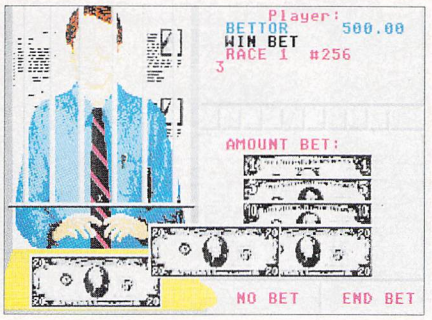
Open the box and you'll find a single disk and manual, which to give a feeling a reality, is laid out in the format of a newspaper. As well as supplying all the information necessary for program use, the 'newspaper' helps novice gamblers by explaining some of the commonly-used terms.

After a security question and a few others to set up the simulation, the mouse-controlled program boots in lo-res colour to place the punter in his favourite location, the bookie's.

Information about each of the day's races can be found here and you can also use the vital gambling tips found within the pages of the Daily Double Horse Racing newspaper.



The full race is shown, with the leading horses named at the bottom



Place your bet in the bookies. Hand over the money by clicking on the Dollar notes

Once you've analysed the past performance of both the horses and jockies, pick the horse you reckon will gallop to the finish line first. Choose the type of bet you want then go to the clerk and decide how much you're going to put on the race. Handing over of money is done by clicking on pictures of Dollar bill values, which then slide under the clerk's protection bars (that's right, the program's American - dollar bills and bullet proof glass...)

Once you've placed a bet, sit back and watch the race. Rather limited digitised speech, the start and the top half of the screen gives a side-on view of the horses running along the track with background scenery scrolling from right to left. At the bottom of the screen, the race number and total distance are shown. Below this the horses currently in first, second and third place are named.

Once the winner's crossed the line, more digitised speech tells you which number it was. The amount of money you've won or lost is shown along with your new bank balance. It's now time to move on to the next race and back to the bookmakers.

Graphics are average throughout, although the movement of the animals during the race has been executed rather nicely, and although this animation is rather slow, it does help to convey a sense of 'being there'.

Overall, a familiar but well implemented game theme, which will enable you to have a little flutter without the nail-biting worry of whether you'll lose your shirt.

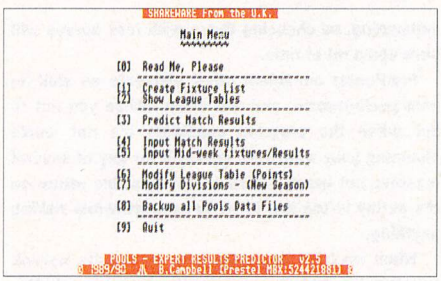
£ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £ $ £

Product: Pools - Expert Results Predictor
Supplier: It's on the cover disk!
Configuration: All STs, colour and mono

This shareware football pools predictor from Bay Computers is currently being updated to utilise GEM and there's a beta test version on the disk.

The version tested predicts league and cup matches, and also includes some minor leagues. The predicted results can be output either to screen or printer.

As with most pools predictors, Expert Results Predictor (hereafter known as ERP) isn't very accurate at the start of the football season, but as more results are added and the database is updated, the program becomes a much better forecaster. The moral? Don't expect to hit the jackpot the first time you use the software.

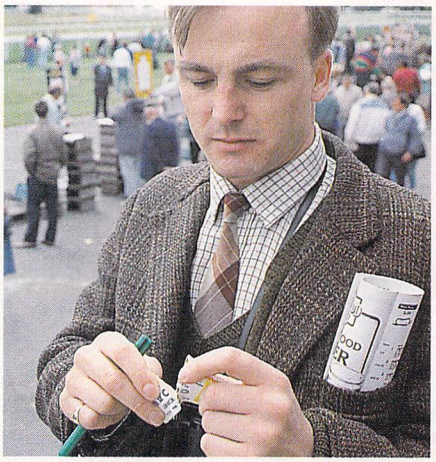


The main menu screen. A GEM-based version is currently being worked on and that provides an easy-to-use front end

The Modify Divisions - (New Season) option is protected by a password because it destroys all the data entered so far. The password isn't meant to be secret - it's provided in a help screen - it simply adds a bit of data security. You should only need to do this once at the start of a new season, and the task is simplified by being able to promote and relegate teams. League tables can be printed to screen or printer and fixture lists created easily.

Pressing F1 on the main menu, provides a summary of all past results stored on the current disk. The teams' form figures must be kept up to date by entering all the mid-week match results as well as the weekend results. The program keeps track of the last three home and last three away matches for every team, as well as the season's running total of league points. The program examines home records for the home team and the away record for the away team, then combines them to produce a predicted result. 20 most likely home wins, 20 most likely away wins and 20 most likely draws. You can use this information to fill in your pools form.

As with all pools predictors, the data entry is tiresome and you need lots of dedication to keep entering facts and figures. The only thing to spur you on is the thought of winning, and when you don't win the first (or the second, third, fourth and fifth) time, it's easy to lose interest.



And the verdict? Is 'USER the scourge of the bookmakers? Unfortunately not, welcomed with open arms, they sent us home with empty pockets - ho hum!

Still, we had lots of fun down at the dog and horse racing tracks (spitting, swearing, looking tough...) and it's worth cutting along just to soak up some atmosphere and tension, as our four-legged friends round the final bend and sprint to the finishing line.



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BOOTINFO

Discover the innermost secrets of your floppy disks' format with this powerful desk accessory. Click on the menu and the disk's BIOS parameter block is displayed in all its glory. Full 68000 source code included.

RAINBOW COLOURS

Scrolling multi-colour demos usually mean long and complex 68000 machine code programs that insert themselves into the horizontal and vertical blank operating system routines. This version, however, is written in simple BASIC!

DUALFORM

Create double sided, 800k floppy disks that can be read using either a single or double sided disk drive. Put the extra double sided disk programs in the SIDE_2 folder just like we do with our cover disk.

PALETTE.PRG

A handy little PD program that's great for anyone who needs to work out the RGB values to produce a particular colour. Click on this utility in low resolution colour and the whole of the ST's 512 colours will be shown on screen.

PERCUSSAMAN

Percussaman is a four-track, 16-instrument, digitally synthesised drum sequencer providing many of the functions of powerful professional equipment. It uses sounds sampled at 16kHz to produce a very high quality output.

SNAP

Not the familiar card game, but a powerful snapshot utility that can be used to grab screens and artwork from other software for inclusion in your own programs. Hit the hot-keys to instantly save the screen to disk.

STPAGE.PRG

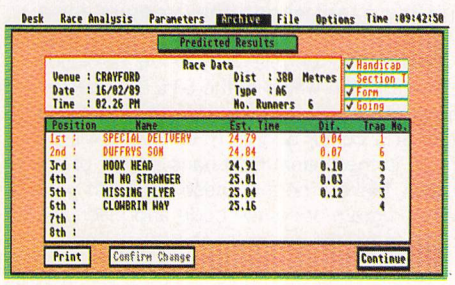
ST-Page is an ultra-fast editor written in 100% machine code using Fast BASIC's built-in assembler. It produces pure ASCII files which makes it ideal for typing out notes and memos, or entering C, Pascal and 68000 source code.

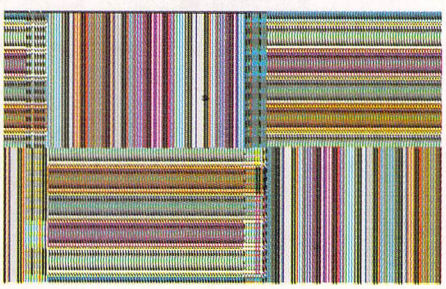
TOP DOG

Going to the dogs! Whether you're serious about betting or just like the occasional flutter, this is the only tipster worth considering. Why? It's the one the bookies tried to ban! Sort out the greyhounds from the rest of the poodles.

ANGLO

War-gamers should don their battle gear, pick up their machine gun and jump astride their camel for here's a scenario for Rainbird's Universal Military Simulator featuring the Invasion of Egypt, November 5th 1956.





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• 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're limited by natural physical forces ie if you only have one head then you'll 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 who just can't live without the tempting teasers on side two, we offer our Side Two Service. For the stunning 'cheaper-than-the-rest' price of 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 whizz it to your door. Cheques or postal orders made payable to Atari ST User Disk Offer to the usual address.

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 which 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 up 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 Courtyard, Sallow Road, Weldon North Ind. Est., Corby, Northants, together with your name and address and we'll replace it.

ARCX.TTP

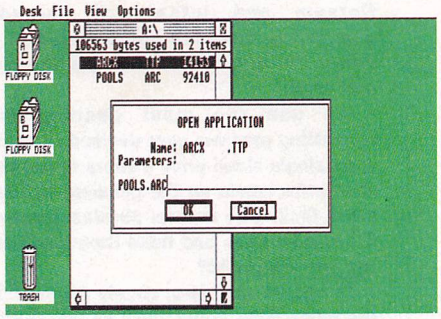
Configuration: All STs, mono and colour

Some of the programs on the cover disk are quite large and have been archived - in other words, compacted - using a special utility designed to cram many programs into as small a space as possible. This means we can put even more goodies on the cover disk than you would normally get. (You can tell which files have been archived as their names always end .ARC.)

Top Dog in the SIDE_2 folder has been archived and before you can use this superb dog racing tipster, you must de-archive it. Here's how to do it:

1. **Format a disk**
2. **Copy ARCX.TTP and SBREAK.ARC off the cover disk to this new blank disk**
3. **Double click on ARCX.TTP and type the name of the archive: TOP_DOG.ARC**

That's all there is to it, now just click on the program to run it. Any other archives can be de-archived in the same way.

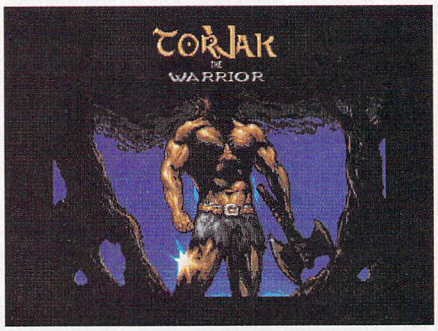


Double click on ARCX.TTP then enter the name of the archive

TORVAK.PRG

Configuration: All STs, colour and mono

We go way back in time for our game demo from Core Design, to the death-throws of the Tormanian wars, no less. Here you can experience a game which transcends the centuries. No, Torvak is not one half of a

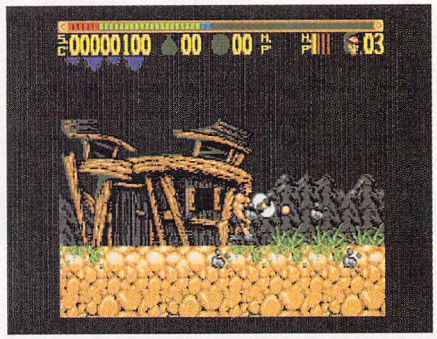


famous figure-skating partnership. This is a time of ruthlessness and barbarism.

Torvak is a warrior, built like the proverbial brick dunny, with one vocation in life: to smash, maim and slaughter his way through an innumerable enemy. Making Arnie look like a octogenarian philanthropist, Torvak muscles his way through a furious bastion of foe (guess who's been at Roget? - Ed).

The game is divided into levels each of which represents different terrains and environments. In the true style of ancient lore, the game is full of myth and legend with strange mystical beasts set against our muscle-clad hero. With joystick control, you must assume the identity of this much-outnumbered warrior and smite his enemy clean into the next century.

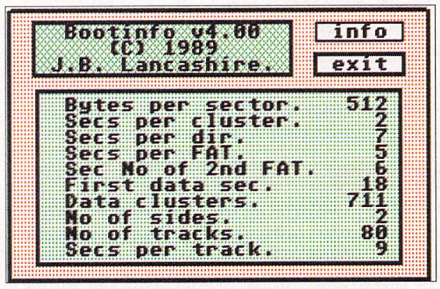
Cracking bones and smashing heads, the action is never short of frenetic, but in addition to the gratuitous violence, you've got to do some damage to the local architecture as well. Throughout the game, from the swamp to the mountains, strange statues line the pathways and smashing them reveals other weapons which can be swapped for your existing cudgel. The life-span of this warrior is literally in your hands - go on, give the bloke a hand!



BOOTINFO.ACC

Configuration: All STs, mono and colour

Bootinfo is a simple desk accessory written by J.B. Lancashire that helps you to identify different disk formats. To use it, copy the file BOOTINFO.ACC to the root directory of the disk you boot with. Next



time you switch on or press the reset button the utility will automatically be loaded and installed.

On selecting the Bootinfo accessory on the Desk menu, the BIOS parameter block of the disk in drive A will be read and displayed in a dialog box. Selecting the Info button will enable you to look at another disk, and clicking on Exit will return you to the desktop or the program running when you called Bootinfo. The source code for Bootinfo demonstrates how desk accessories and dialog boxes are accessed from assembly language.

POOLS.TOS

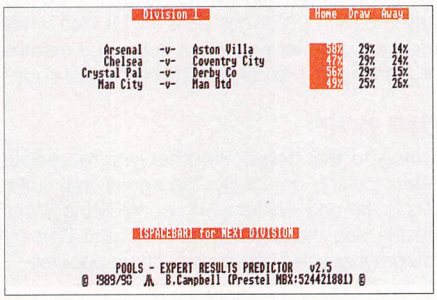
Configuration: All STs, colour only

You've read the cover feature this month, wanna get in on the gambling action? Of course you do, so here's your chance to become an overnight millionaire! This football pools predictor covers all league and Cup matches, and also includes some minor leagues, too.

The predicted results can be output either to screen or printer and all you need to do is put your crosses on the pools coupon and post it off. It's not very accurate at the start of the football season because the teams have played few matches and it's difficult to predict their form, but as more results are added and the database updated, the program becomes a better forecaster.

The Modify Divisions - (New Season) option is protected by a password because it destroys all the data entered so far, this shouldn't cause any problems though as you should only need to do this once at the start of a new season. The task is simplified by being able to promote and relegate teams. League tables can be printed on screen or printer and fixture lists created easily.

The program keeps track of the last three home and last three away matches for every team as well as the season's running total of league points. It examines the home record



for the home team and the away record for the away team, and then combines these to come up with a predicted result.

PALLETTE.PRG

Configuration: All STs, colour only

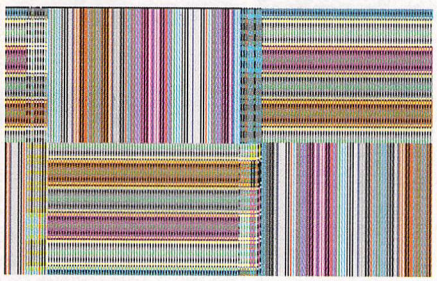
This handy little PD program is great for anyone who needs to work out RGB values to produce a particular colour. Programmers need to enter RGB values into their program source code when setting up a palette, and artists need to study the full palette in order to find the exact shade they require for a picture.

Double click on this utility in low resolution colour and the whole of the ST's 512 colours will be shown on screen. Use the mouse to point at a colour and its RGB values will be shown in the bottom right-hand corner of the screen. Make a note of these, return to your paint program or source code and insert the values to get the particular shade you need.

COLOUR1.BSC
COLOUR2.BSC
COLOUR3.BSC

Configuration: All STs, colour only

Have you ever seen those demonstration programs that display more than 16 colours on the screen at the same time? They're usually machine code programs that use horizontal and vertical blank



interrupts, and other hideously complex technical stuff to display multiple palettes - it isn't necessary!

There's another way to achieve the same effect, and from simple BASIC. It's actually a trick, or optical illusion because what you do is mix two colours together by plotting alternate dots in one colour and then going back and filling in the gaps with the other colour. The two merge on-screen to produce a different colour. The effect is better with poor quality TVs and monitors because the colours are more blurred.

DUALFORM.PRG

Configuration: 1Mb RAM, mono or colour

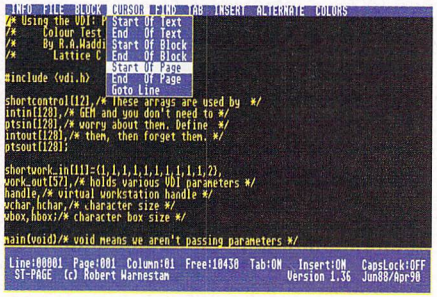
DualForm creates double sided, 800k floppy disks that can be read using either a single or double sided disk drive. The only restriction is that single sided disk drives can't access the programs stored in the SIDE_2 folder - just like our cover disk. Run DualForm, choose the drive to format, pop a disk in the drive and away you go. DualForm will format a double sided, 81 track, 10 sectors per track 800k+ disk and create a folder called SIDE_2 with a file called DUMMY in it.

Copy all the programs that are to be accessible by both single and double sided disk drives to this disk. When you've finished, go into the SIDE_2 folder and delete the file called DUMMY. Now copy into the SIDE_2 folder all the extra files that are to be accessed by only double sided disk drives.

STPAGE.PRG

Configuration: All STs, colour only

ST-Page is an ultra-fast editor written in 100% machine code using Fast BASIC's built-in assembler. It produces pure ASCII files which makes it ideal for entering C, Pascal, assembly language and even BASIC source code. Or if you simply want to type out a few notes or a letter. Its very compact size means that it takes up very little space on your utility disk and it's quick to load.



You can type in text just like any other text editor, but remember to hit Return at the end of the line because there's no word wrap facility. The editor features automatic indent, which is useful when entering lines of source code when programming.

To load a text file, use Control+cursor left or right to highlight the File menu option then press Control+cursor down. Highlight Load File and hit Return to display the standard GEM file selector. Select the file to load as usual and click on the OK button.

PURCUSSA.PRG

Configuration: All STs, colour only

Percussaman is a four-track, 16-instrument, digitally synthesised drum sequencer by Robert Withey (comparable to a drum sequencer) and using sounds sampled at 16kHz. You can edit 140 patterns, and sequence them to produce up to 15 minutes of sampled sound beat.

The edit menu enables you to design and test the basic beat patterns and cicking on any instrument name plays that instrument. Clicking on a box in one of the editing windows will place or remove a hit, up to four hits per column. The BL (beat length) column shows how long a sound will last.

The beat menu handles storage and retrieval of beats. The number in the bottom right-hand corner is the current beat (alter by clicking on the beat slots on the left). The song menu allows sequencing of beats to produce a song.

SNAP.TOS

Configuration: All STs, colour and mono

SNAP.TOS is a simple, but useful snapshot utility that saves the ST's screen when a certain combination of keys are pressed. When it's run, Snap hides itself in memory and quickly returns to the desktop. Now you can run another program, and at any time, you can press the special control keys to save the screen.

It works in any screen mode and saves ordinary Degas screens - PI1 in low resolution, PI2 in medium resolution and PI3 in high resolution. It's useful for grabbing screens and artwork from other software for inclusion in your own, for instance, for pasting mono images onto DTP pages, or taking sprites from pictures and so on.

When you want to take some snapshots double click on SNAP.TOS on the desktop to install it in memory. Now boot up your software as and whenever you want to save the current contents of the screen press the Control+Alternate+both Shift keys.

ANGLO.SIM

Configuration: All STs, colour only

Don your battle gear and jump astride your camel for here's a scenario for Rainbird's Universal Military Simulator featuring the Invasion of Egypt, November 5th 1956.

On the July 26 1956, Egypt nationalised the Suez Canal causing a major concern both in Paris and London. The conclusion was that only a military operation could restore the control of such a strategic asset.

Troops were gathered, command centres formed and organisation of transportation and assault units were completed. Eleven days were allowed to take the entire 64km canal. British General Keightly was commander of the Allies while land forces commander was Lt. General Stokwell.

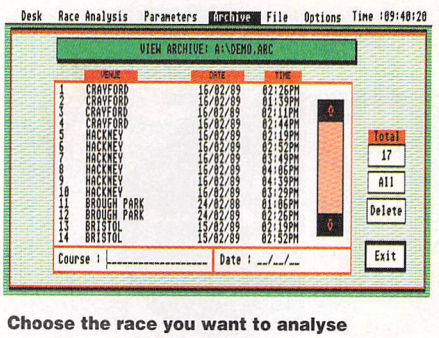
TOP_DOG.PRG

Configuration: All STs, colour only

Beat the bookies at their own game! Top Dog is a greyhound racing analysis program that attempts to predict the winners from the poodles and pooches. No prior knowledge of dog racing is required because all the information that the program needs can be obtained from the Greyhound form pages of the Sporting Life or Racing Post.

Whether you're serious about betting or just like the occasional flutter, Top Dog is the only tipster worth considering. Why? Well, it's the one the bookies tried to ban - at least, that's what Forecast Software says.

Rush out and buy the Sporting Life or Racing Post and turn to the greyhound racing section. There, you'll find the form details of all the dogs running. Feed in the date and time, distance, track, race grade, number of runners, trap number, handicap, sectional timing, course going and so on, then sit back and watch the program calculate the finishing order of the race. It'll even tell you the finishing time and distance between the dogs!



Choose the race you want to analyse

RUNTIME

ISSUE THREE

The world's first totally dedicated electronic media magazine for all ST users goes from strength to silicon-based strength . . .

ON THE ELECTRONIC PAGES...

PROGRAMMER'S CLINIC
Got a problem? Then come along to the friendliest clinic around. If Mathew Lodge can't solve it he'll post it on the electronic noticeboard and invite our talented readers to help out. Solutions will flood in before you can say arrgghh...

ARCADE GAMES WRITING
Struggling with STOS? Phil Lawson provides a helping hand. Dissecting the great grand-daddy of all arcade games Breakout, he shows how not to lose your marbles!

EXPLORING GEM
The ST's virtual device interface is a minefield for the unwary - a wrong call, a parameter missing, and boom! The computer prints those cute little bombs all over the screen. Roland Waddilove comes to the rescue and provides a safe route.

SCREENFULL
The ultimate challenge for programmers is to write a useful routine in just one screen of code. It can be done, and here's another microscopic marvel from our talented readers.

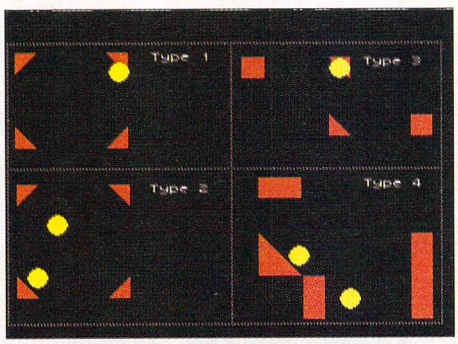
The submissions for RunTime keep on rolling in and the Post Office has laid on a special van just to deliver our sack-load of mail each week. We cram as much into RunTime as possible - in fact, even more because we're using advanced compaction techniques that squeeze over a megabyte of programs, utilities and articles onto one double sided disk. And as if that's not enough, it can be read by single sided drives, too!

In Mathew Lodge's disk-based clinic this month there are questions on C, the STE as well as a guide to using GDOS fonts. There's a plea for someone to explain what the STE's Cookie Jar feature is, a reader seeking assistance with with Gulam (gosh!), and everything you ever wanted to know about GDOS fonts but were afraid to ask.

Screenfull is an exciting new challenge for programmers - to write a program (or even just a subroutine) that will fit on one standard monitor or TV screen. That's about 22 lines. The program can be a game, utility, graphic designer, music and MIDI editor or even a business program, the choice is yours. You can also use any programming language such as Basic, C, Pascal, STOS or 68000 machine code but remember, the whole of the source code must fit onto one screen.



This month's challenge has been answered by programmer Sean Cleaver of East Hoathly in Sussex. It's a password program written in 68000 assembly language using Devpac 2. Assemble it and save it in the AUTO folder of your boot disk. When the ST is booted the program prompts you for a password (458, but



it can be changed to any numbers or digits), and won't continue unless you enter the correct one.

If you are burning the midnight oil trying desperately to create a block-buster of an arcade game then Phil Lawson provides some light relief with his continuing tutorial on all aspects of this superb game creator. This month's column is a load of old balls - he demonstrates how to make balls roll around the screen and bounce off objects at the correct angles. Here's a use at last for those dull laws of motion devised by that awfully clever Newton chappie you learnt about at school!

For the programming elite who wouldn't be seen dead with a BASIC interpreter in their micro Roland Waddilove continues his exploration of the ST's virtual device interface for C programmers. Remember - Drawing lines, circles and rectangles is easy when you do it Roly's way!

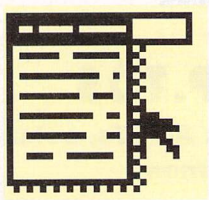
GETTING STARTED

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

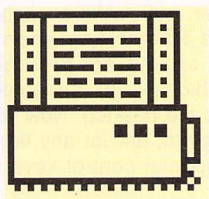
The magazine appears on the disk as a program called MAGAZINE.PRG, all you need to do to read it is double click on the program icon. You'll see a GEM menu bar at the top of the screen, moving your mouse pointer over it reveals several drop down menus.

These menus contain the titles of 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 TV isn't very clear you can print out the article , then study it at your leisure.

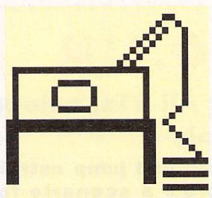
At the foot of the screen you'll see several icons. Here's what the main ones do when you click on them with the mouse...



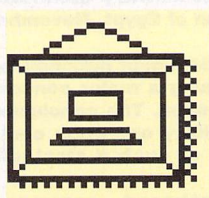
This is the icon which enables you to return to the opening GEM menu bar. Click this if you want to stop reading the current feature



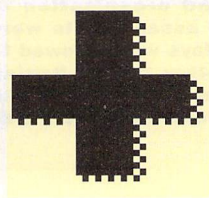
Use this icon if there's a particular page of the feature which interests you and which you wish to have on paper



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 which helps to illustrate a point. Click this icon to see the picture



Everyone, even learned programmers need help occasionally, if you find that some friendly advice is needed, click the cross

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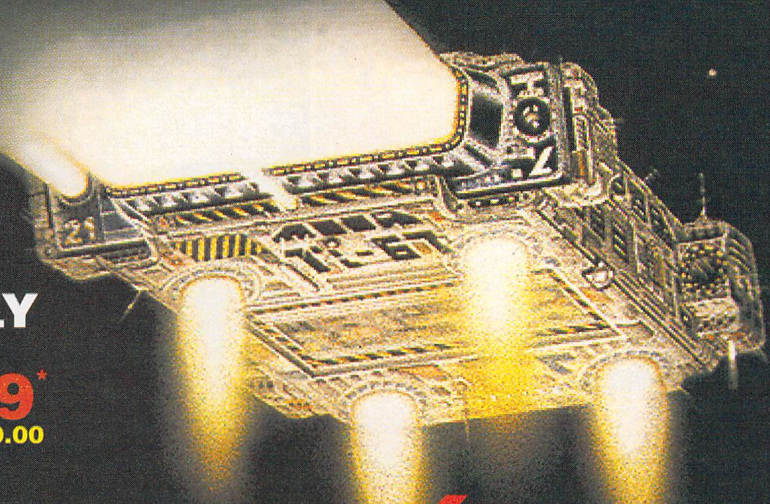

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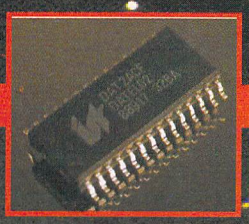

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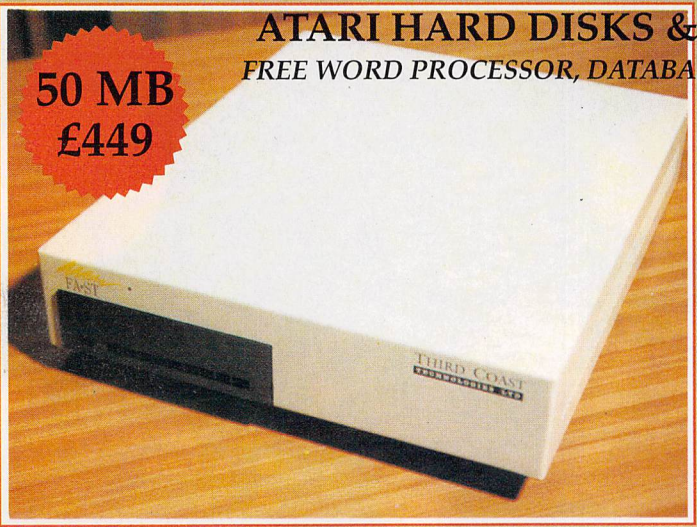

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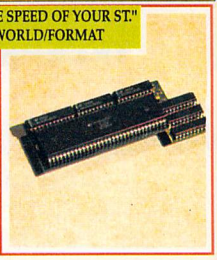

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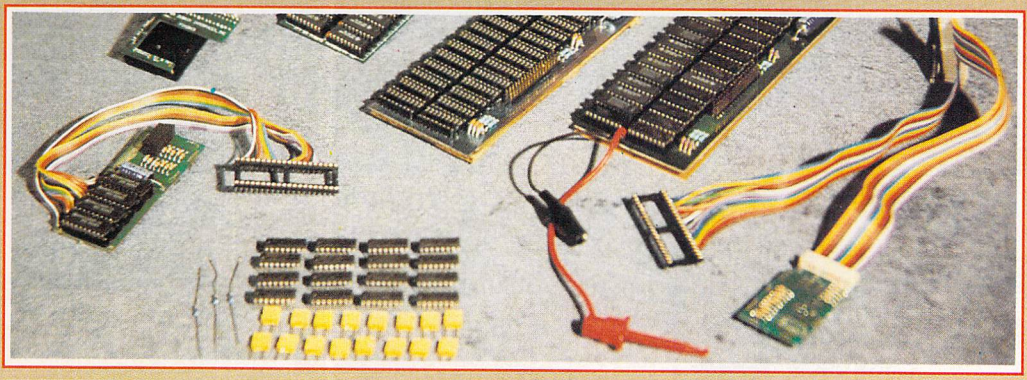

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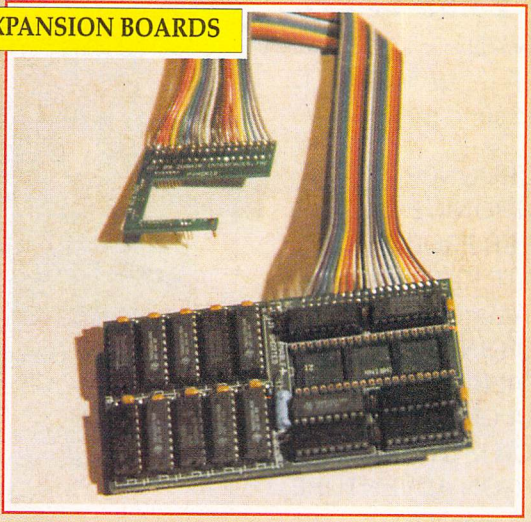

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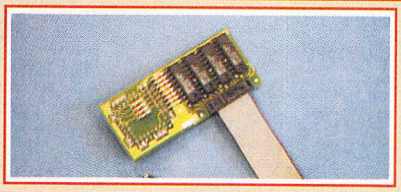

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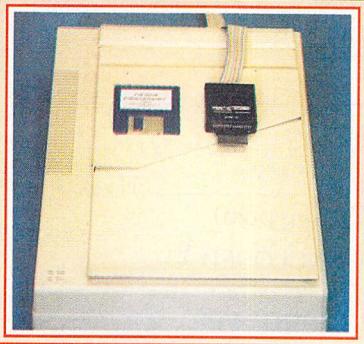

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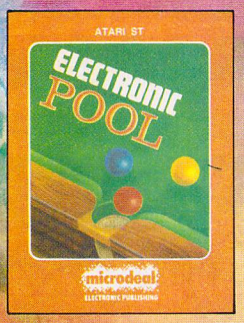
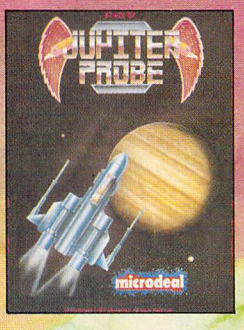
ALL FOR ST OR AMIGA



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



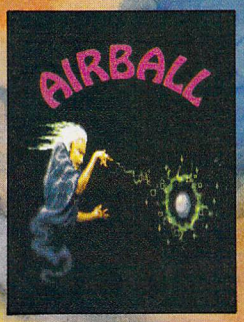
ELECTRONIC POOL
Mono or colour version of 'Video Pool' arcade game.



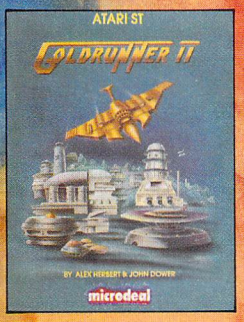
JUPITER PROBE
Vertically scrolling shoot em up by Steve Bak.



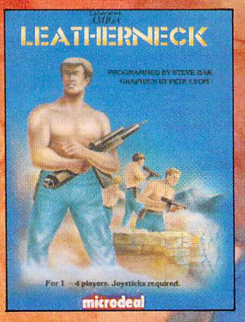
KARATE KID PART 2
Our top selling karate game.



AIRBALL
Over 200 rooms of strategic arcade action, graphics from Pete Lyon!



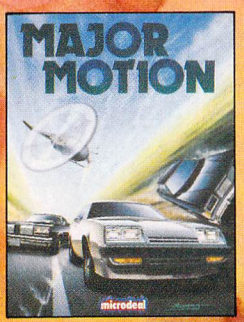
GOLDRUNNER 2
Sequel to our top selling shoot em up, high speed action packed arcade game.



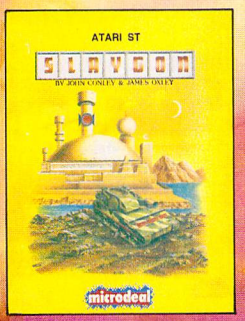
LEATHERNECK
Reviewed as the best arcade war game, program by Steve Bak.



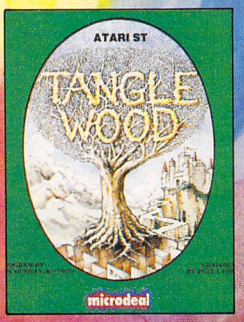
TETRA QUEST
Over 300 screens of arcade strategy.



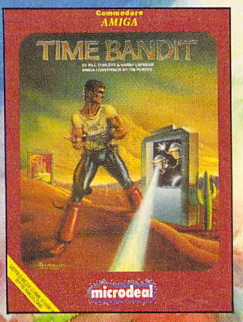
MAJOR MOTION
Spy car chase arcade game.



SLAYGON ADVENTURE
Stop Cyber Dynamics ruling the world in this graphic adventure.

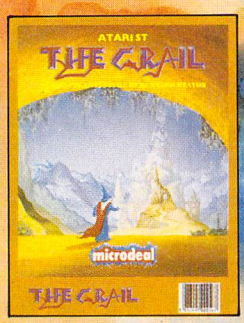


TANGLEWOOD ADVENTURE
Rated as one of the best 16 bit graphic adventures.



TIME BANDIT
Top selling arcade adventure, the original ST Mega game.

AMIGA Version Requires 1 MEG



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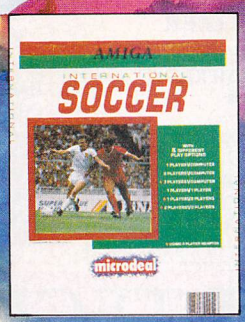

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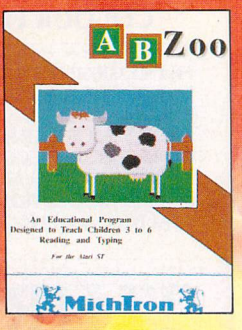

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Corks! There's another copy of PlayTest on the newsstands, chaps!

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STU9

FIREBALL

Microstyle has recently acquired a new game by the Hot House programming team. Fireball is described as having the skill of soccer, the speed of ice hockey and the strategy of Rollerball.

Action takes place in a 3D energy dome and the game is played between two, two-man teams. Eight heavily armoured teams take part in the play off and the object is not only to score goals, but also to kill the Salamander keepers who guard the goal portals. The play area, or Hexorium, contains eight goals, four per team, these are better known as Dragonheads.

The ball is a molten orb, known as the Fireball. This can only be handled by the players for a limited time. To overcome this problem, the players wear heavy armour traditionally known as Ovens. Only when a team has killed all four of the opposition's Dragonheads will the game be won. Fireball is available in August priced £24.99 on the Microstatus label.

A GRABUMS II

Having wowed the world with its Universal Military Simulator, Intergalactic Developments Inc. together with Microprose is set to release the follow-up. UMS II is set on a global scale and players will be able to test their war-gaming skills in two different eras, Alexander the Great and the Second World War. Subtitled Nations at War, the game enables players pinpoint accurate control over their forces. Games may be played with over fifty players, each one controlling their own independent country. The game has taken several thousand man-hours to produce and the hard work certainly shows. UMS II: Nations at War is available shortly priced £29.95

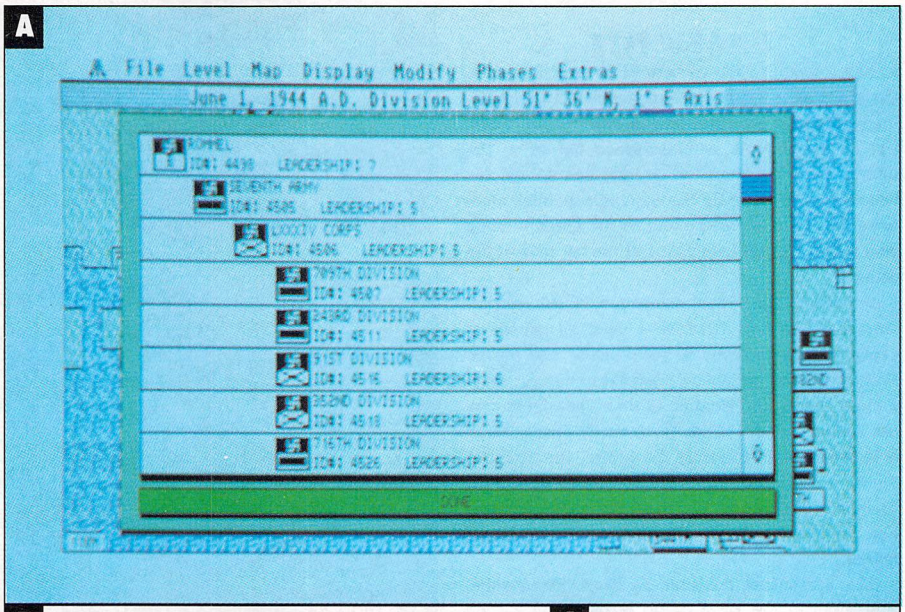
B HEROES

Are you fed up with tennis and football 24 hours a day? Could your life do with a life? Call out the Heroes. Domark believe that computers are being left to gather dust and cobwebs while their owners are out sunning themselves. The computer industry has fallen into hibernation and is in danger of never waking up.

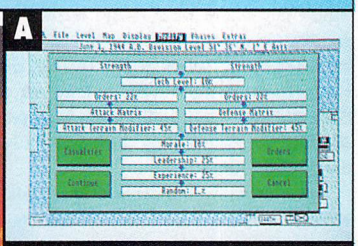
The answer lies with the Heroes, an action-packed compilation coming soon from Domark. Featuring four games the package boasts an impressive pedigree. Included are Domark's James Bond shoot-em-up, Licence to Kill and Force-ful coin-op conversion, Star Wars. Also appearing will be big ol' Arnie in The Running Man. Finally, gamesters will be treated to a little gratuitous hack-n-slay in the shape of Palace's Barbarian II. Billed as "the most explosive compilation yet", Heroes will appear during July and will cost you the princely price of £29.99.

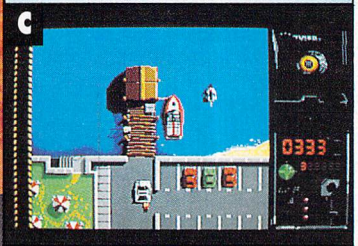
C THE SPY WHO LOVED ME

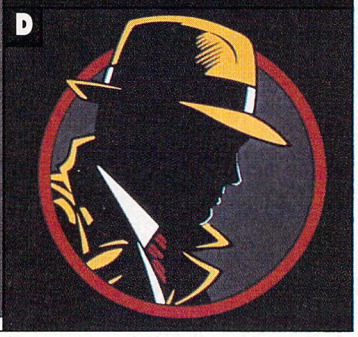
Domark is due to release yet another James Bond tie-in. The Spy Who Loved Me should be out soon. The film was the first to feature both Bond's sub-aqua Lotus and his steel-toothed arch-enemy, Jaws. Combining resources with a beautiful Russian agent, Bond must discover the whereabouts of three missing nuclear submarines. The Spy Who Loved Me, features a number of levels each with their own individual styles of gameplay. Watch out for The Spy Who Loved Me sometime in September priced £19.99.











D DICK TRACY

The French division of the Walt Disney Company is pleased to announce the European launch of the Disney Software label. Together with Nathan Software, a leading light within the field of children's and creative software, and Titus the French software entertainments giant, the Disney Software label will be aimed at three specific areas: entertainment, with first-class products such as the latest Warren Beatty and Madonna movie Dick Tracy, and the soon-to-be-released Stephen Spielburg thriller Arachnophobia, already in the bag this department looks as though it will supply something special. Children's, to help children with learning skills, Disney has called upon some of its classic characters. With Mickey and the gang all chipping in there should be no troubles and Creativity, Disney Software plans to release the Disney Animation Studio which will enable home-computer users to recreate pieces of Disney magic on their computer screens.

The company has already started work on some of the projects. On the entertainments side three projects are underway.

Dick Tracy will take the form of an arcade-action style game, Ducktales: The Quest For Gold will see Scrooge McDuck taking part in an action-adventure, and Arachnophobia is billed as an action-thriller.

The first two titles will appear in October and November respectively, while the final one should appear around February of next year. We'll give you lots more details of all these releases as they happen.

E MAGIC FLYE

A. has announced the release of its next ST game, Magic Fly. Billed as a vast search and destroy game, the action sees you assuming the role of pilot in control of the ultimate confined-space fighter of the future. Time has marched on and space vehicles have grown to resemble the ancient insect-like creatures that once scuttled about on the Earth. Piloting your Magic Fly, you help police at the far edge of the galaxy.

Organized crime has reached epidemic proportions and the Ceti Triad have used all-manner of exploitation techniques to gain wealth and power. However, their unrelenting brashness has cost them a great secret, the location of their operations centre. Taking controls of the T2 Magic fly, your mission is to penetrate and destroy the centre. Just to make things a little more interesting, you've also been assigned to locate and retrieve top-secret information on the Triad's latest, most deadly prototype fighter.

The game was designed by Mark Pickavance, whose impressive track-record included titles such as FireIron and AMS. The action is being programmed by the talented Jeff Lawson whose previous projects include both Spitfire 40 and Strike Force Harrier. Together the team have produced the 3D, filled vector graphics game which features over thirty alien craft.

Set in a labyrinth of networked tunnels, the game will provide players with hours of fun. The mission is by no means easy, but with ten different weapon systems at your disposal you should have the upper hand. Prepare to swat the Magic Fly during August, price £24.99

F CADAVER

The Bitmap Brothers are busy putting the final touches to their latest epic. You'll be glad to hear the game now comprises five levels each containing about seventy puzzle-ridden rooms. Imageworks is confident that the title will be the game of 1990. Featuring the classic 3D-style graphics found in the old 8-bit Speccy titles, Cadaver sees a new departure for the Bitmaps. Being a sort of fantasy role-playing come graphical adventure, Cadaver will wow new fans and old alike. Cadaver is to be released during September and will cost £24.99.

G GRANDSLAM

London-based Software House Grandslam has gone into liquidation. The company who brought us great games such as Pacmania, Pacland and the Running Man won't release any more titles in the near future. The company was to publish a number of titles including Thalion's Dragon Flight. Speculation was rife over who was going too grab the licence, Birmingham giant U.S. Gold looked a likely candidate but finally Active Sales has managed to gain the rights to publish the games.

And staying with U.S. Gold, the Brummies have recently signed a contract with French publishers Delphine. Future Wars II: Operation Stealth looks likely to be the first release and sources inside U.S. Gold say that relationships between the two companies are very good, so expect to see great things soon.

H MEAN STREETS

Become a private investigator named Tex Murphy. The year is 2033 and you've been hired by a beautiful woman to uncover the facts about her father's untimely death. The one-time University of San Francisco Professor was found brutally murdered and as you begin investigations, you stumble on a sinister death wish aimed at specific members of the scientific community. Are the murders purely coincidental, or is there something more sinister afoot? It's all down to your investigative brain to suss out.

During the game, you'll be able to talk to 27 fully-animated characters and by questioning, bribing or even threatening them, you might just get the necessary answers. Some of the characters will even talk to you. The programmers have included this unnerving effect with the aid of their Real Sound techniques. Mean Streets will also have you cracking high-tech security systems, rummaging around offices, warehouses and factories looking for vital clues and evidence.

Put your life on the line as you battle against the enemy in action-packed shoot-outs. There's even a flight sim element as you jet from city to city in the Lotus Speeder. Mean Streets hits the streets during September and the price? We'll keep you posted....



I ADVANCED FLIGHT TRAINER

Chuck Yaeger has been flying for as long as he can remember. The old, bold pilot has been into computer flight sims for nearly as long. Now, Electronic Arts is proud to announce the release of the Chuck Yaeger Advanced Flight Trainer 2.0. The program will enable pilots to test their skills with a range of aircraft including, Spads, P51's, F18's, X-29's, the FY-117A Stealth Fighter and even the Space Shuttle.

The program includes night flights and the programmers have included formation flying with either the Blue Angels or Thunderbirds acrobatics teams. You can compete in races, saving performances as you go. The Flight Trainer also lives up to its name teaching pilots all the tricks of the trade.

The game comes complete with a six day training program during which, you can learn the basics of flying. July should see the arrival of this ultimate flight simulation and lessons will lighten you to the tune of £24.99.

J SNOW STRIKE

January 1997: Washington DC is the stage for the inauguration of America's new President. During his speech, the President vows to solve by force, the South American drug problem. In order to do this he promises to push Congress into a formal war situation with the narcotic barons.

February 1998: Congress continuously refuse to declare war on non-governmental organizations, therefore as Commander in Chief, the President decides that the only option left for him to follow is to send troops into South America (under the guise of police action) to protect American citizens. The State department approves the purchase of a new State-of-the-Art jet fighter, the F14-LCB COSMOS. Flown by the right pilot (know anyone who fits the role?) this new aircraft could be used effectively to destroy the major drug installations and major transport links.

April 1999: The President authorizes Operation Snow Strike. Within days a squadron of F14 - LCB COSMOS jets arrive on-board the aircraft-carrier USS Epyx. The drug baron's domain has been carefully mapped and the first offensive strike is about to get under way. Snow Strike features ten different missions, variable training modes and intense pre-flight preparation. Flying a specially-modified F14, you'll be called upon to rid the world of the evil narcotics syndicates. Both Epyx and U.S. Gold believe the game carries a far reaching message. Due for release in August, Snow Strike will cost £19.95.

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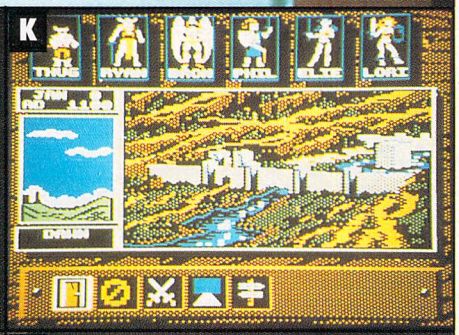

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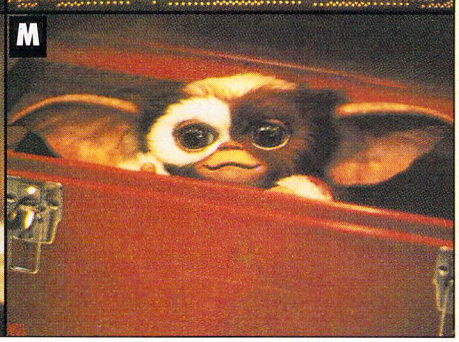


K SPACE ROGUE AND KNIGHTS OF LEGEND

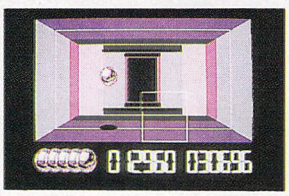
Mindscape has just announced two more ST products for release later this year. The first of these is Space Rogue which should appear towards the end of July. The game sees you drawn into a web of intergalactic intrigue as you uncover assassination plots and at the same time you'll become involved in full-blow wars.

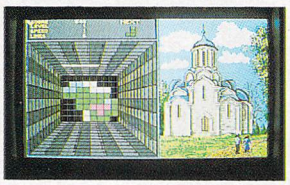
Space Rogue is a role-playing style game that will keep ST gamers busy for hours on end. The game's price has been set at £29.99 and looks certain to be a cult hit. Meanwhile, Knights of Legend has been in development for eight years! The game incorporates what Mindscape believe is the most comprehensive combat system ever offered in a role-playing game.

Travelling through the land of Ashtalarea, you will come face to face with hundreds of the land's colourful inhabitants and terrifying foes. Using your own spells or the sharp edge of your sword, you progress through the land, continuing the mission. Knights of Legend is due for release during August and will once again cost £29.99.

M GREMLINS 2

In the run up to Christmas (yes, it's nearly here again!) Elite Systems has announced that it has acquired the rights to one of this year's biggest film licences. Together with Topo Soft, a Spanish software house, Elite is busily working on the 16-bit version of Gremlins 2. There are no firm details about the game as of yet but we've heard it will take the form of a platform romp. The game should be ready in time for the Christmas rush and the plan is to coincide it's introduction with the release of the movie.







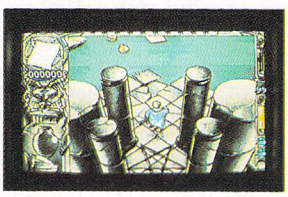


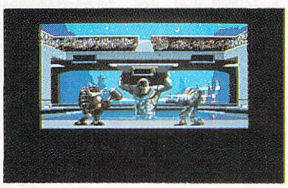
THOSE TO WATCH

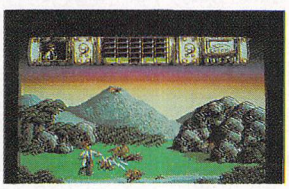
Coming soon from Infogrames is a wealth of wonderful games. The programmer of the original Tetris has created a new 3D-style game known as Weltris. Infogrames are also due to release Hostages 2. Called Alcatraz, the game should be available in September. In the meantime also look out for Mystical, Light Corridor, Alpha Waves, Murders in Space and Metal Masters.

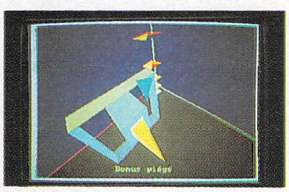
As well as hundreds of Sierra On-Line adventures, Activision is also about to release another Vivid Images Design game. Time Machine has you sorting out logic problems over five time zones. All the puzzles are interlinked by both time and space and players will need all their wits get back to their own time zone.

Psygnosis is also programming a phenomenal number of games. Shadow of the Beast has finally been finished and will be out soon. In the meantime the Liverpool-based company is ready to release Nitro, The Killing Game Show and Matrix.

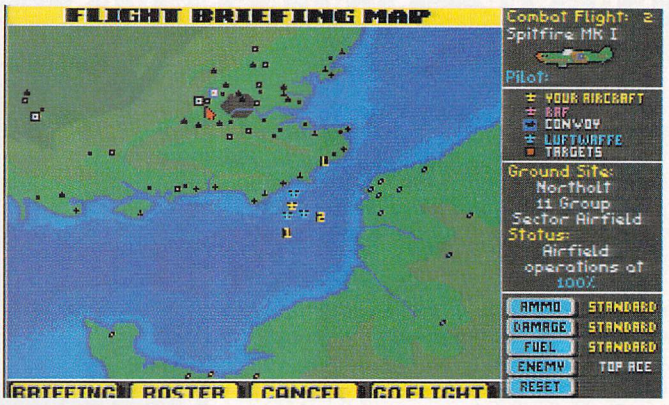












ABOVE; There are several different planes to choose from including fighter planes, bombers and dive bombers. These plans are selected via the mouse pointer and you'll then be presented with the missions

ABOVE RIGHT: It's here on the map screen that you'll be able to view the proceeding battle from an outsider's point of view. You can view any information you like about plane squadrons and land-based targets

Their finest hour

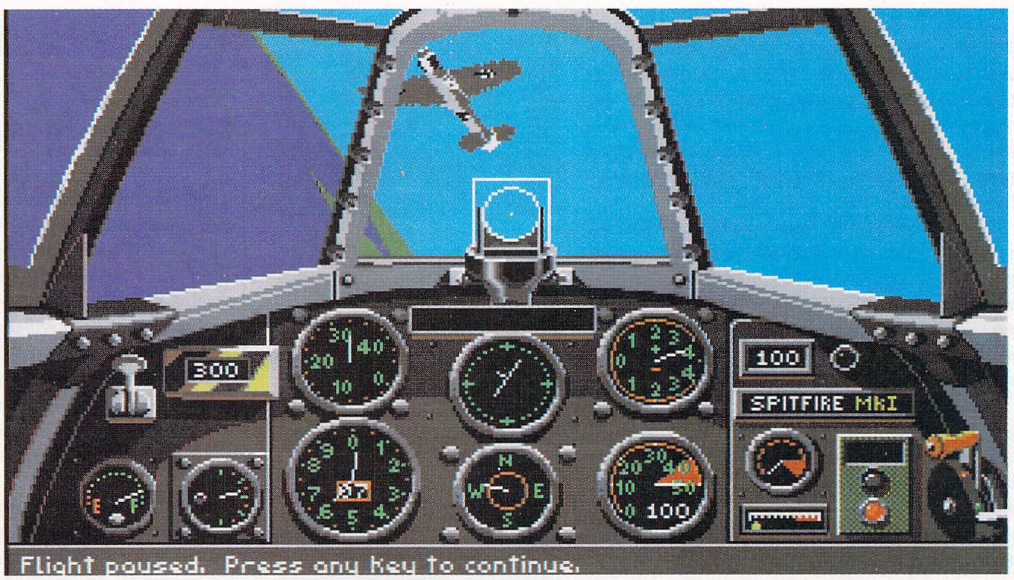
THE BATTLE OF BRITAIN

House: FIREBIRD Price: £24.95

TRIED AND TESTED:

REVIEWER: .....STEVE
GRAPHICS: 85%
SOUND: 74%
GAMEPLAY: 87%
OVERALL.....90%

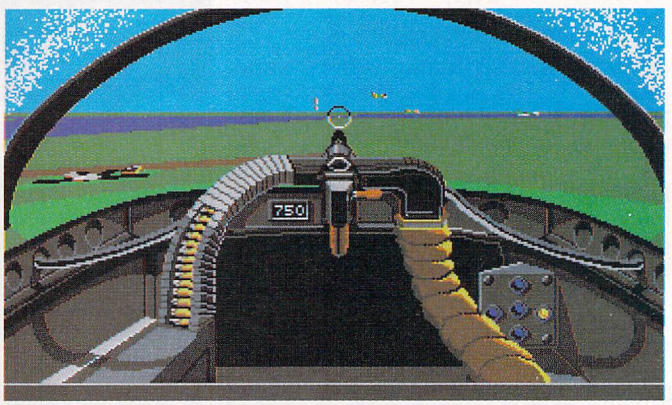
RIGHT: This is the view from the cockpit window of a Supermarine Spitfire. As well as the forward view, you can also look across both wings, in the rear view mirror and down at the ground



BELOW: If you ever wondered how it would feel flying a Messerschmitt and pumping rounds into a Spitfire or Hurricane then The Battle of Britain is for you. 20mm cannons can cause quite a few headaches for the RAF boys

BELOW RIGHT: The hardest missions to attempt are the bomber runs. Keep your eyes on your gunner seats and watch out for Hurricanes and Spitfires





Battle of Britain is the latest release to come from the Lucasfilm/U.S. Gold partnership and follows hot on the heels of the highly successful Battlehawks 1942.

Battle of Britain depicts the heroics and uncertainty that surrounded the Luftwaffe's invasion of Britain and the desperate attempts made by the RAF to thwart the attacks. You'll be able to choose between several fighters and bombers that have been selected from both the Luftwaffe and the RAF.

The only two planes available to the would-be RAF pilot are both fighters: the Supermarine Spitfire and the Hawker Hurricane, as these were the two major work horses for Britain during the Battle. The Luftwaffe have only one fighter plane, the Messerschmitt - the others are bombers and dive bombers.

Once you've selected the plane that you wish to fly, you're presented with a series of different missions in which to participate. These vary in difficulty and are all based around events that actually took place during the Battle of Britain.

Flying a Spitfire or Hurricane, the roles that you'll be requested to play will be that of intercepting enemy bombers while the German Messerschmitt pilot will mainly fly escort to bombers. Obviously, bombers are required to bomb certain targets such as airfields, radar bases and factories.

After selecting a mission, you're presented with the map screen. Here you'll be able to see a map of the South of England with all the airfield and radar positions. Also displayed will be the initial positions of all the planes that participate in your chosen scenario.

By moving the mouse pointer around the map, you'll be able to glean certain facts about the plane's positions, direction and squadron information. There are several attributes to the right of the map screen that can be toggled to make your game easier or harder. These include ammunition, damage, fuel and enemy.

Ammunition, damage and fuel can be switched from normal to unlimited while the skill of the enemy can be switched from novice through to top ace. Once you're happy with the selections, you can enter the fray.

Both mouse and joystick can be used in the Battle of Britain but the mouse proves slightly more responsive when caught in sticky situations. Everything you'll need to fly a plane or bomber is present on the instrument panel.

The damage indicator is represented in bar form which increases as the plane is hit. As more hits are taken, your speed will decrease and the indicator will nudge further forward into the red. If it reaches the top, then your plane will be out of control and you'll need to bail out before it slams into the Channel or smashes into the green pastures of Southern England.

The bombers have several gun positions and these can be switched through certain keys on the keyboard. There are left and right as well as forward and rear gunners and a direction indicator on each of these gunner displays will show from which direction the Spitfires or Hurricanes are attacking.

Once you've reached the target, switch to the bombardier position where you'll be able to fine-line the target. As soon as you're in range, hit the Return key and watch those bombs fly. Wheeee! If you've timed it right the bombs will explode on their targets.

After all the planes and bombers have completed their mission, they'll be requested to return to base. The home airfield can be located by selecting a map option and finding out the compass direction in which you'll need to travel.

Landing a Spitfire or Hurricane is pretty simple, but bombers have the hard job of flying all the way back to Germany and being constantly attacked by the RAF.

Once you've landed safely, you'll be informed of any kills and, if you're a bomber, how many targets were destroyed. A score is allocated to your pilot and he will be rewarded with medals if his score warrants it. The Battle of Britain also has a campaign editor which enables you to design your own campaigns then save and load them to disk. All this adds up to a hell of a game.

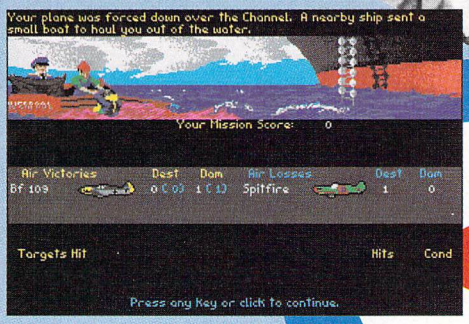
Battlehawks 1942 was good and the sequel, Battle of Britain carries on the tradition. These games are far more enjoyable than the likes of Falcon and F-29, because you can actually see what you're supposed to be firing at - you're flying the plane, not some hi-tech computer system.

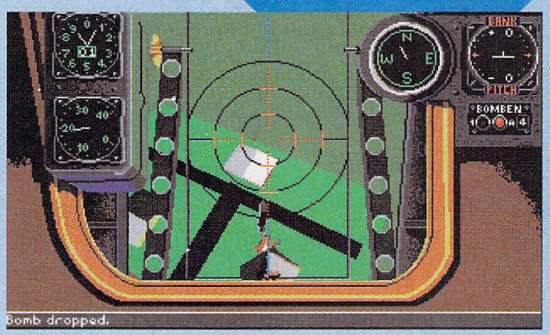
The choice of missions have been well varied and will certainly offer a worthy challenge to even the most hardened of pilots.

The replay option is excellent and enables you to view the battle from all angles.



Although crashes regularly occur when you're shot down, it's also very easy to forget to check your altitude while chasing an enemy plane. This will definitely result in your untimely demise

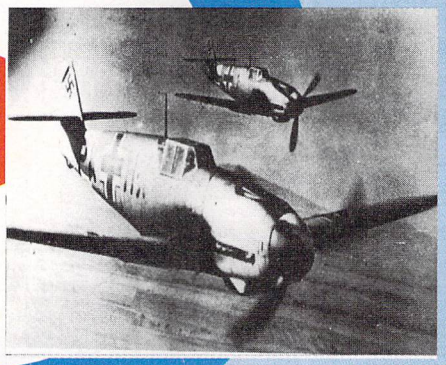




ABOVE: As well as keeping your eye on your gunner seats, bomber pilots should keep the plane straight and on target. The attack indicator will indicate where the enemy are attacking from

BELOW: Once you're in the thick of the action you can switch on an on-board camera and record the whole event on film. This can be viewed in a spectacular cinema-fashion





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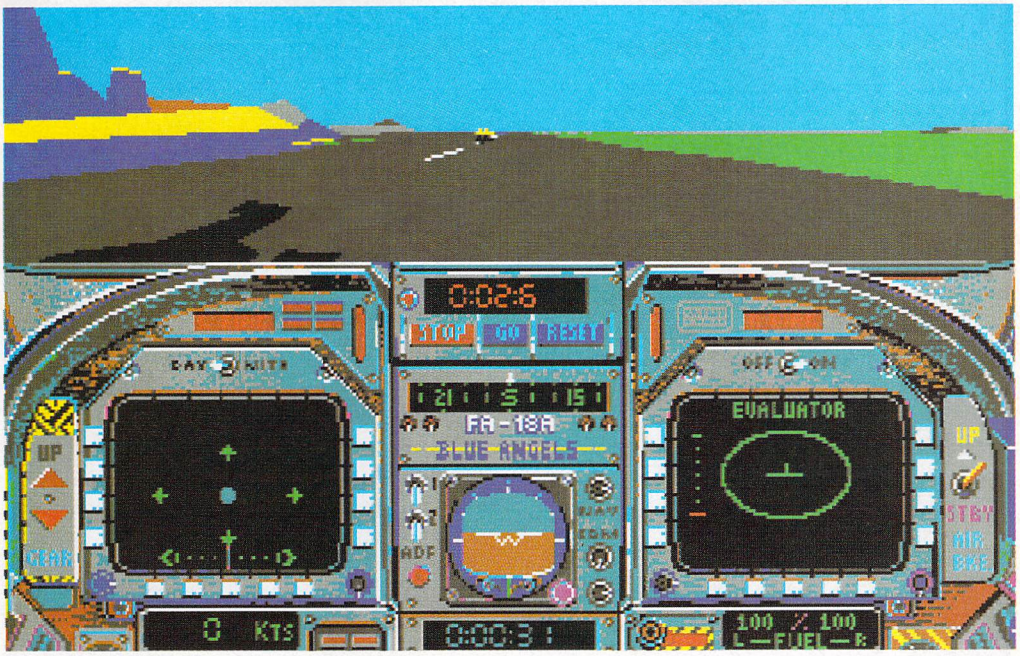
RIGHT: Making a welcome change from the usual combat simulator is Blue Angels - the only air show simulator for the ST. Jump into the cockpit of your F-18 Hornet and join America's best in the flight of a lifetime!



TRIED AND TESTED:

REVIEWER: .....ALEX
GRAPHICS: 76%
SOUND: 66%
GAMEPLAY: 71%
OVERALL.....72%

BLUE ANGELS

House: ACCOLADE Price: £24.95

When you were young, you must have gone to see an air display put on by the Red Arrows, right? Some even go when they're older, and therefore can appreciate the time, effort and practice that goes into these displays.

In case you don't know who the Blue Angles are, they're the American equivalent of the Red Arrows. Their first show was over forty years ago, and then the majority of the pilots were veterans from World War II. It's said that these magnificent men in the F-18s have performed for over 200 million spectators and that's saying something!

Now Accolade offers you the chance of a lifetime to actually fly one of these blue Hornets (for that's what they are) and participate in some of the most dangerous and exciting manoeuvres that they have ever performed.

You cannot fly a display without knowing the manoeuvres, so first things first. It must be said that more time will initially be spent on the ground than in the air, but you'll need to know every move to pull off the various twists, and rolls successfully.

If you don't, you're not only endangering your own life but that of your counterparts as well. Obviously, you won't die if you make a mistake, so therefore you can re-try that move and hopefully pass with flying colours. When you do try a new move, it's best to view the simulator. This is basically a 3D box to show you in detail the desired manoeuvre.

The proper flight path is mapped out so you can view it from all angles. After a lot of thought and concentration, hopefully you will feel ready to get in the plane and practice.

There are three types of flying including take off, solo flight, or the delta. Flying the Delta is when you attempt to enter the skies with your flight-mates, the take-off is self-explanatory and so is the solo - you fly on your own. You have the choice to fly anywhere in the group - you can even take the lead if you wish.

After the flight, you can choose whether to practice or to go on the the real flight. Choose the latter and you'll participate in a real air show, and every move you do must be perfect. If, on the other hand you fell queasy at the knees about all of this, you can choose to stay on firm ground and watch the air show from a spectators point of view (and any other view your heart may desire!)

Blue Angels certainly makes a change from the usually combat flight simulator, but more could be done with the idea but on the whole, the game is good, with nice graphics but virtually non-existent sound.

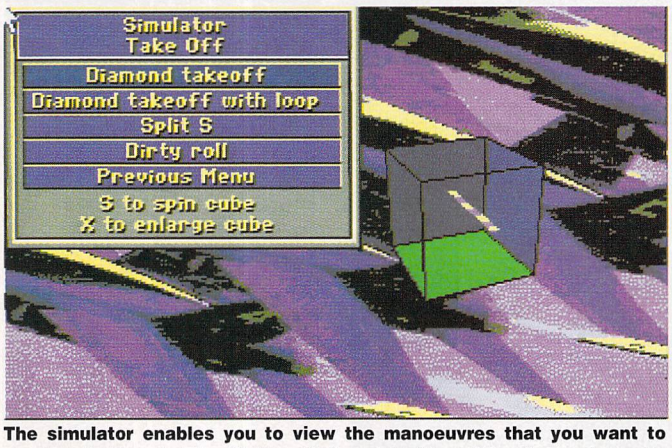
In fact the game looks very nice, that is until you start playing!

Most people will probably find it impossible to play with the joystick for there are too many different moves, so that leaves only the cursor keys which are also too hard.

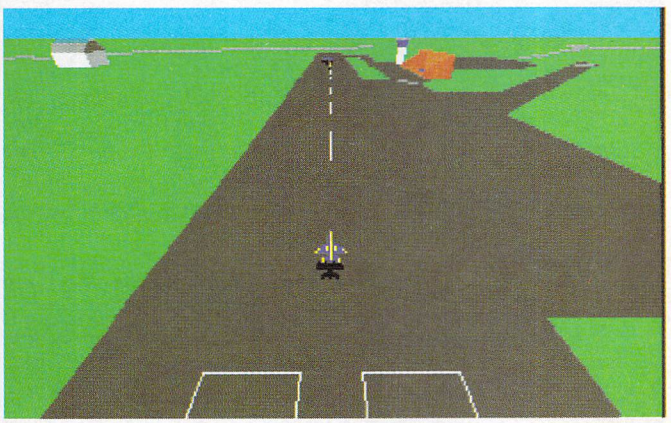
Not a dire game, but I'll be sticking to the likes of F-19.



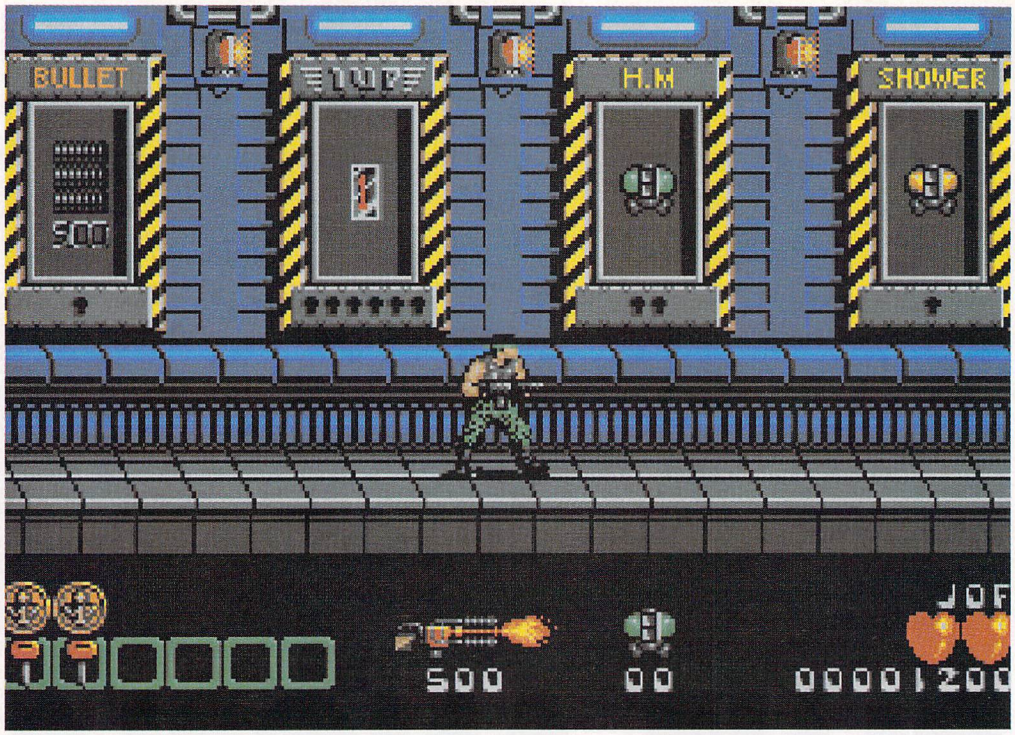
Now is the result of you work up there in the clouds. The review of your flight soon appears and confirms you thoughts - that collision was not good for the plane or you and you really should try again

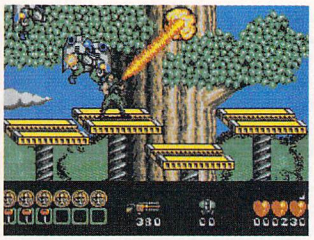


The simulator enables you to view the manoeuvres that you want to practice in the air. The flight path is set inside a 3D cube, and can be rotated to that any view can be seen.



For those of you who don't fancy flying, you can view the display from the spectators' point of view. You can look at the aircraft from the ground, the air and virtually anywhere else you can think of!





ABOVE: One of the later stages requires you to make your way to the top of a tall tree - easy right? (especially with the aid of the power-lifts) Wrong - out of nowhere comes a horde of gyro-soldiers buzzing around the screen

LEFT: A shoot-em-up is not complete without a way to increase your firepower. After each level, you enter a shop by blowing the door down (nice!) before running along and grabbing a weapon - don't forget to pay for it!

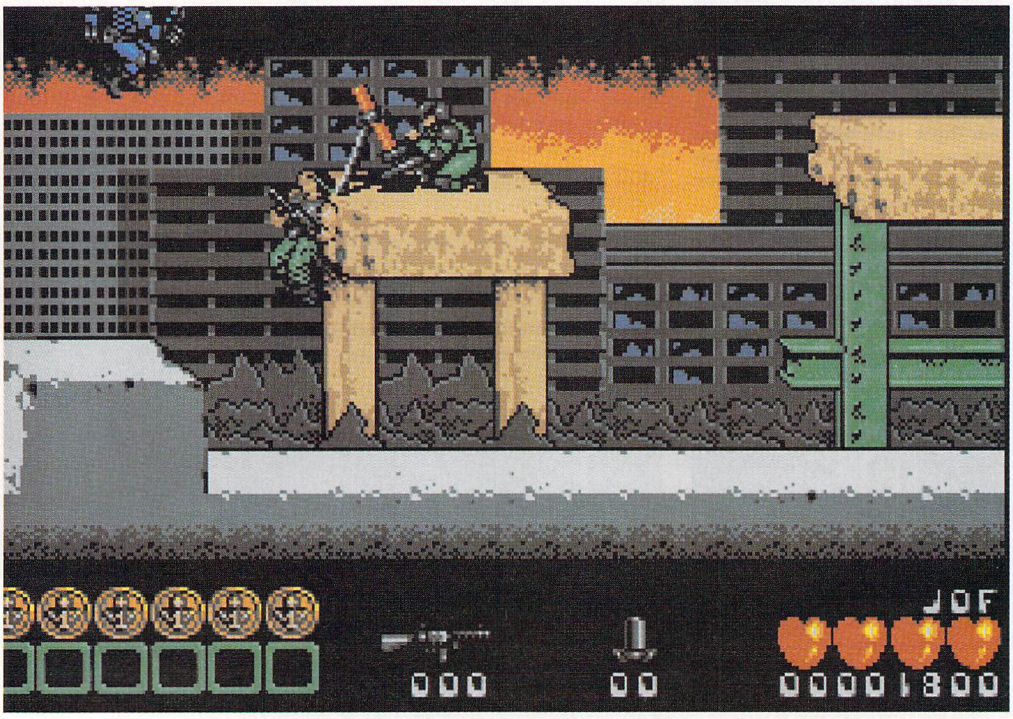
MIDNIGHT RESISTANCE

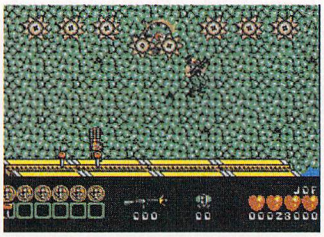
House: OCEAN Price: £19.95

Converted from the virtually unknown coin-op, Midnight Resistance is the latest release from the software giants, Ocean. The game was produced along with Special FX, and is a single or two player shoot-em-up in which you are a commando, with the aim of rescuing political prisoners kidnapped by aliens.

It is you who the world is relying on and so you must battle through the numerous levels (with or without a friend), trying to destroy never-ending waves of alien guards, before attempting to blast the usual end-of-level guardians back to where they came from.

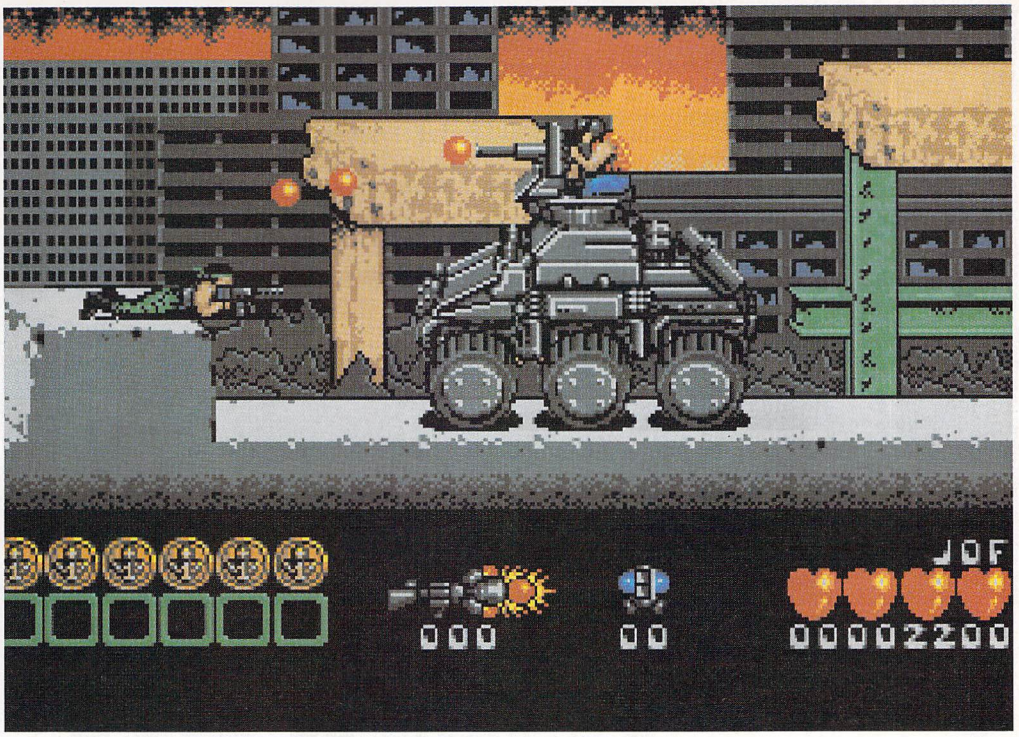
Collect your sturdy pulse-rifle





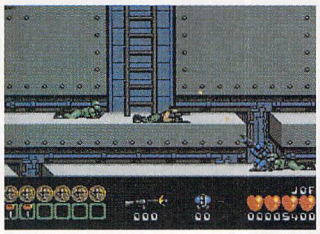
ABOVE: Looking like something out of a technical Lego set, these cogs are far from friendly. They move swiftly about the screen crushing anything that is unfortunate enough to get in the way

LEFT: Incoming! The ground erupts in a ball of fire as the small explosive detonates next to you. Looking up, you see the culprit - a mortar man situated up ahead. A quick burst from you gun will soon see that justice is upheld!



RIGHT: Mid-way through each level comes along a large armoured car. You must avoid the bullets being fired at you and at the same time blast away at its tough, armoured shell

BELOW: It's not very often that you see someone as agile as your player, but it is more than likely that your skill is matched by the opposition. Grunts wielding assault-cannons come charging towards you, and even a Robocop look-a-like attempts to take your life



from the drop-ship before leaping out into the midst of the action. First the outskirts of the complex must be infiltrated, but later on the battle gets tough - very tough! Each green beret is controlled by joystick - you can make your commando leap in eight different directions whilst still firing!

The game is split into two different areas and combines both vertical and horizontal sequences. Each screen is infested with hostile creatures which either charge towards you firing machine guns, or leap about inflicting damage as they drop on you.

There's also a selection of snipers and a grenadier who throws mortars which instantly kill

Armoured cars and hefty tanks trundle towards you, firing their large calibre weapons, and only several well placed shots can disperse of these menaces - watch out when they explode!

There's the standard horde of soldiers (some harder to kill than others) who, on their destruction drop a key which can be traded in at the the end of each level for heavier fire-power, extra lives and other goodies! Don't forget extra ammo though.

If you take a hit whilst carrying your gun, you'll lose it until you(or you companion) manage to retrieve it. A hit also results in your keys being dropped.

Obviously, the levels become harder as you progress, and

TRIED AND TESTED:

REVIEWER: .....ALEX
GRAPHICS: 82%
SOUND: 79%
GAMEPLAY: 86%
OVERALL.....85%

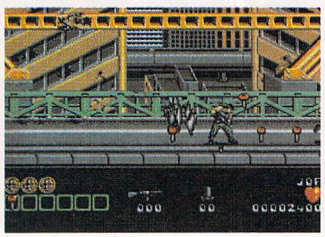
soon even the scenery poses a threat. Beware of seemingly harmless cogs flying around the screen - they're liable to split you in half if they touch you.

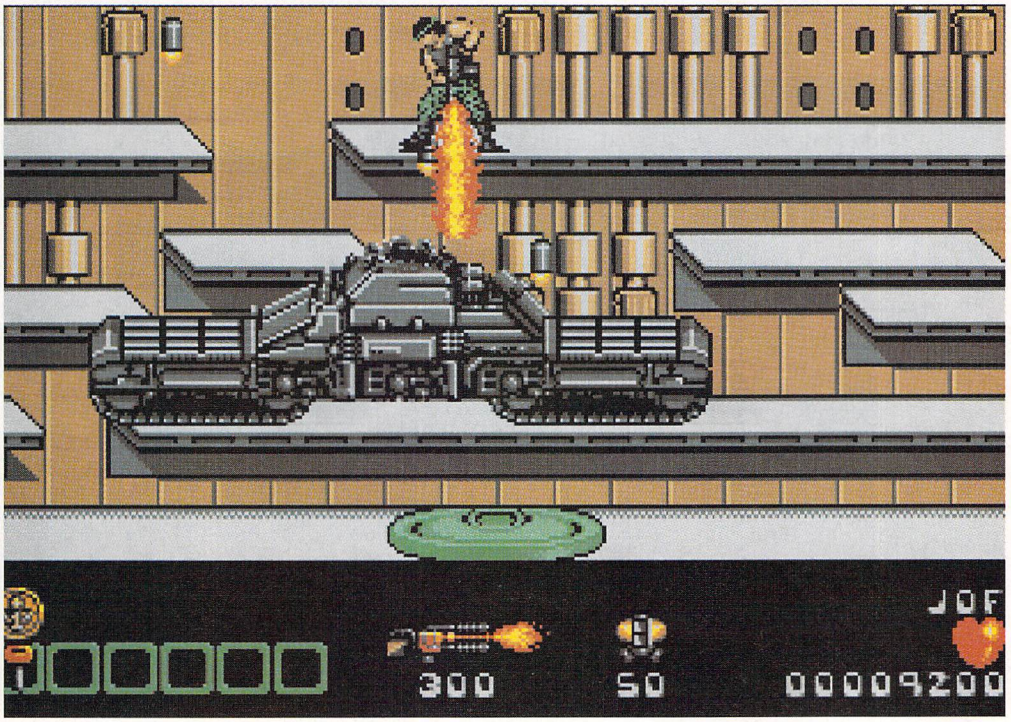
The areas change as you manage to work your way to the centre, and as you pass through large metal rooms and plas-crete tunnels, it's only a matter of minutes until you discover what the future has in store. In a desperate battle to the end it's either them or you!

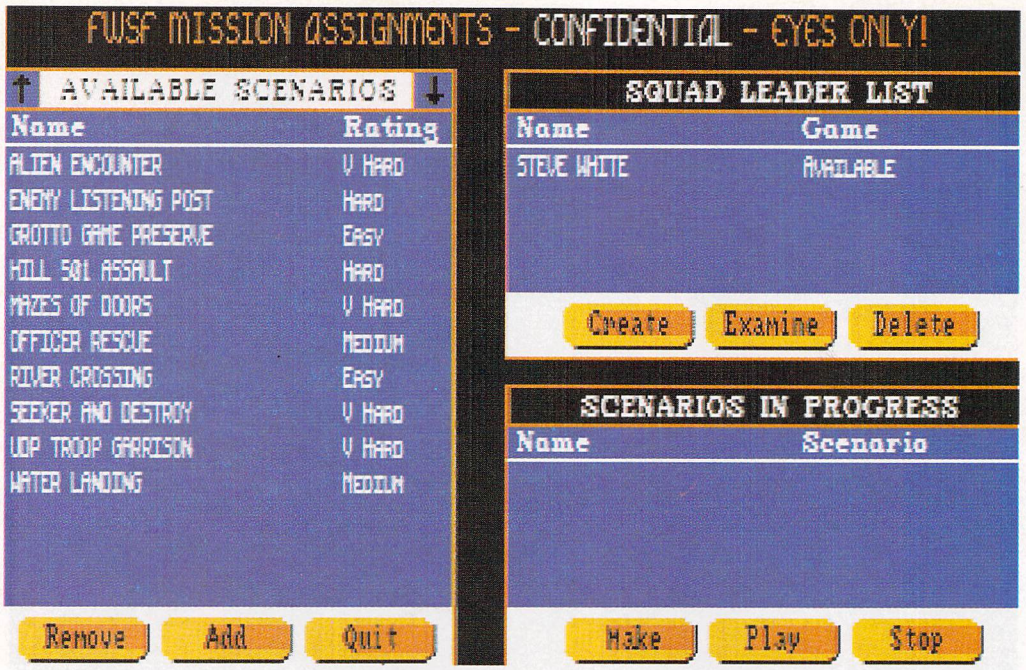
Ocean were very quiet when producing Midnight Resistance, but it's a pleasant surprise - containing everything a good shoot-em-up should have - power-ups, an endless supply of cannon fodder...The action is fast and furious, the graphics are superb and the sound is out of this world. My only gripe is the flick-screen scroll - I would have preferred continuous scrolling. Despite this, Midnight Resistance plays like a dream and is sure to be a hit.

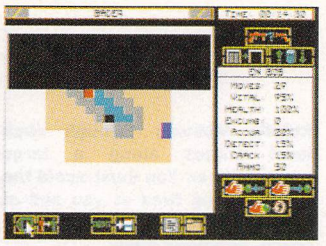
RIGHT: The currency is keys - the more you collect, the richer you are. To begin with you are given a few, but after that you're on your own

BELOW: Most furious blasts these days have the inclusion of end-of-level guardians and sure enough, Resistance has them too. They come in the form of huge battle ships or aircraft, and take many accurate shots before they give up



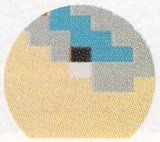






ABOVE: You can call up a map view of the surrounding area which will break down the present location into lo-res and display any characters that may be within the vicinity

RIGHT: Plenty of missions to choose from and each one has its own difficulty level. A maximum of four squadron leaders can be held at any one time



BREACH 2

House: IMPRESSIONS Price: £19.95

Years ago you took your squadron of marines into some of the most inhospitable situations ever created and now, due to your experience in warfare and leadership, you've been recalled from retirement to command a new squadron and take them into battle.

On loading up Breach 2, you're presented with a scenario builder which enables you to choose from a series of missions that vary in difficulty from easy to very hard.

Before beginning a mission, you create the name of a squadron leader who will then be saved to your game disk for later recall. You can then choose a mission from the wide range available and allocate to it a save name so that it can be continued at a later date if you run out of time while playing. You can view your squadron leader's statistics which will reveal certain facts about his strengths and weaknesses.

The first character to enter the fray will be the squadron leader. Each marine can be moved by dragging a pathway to the destination. The further this path is taken, the more movement points will be deducted. As well as moving, the marines can also perform various other tasks such as throw grenade, use medikit, use psychic abilities and fire laser pistol/rifle.

All of the actions take up movement points and vary in the amount they require, so you'll need to be careful when using them. On selecting a new marine, he will appear in the same position that the previous marine started. If you leave a marine on the start position and try to select another one then control will return to those presently on screen.

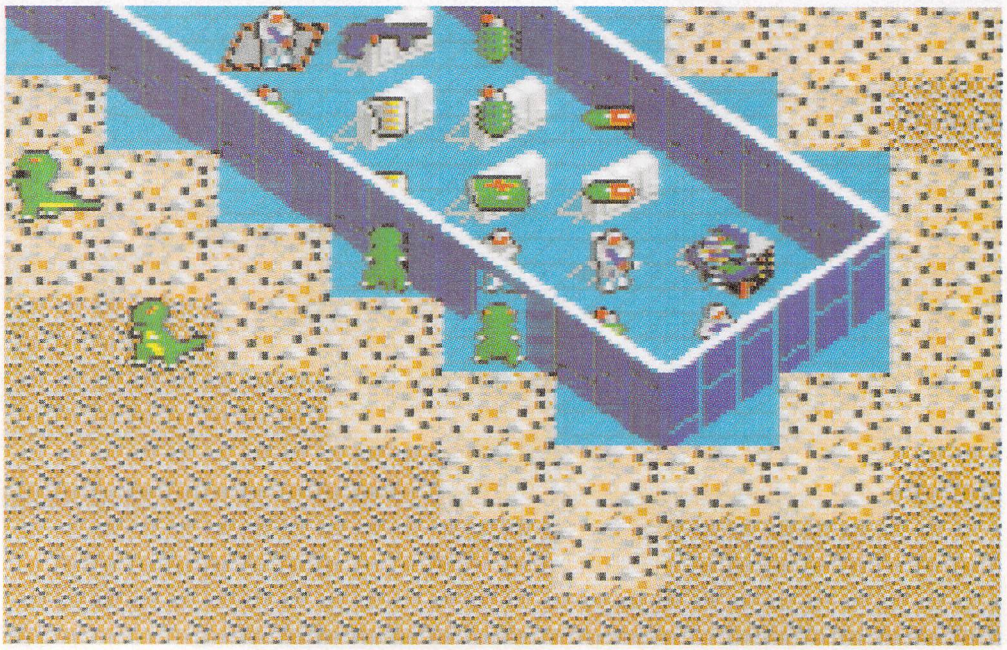
As well as movement points, each soldier also has other attributes such as health, encumbrance and accuracy. These are all shown as a percentage and they will undoubtedly be changed as the game progresses. Health is the most fragile and when the percentage turns red you'll know that it's time to issue that particular marine with a medipack. This can cause quite a few problems if you have medipack holder positioned quite a distance from the injured member of the party.

As you journey further into the mission you will almost certainly come up against some sort of resistance. Dinosaurs litter the play area and these will wreak havoc upon your squadron if they're close enough.

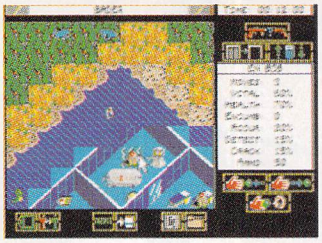
Tyranosaurus Rex attack by biting, while Wadgels fire their tail quills at you. It may be best to throw a grenade at these creatures as they can prove fairly dangerous. Try not to throw

TRIED AND TESTED:

REVIEWER: .....STEVE
GRAPHICS: 81%
SOUND: 73%
GAMEPLAY: 80%
OVERALL.....78%

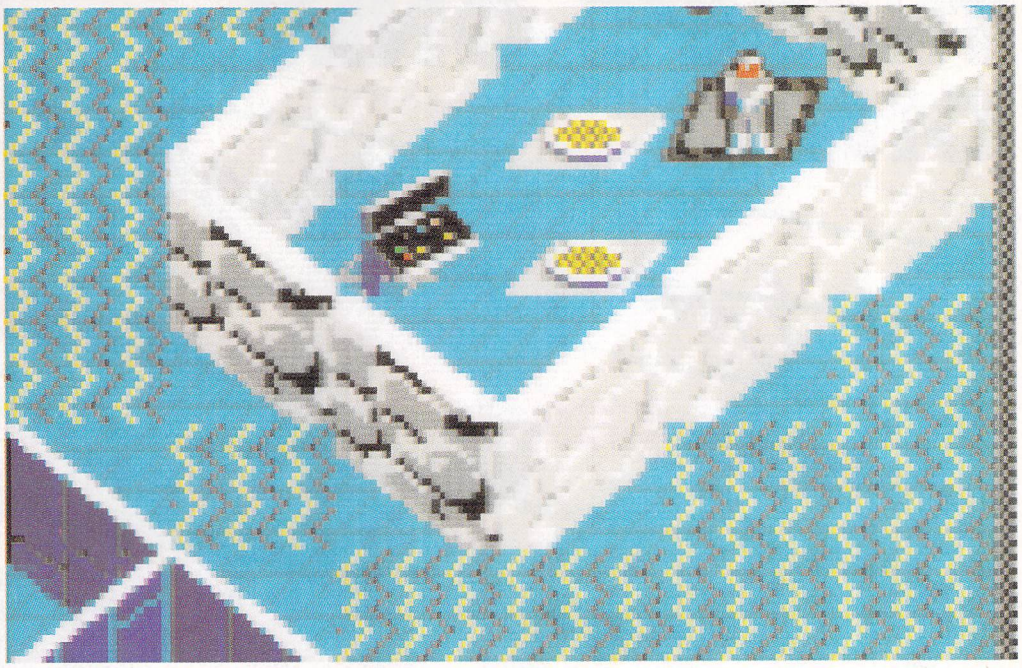


LEFT: The terrain outside is full of inhospitable creatures and Dinosaurs regularly make an appearance. Get too close and the Tyranosaurus Rex will take a bite at you



ABOVE: Some of the missions will require you to enter a hostile zone and rescue hostages. You will need to take them and hold them as a character if the rescue is to be successful

RIGHT: Select a squadron leader and allocate him a mission, then you and the marines will be beamed down to the start position, normally located within a building



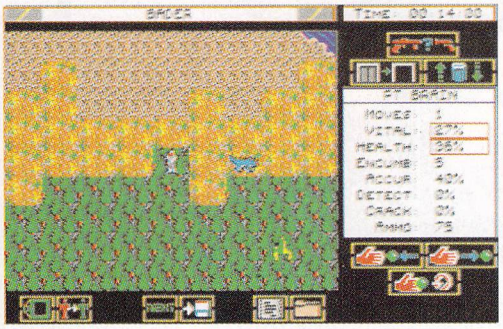
grenades into dense undergrowth as the grenade may hit a tree and blow half your squadron away. As well as monsters there's the enemy soldiers. They will invariably be hidden in dugouts, making them extremely hard to hit. A grenade or rocket normally does the trick. Nothing is worse than when you're fighting the enemy and think you've a clear shot when suddenly, the enemy launches a smoke grenade that totally wipes out your field of vision. Try to get in their first.

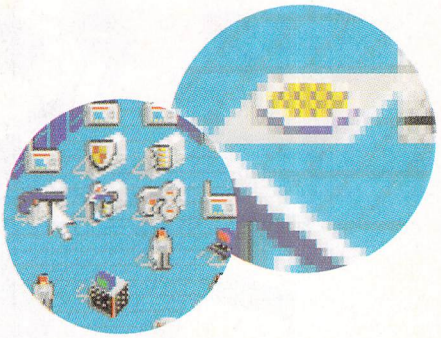
Eventually you'll reach a destination and will be able to accomplish the task. Some of the areas will need to be accessed via transporters that will beam you to a new location. Lifts will also prove handy for getting around, although not all of these lifts will work. Sometimes you may be required to rescue hostages and these are indicated by a character sitting on the floor.

Rescuing a prisoner means that they must be taken and held by your marines. There are also various objects littered around the play area which can be collected and used later on. Everything you need to control the marines is displayed around the player in icon form. This makes the game extremely user-friendly.

After the excellent Breach, the sequel is just as good as its predecessor - if not better. The same control user-friendly control system has been used and controlling the marines couldn't be simpler. There are plenty of missions to choose from and each offers a worthy challenge to both the experienced and inexperienced Breach player.

Old leaders from the original-can be ported into the new Breach game. An excellent release but one, that will appeal to RPG fans only.

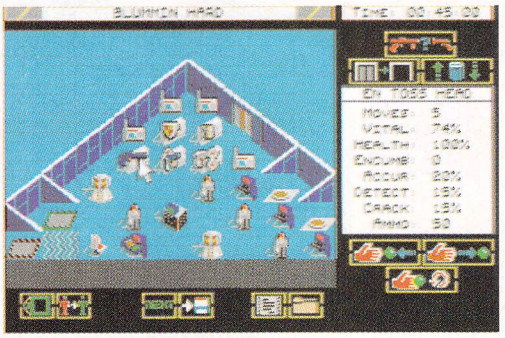


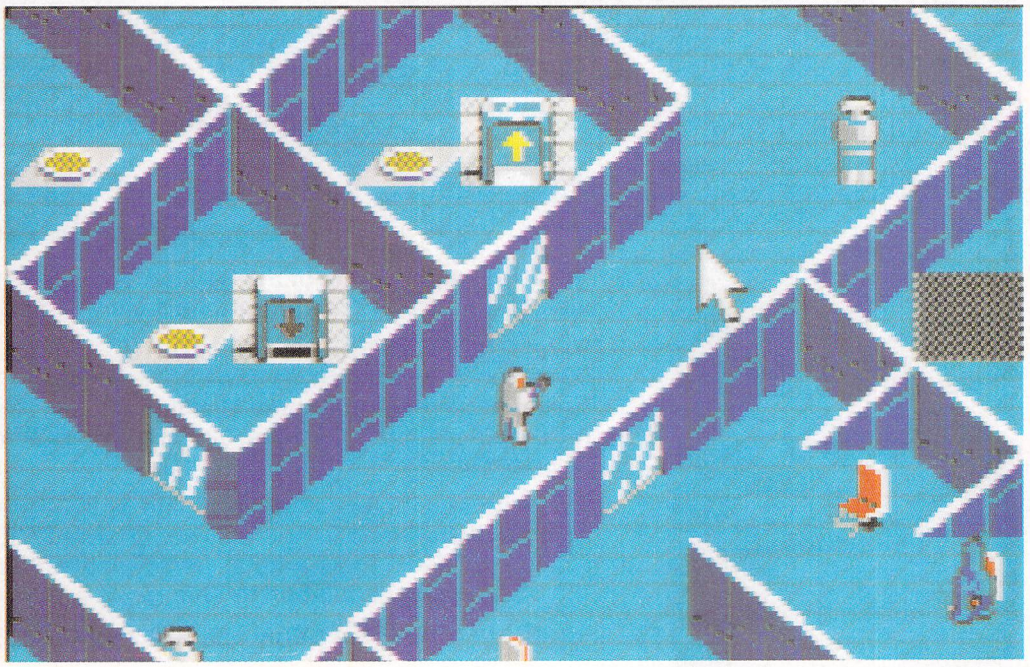


ABOVE: There are several different landscapes that your marines are required to travel across, and each one has a different effect on your performance. Grass takes 2mp while jungle requires 9mp

RIGHT: Searching the giant ships bowels will often reveal specialised equipment that will aid you in your goal

BELOW: As well as doors, access can also be made through lift shafts, although not all of these will be working. There are also transporters that will beam you to a new location





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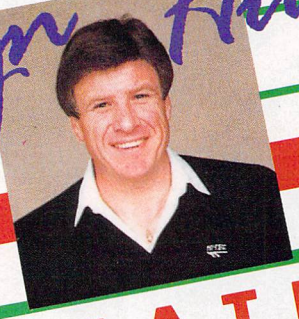

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When EMLYN HUGHES INTERNATIONAL SOCCER was released for C64, Spectrum and Amstrad, reviewers were amazed. It rated 90% in ZZAP, 91% in Sinclair User, 88% in Games Machine, 91% in Amstrad Computer User, 94% in Computer & Video Games, 887 in ACE, Game of the Year in CCI – we could go on for ever!

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

Forget the rest – there's only one EMLYN HUGHES INTERNATIONAL SOCCER!

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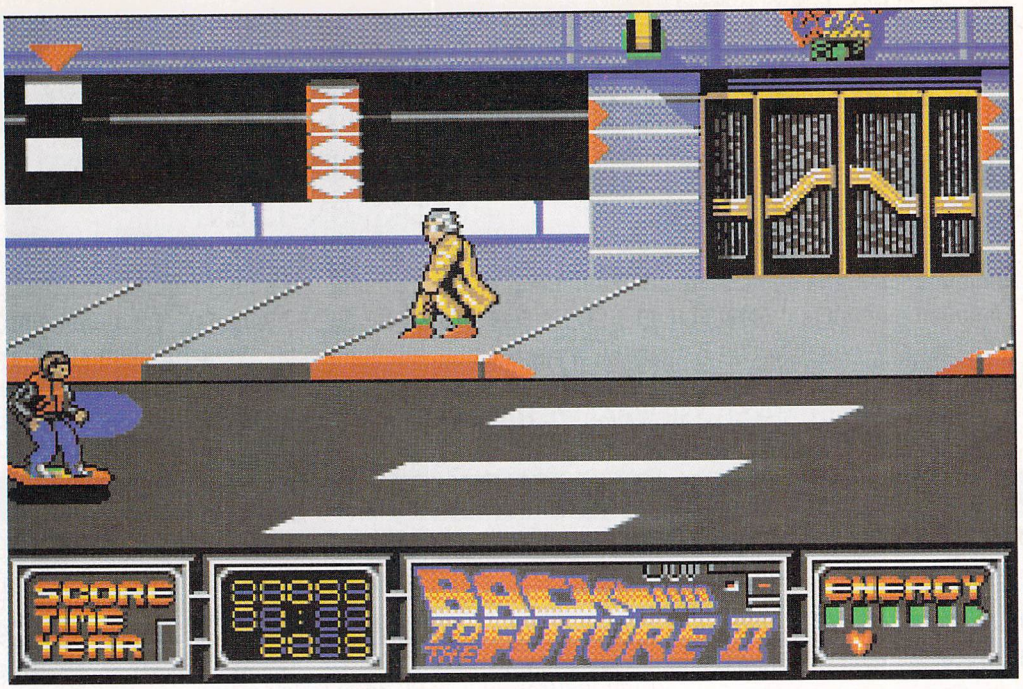
RIGHT: Riding along on his newly-found hover board, Marty must dodge the oncoming obstacles and at the same time rid himself of Griff and his gang of maulers. Using the board to the full, it is capable to weave in and out of the opposition and even leap over any nearby cars.



BACK TO THE FUTURE II

House: IMAGEWORKS Price: £24.95

TRIED AND TESTED:

REVIEWER: .....ALEX
GRAPHICS: 63%
SOUND: 67%
GAMEPLAY: 68%
OVERALL: 65%

Imageworks grabbed the licence to the film conversion of Back to the Future II before it even hit Britain. The movie follows on from the original, showing how a sports book changes the whole world of Marty McFly. The story begins with Marty trying to stop his son from making a decision that he would really regret later on in his life, this happens at the cafe where Griff is - he's Biff's Son and Marty's arch-enemy. Soon the air is thick with argument and Marty is chased out of the cafe by Griff and his gang.

The game begins here, as you jump onto a hover board and use the joystick to move and avoid oncoming obstacles, cars and of course, Griff's gang. If you find yourself unable to dodge an object leap over it by the press of a button.

By now Jennifer, Marty's girlfriend, has been picked up by the police and escorted back to her house . The problem here is that she might now meet herself (!?!) it is up to you to make sure that this doesn't happen (if it does terrible things will follow).

With the Almanac in Griff's hands, he jumps into your DeLorean and travels back in time where he hands it over to his younger self. The result - a 1985 ruled by Biff Tanon where crime is the life-style of almost everyone. This level sees Marty attempting to battle his way past an army of thugs in a horizontal beat-em-up style game.

Marty must now correct the mistakes already made by arranging the picture so it takes on its original form (basically a sliding-block puzzle of a scene from the Enchantment Under The Sea dance).

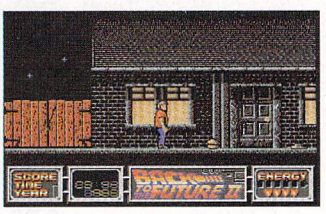
The last level takes on the same style as the first, and once again Marty must dodge the oncoming obstacles and avoid the thugs who are still pursuing him.

After seeing the film (which I thought was first class) I was expecting a game which was just as brilliant. This wasn't to be but it does however seem that Back to the Future II has been programmed on the hope of selling it on the film licence. It sticks closely to the film's plot, but this doesn't manage to salvage the average movie tie-in.

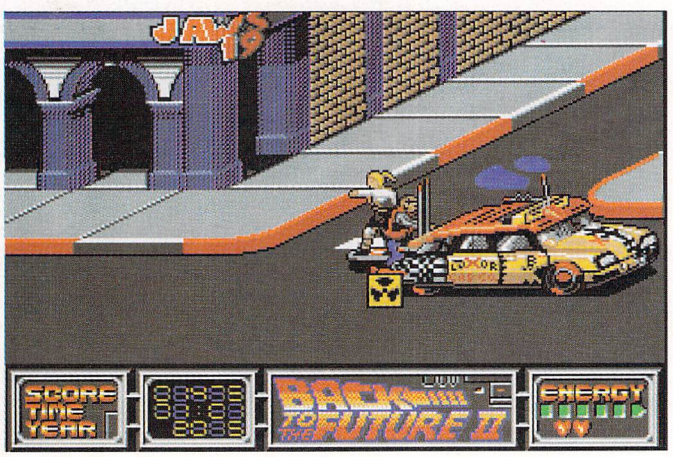
The graphics are colourful and well defined, and the sound is good too, but I found the scrolling poor and the gameplay is monotonous. The different styles of gameplay provided initial excitement, but after a few games this faded. I feel that the game doesn't have the lasting appeal.



ABOVE: In similar style to most other beat-em-ups, Marty sees himself walking across the hostile walkways of the new 1985. Using his fists and feet, Marty must battle his way past the thugs in order to change what has already occurred.



ABOVE: In order to change the course of time (and return things back to how they were) you must use your wits to figure out this jumbled up sliding block puzzle. Whilst you're doing this, the rock'n'roll band sing along to Johny Be Good.



RIGHT: Marty remembers his skills from the original film and holds onto a nearby car to gain speed. This extra boost of power seems to have done the trick and no thugs are in sight - but how long will it last?

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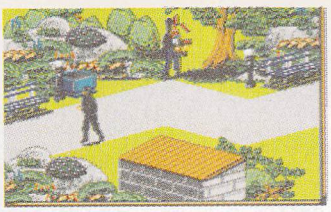
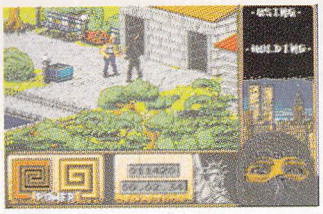




FAR LEFT: the juggler is deadly and if you stand still for too long he will throw a knife at you which will kill you instantly. Keep moving to avoid his deadly shot

LEFT: The enemy fight with their fists and feet, some with poles, nunchukas and knives.

LAST NINJA 2

House: FIREBIRD Price: £24.95

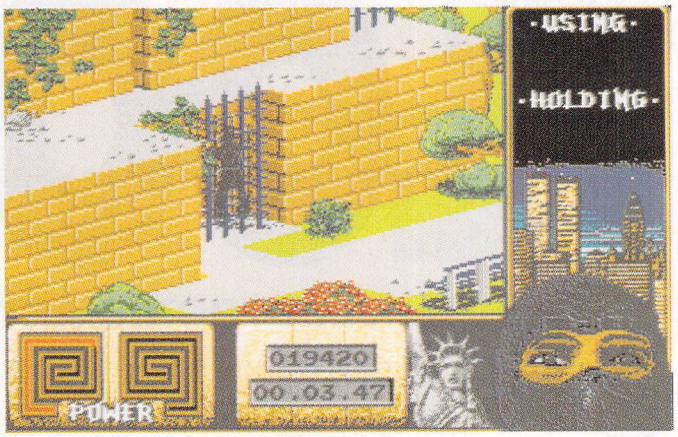
Kunitoki, an evil Shogun who wiped out the ancient Ninja clan, has arrived in New York and is up to his evil tricks once again. But Armakuni, last of the Ninja warriors, has sensed his presence and is hot on his trail. It was several years ago when Armakuni last confronted Kunitoki and it was believed that the evil Shogun had been destroyed once and for all. No such luck and so Armakuni, through deep meditation, has arrived in New York to avenge his clan and kill Kunitoki.

The action begins on one of the roof tops of an old junk warehouse. The roof is littered with dusty instruments which seem to be totally neglected. After looking around, Armakuni spots light behind a long, flowing curtain. Entering the room, he's confronted by one of Kunitoki's evil henchmen. But he's no match for the martial art skills of The Last Ninja and after a flurry of punches and kicks the hood crumples to the floor.

There seems to be some kind of elevator shaft on the wall and in his rage, Armakuni punches his fist into the control panel. On returning to the rooftop he discovers that the control panel has operated a lift that will take him to the busy streets below.

The Last Ninja 2 takes place in and around the streets of new York which are littered with hoodlums and other martial artists all intent on destroying Armakuni. The Last Ninja must fight his way through the streets and collect weapons and objects which he can use at a later date.

Any objects present on a screen will flash momentarily just as Armakuni steps into the location. On picking these objects up they will appear in the 'Holding' inventory. They will have to be shifted into the 'Using' window before they can be used.



Some of the areas may seem a little inaccessible at first and you will have to find some other way to get to the other levels. You may be lucky to find a grating nearby

Not all of the hoodlums fight with open-hand techniques - some have nunchukas, poles and throwing stars. If you are hit with a weapon then your energy bar will be severely depleted. Energy is represented in a spiral form built up by blocks. As you're hit, the energy blocks are depleted. If they're all depleted your Ninja will fall to the ground and a life subtracted.

The enemy's energy bars need to be depleted twice before they're eventually killed. When depleted once, they'll only be stunned for a while until the bar is back up to full power, then they'll get up and continue the fight.

Eventually, Armakuni will come to the secret hide-out of Kunitoki and will use all of his ninjitsu skills to defeat the evil Shogun.

Last Ninja was a great success on the C64, but the sequel hasn't converted especially well to the ST. Presentation is superb and the graphics have been nicely detailed, but the gameplay lets the game down - all you have to do is walk around , beat up hoodlums and pick up objects - a common idea but not very well implemented.

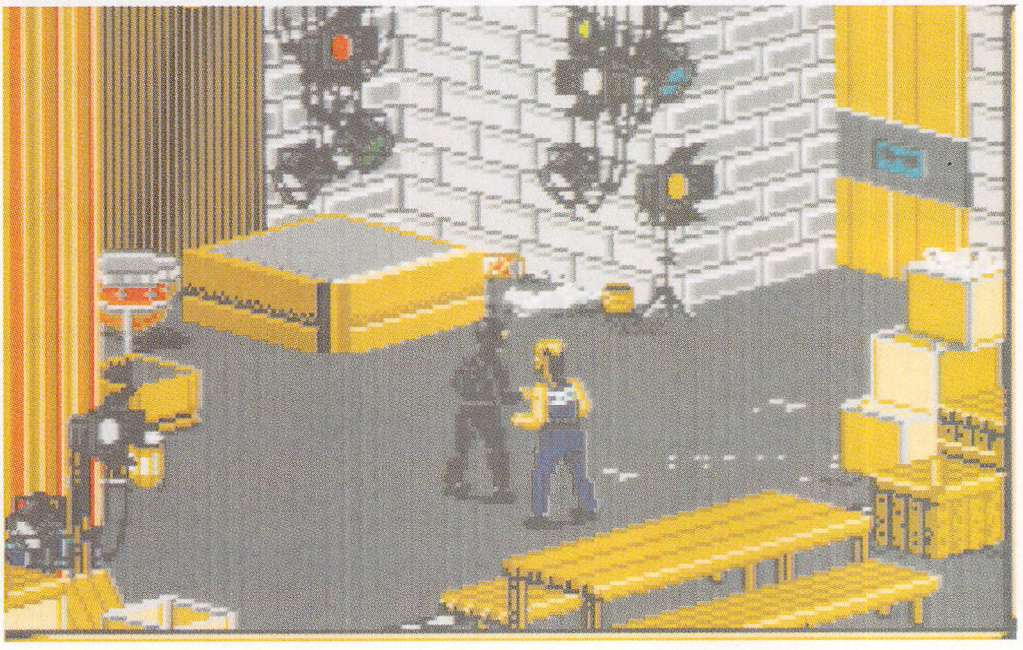
The animation on the main character was a little sparse and there were very few attack moves . This was not helped by the awkward control system. There are better beat 'em-ups around - look elsewhere.

TRIED AND TESTED:

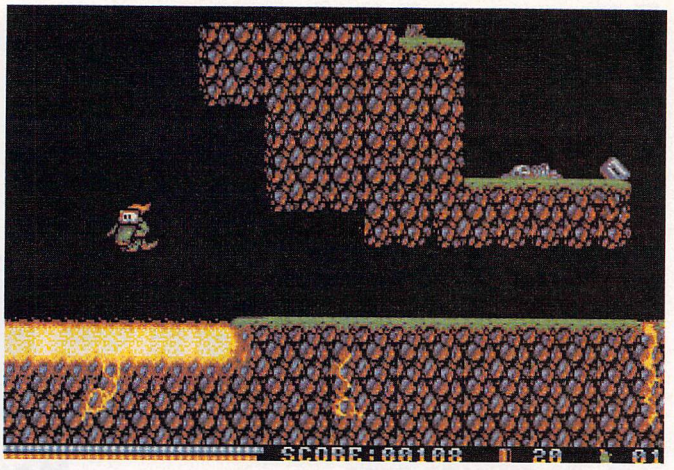
REVIEWER: .....STEVE
GRAPHICS: 80%
SOUND: 65%
GAMEPLAY: 63%
OVERALL.....72%

RIGHT: The lift shaft on the opening sequence can be operated by passing by the curtain and then smashing the control panel with your fist. You'll have to kill the hood first









ABOVE: Thankfully, a password level skip has been included, providing you find the question mark for each level

ABOVE LEFT: It seems Quiffy has sensitive toes, as some floor hurt his little feet. I can't see a pool of hot lava curing anyone's blisters, can you?

FLOOD

House: ELECTRONIC ARTS Price: £24.95





Populous was undoubtedly Bullfrog's finest hour, combining brilliant graphics with original but addictive gameplay. Then there was Fusion - another arcade game that was a smash success. With that sort of history, you may wonder what the creators of the game of the year will come up with next. Well, they seem to have left creating your own world behind, for a scenario where the world is already in existence - all you have to do is save it.

You play the part of Quiffy - a strange but friendly fellow who resembles a green blob. I could think of many hindrances to being spherical and green, but our young hero seems to manage. To help him move freely across the land, he has small legs and an equally tiny pair of hands which enable him to pick up and use items that he may find along the way.

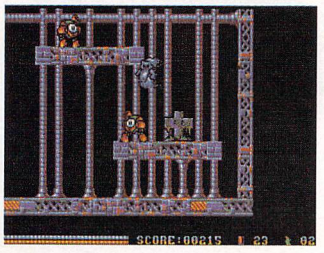
The world in which the hero lives is not the sort of place that we would call hospitable. For instance, the whole thing is set underground and the area is covered in litter. The reason for this is simple - the ancients had left this trash behind! This is far from pleasant, but without it, Quiffy would shrivel up and die. You see, the main content of Quiffy's diet is rubbish. He can make a meal out of what we throw in our bins - resourceful or what?

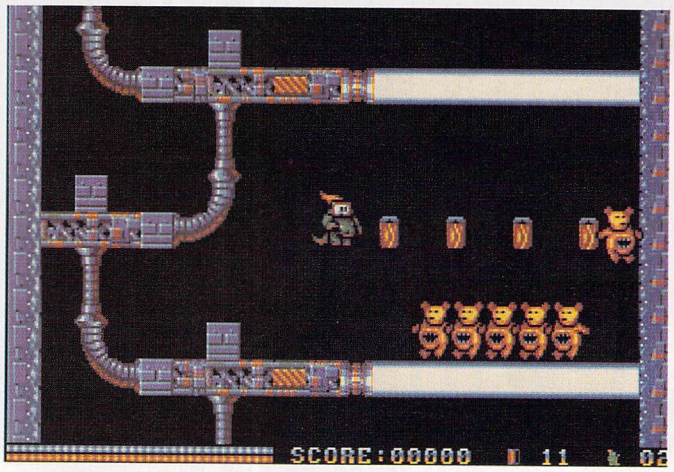
As mentioned before, the little creature lives far underground in some dark and dank cavern. Quiffy used to enjoy life, strolling around the network of caves looking for unexplored areas and hopefully more food. This had

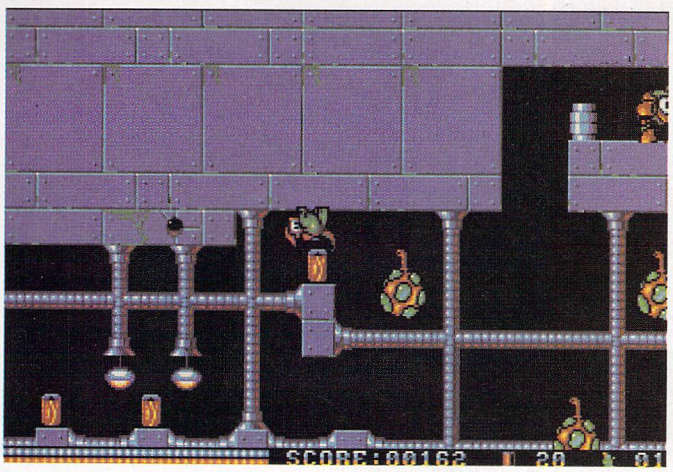


RIGHT: To add a little spice to Quiffy's life, he can pick up a number of weapons which deal out death at a touch of a button - awesome!

BELOW: Our hero's life is not a pleasant one, as his cousin tries to make it as difficult as possible. Psycho-Teddies run riot across the platforms, the Bulbous Vong trying to knock Quiffy's lights out whilst his dead Aunty attempts to scare him out of his skin!







been the story of his life since he was born, but the pleasant lifestyle soon change when his distant relatives decided to turn up.

For reasons unknown to our friend, his cousins, the Psycho-Teddies and the bulbous-Headed Vong, are currently running riot around the caves and caverns that Quiffy calls home. These nasties are causing havoc, and now they've waged war on Quiffy and his counterparts.

They're good at what they do, for it seems that only the hero of the game is left on his own. You may think he's fighting against a superior force, but due to his intelligence, Quiffy is worth three of their army!

But wait - our blob has yet another problem on his hands. Many years ago, the legendary Taps of Wrath had stopped working, thus allowing the caves to empty and therefore become hospitable. However, the arrival of the hooligans has somehow knocked the taps back into working order, and slowly but surely, the caves are once again filling up. This obviously means that Quiffy's home will soon be flooded unless he can do something.

Quiffy's situation does not look good. Not only is there water all around and his cousins charging around him, his deceased Aunt sometimes makes an appearance, giving a fatal scare if he comes into contact with her ghost.

As he travels around the caves, Quiffy must collect every item of rubbish that he sees, and this often means that our friend will have to bend over backwards to reach every nook and cranny in order to fill his growing appetite. Help is at hand though, because our small mate has sticky fingers. The able-bodied chap has the ability to walk up walls and even across the cavern ceilings! This obviously aids the fellow no-end, but he's going to need all the help he can get.

Various weapons can be picked up along the way, giving him the chance to eliminate any baddies before they get too close. Armament comes in many shapes and forms, but the hand grenade and boomerang are most common.

When a grenade is thrown, it will bounce around the floor before exploding a few seconds later. All well good, unless you're in the radius of detonation, as it will damage you as well as your enemies. A much safer bet is to use a boomerang which flies away, taking out any Teddies or Vongs as it goes!

By far the most deadliest and horrific weapon of them all is the flame thrower. Although compact, it deals a hot death to those unfortunate enough to lie in its path. Depending on the time the fire button is held down, a stream of bright fire will flash across the screen.

Flood is a surprising change from Bullfrog's previous games, and shows how the team are equally good at producing any type of game.

Flood certainly does have fast 'n furious arcade action, combined with varied and stunning graphics. The sound too is superb. The playability is first class and the game will have long-term interest value. I feel this is going to make Flood one of the best games released in a long time.

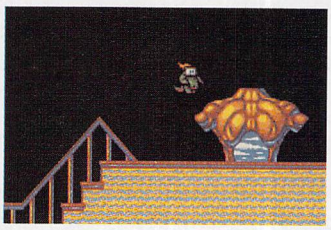
ABOVE LEFT: As the levels progress, so does the difficulty. The cans become more and more spread out, and wide chasms must be spanned if you're to collect every ounce of litter on each level. Thankfully, low-powered lasers span these gaps allowing him to cross safely (as long as he looks both ways!)

ABOVE: Instead of sticky fingers, it appears ol' Quiffy has sticky feet! This has its uses, as it enables him to climb up vertical walls and even across the ceiling



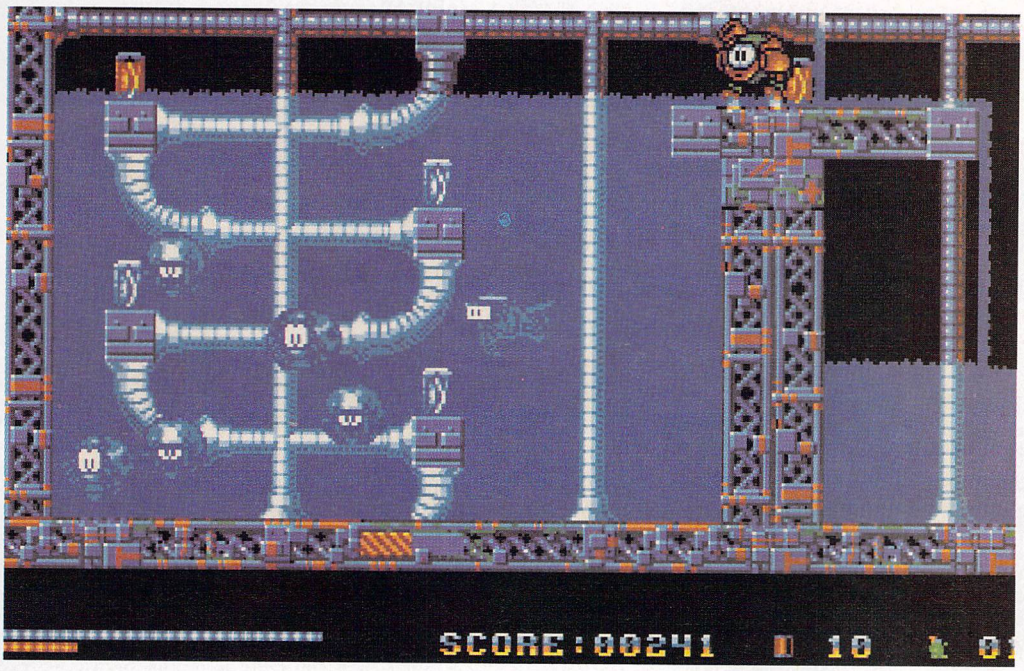
TRIED AND TESTED:

REVIEWER: .....ALEX
GRAPHICS: 78%
SOUND: 82%
GAMEPLAY: 79%
OVERALL.....80%



RIGHT: Living up to its name, Flood has large quantities of water rushing around everywhere. As time ticks over, the water level slowly rises, cutting off the lower parts of each caves. Throw on your goggles and dive in to collect the trash, but keep an eye on your air tanks

ABOVE: After collecting every tin, look for the portal (is a blob's work never done?) This is usually a small caves, but harder levels may try to disguise the transporter



Find out its limits.
Look in the mirror.



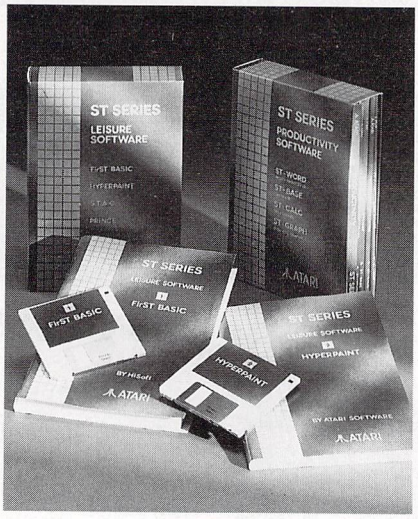
Introducing the powerful new Atari 1040 STE. With such an awesome machine, we're convinced the only limits you'll come across are your own.

Based on the incredibly successful 1040 STFM, the 1040 STE itself goes beyond the limits of its predecessor.

The 'E', by the way, stands for 'Enhanced'. But once you've discovered its amazing array of features, you may consider 'Enhanced' to be the understatement of the decade.

Perhaps the most outstanding feature of the 1040 STE is its graphics. Its palette contains over 4000 colours (all right, 4096 to be exact).

To ensure precise and realistic images, the STE features 'hardware scrolling', enabling smooth scrolling in any direction and split-screen effects. And, with the SM124 monitor, you'll get razor sharp black-out-of-white text that's as clear as the type on this page.



To complete the picture, it is able to 'phase-lock' its video output to an external video source, permitting direct linking to a Genlocking device.

The 1040 won't just have your eyes swivelling in their sockets. Your eardrums will also take a pounding from the 8-bit PCM stereo sound.

The new PCM (Pulse Coded Modulation) sound system's two chips allow the 1040 STE to replay high-quality sampled sounds, in stereo, without burdening the CPU. Or, for even more of an earblasting, just add a couple of RCA output jacks and power the sounds through your own stereo.

Of course we mustn't forget memory. One megabyte of RAM comes as standard. If that's not enough, the 1040 STE provides four SIMM sockets. Simply plug in some SIMM (Single In-line Memory Module) boards and boost the RAM up to four megabytes.

To help you handle all this technology, we've added even more: a Blitter chip, capable of shifting data at high speeds independent of the CPU, and a new version of TOS.

The TOS 1.6 (operating system) has an enhanced file selector with drive-change buttons, improved desktop with file move, MS-DOS compatible disk formatting, and better application installation and auto-booting facilities.

As you'd expect, there's a huge range of peripherals including hard disks, floppy disks, laser printers, colour monitors and even Megafile 44, Atari's unique 44-megabyte removable hard disk.

As well as all this hardware, there are hundreds of software programmes for the 1040 STE - we're even throwing in the ST-Series Productivity and Leisure bundles free.

The Productivity bundle features a database, spreadsheet, word processor and business graphics package, and there's S.T.A.C., FirST BASIC, Hyperpaint and Prince in the Leisure bundle.

If you're itching to get your hands on the controls, there are two 15-pin analogue controller ports (which accept paddles, light-guns and light-pens) and a 9 pin mouse port and joystick port.

With adaptors, up to six people can use the 1040 at one time. Just in case it's too much for one person to handle.

At £499.99 it certainly won't be too much for one person to afford.

The ideal computer at the ideal price, you may think. We think so, too. But there remains only one potential problem: not whether you'll make impossible demands of the 1040, but whether the 1040 will make impossible demands of you.

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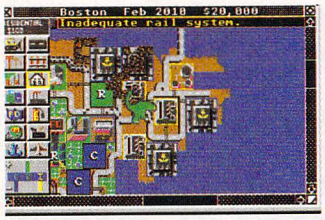
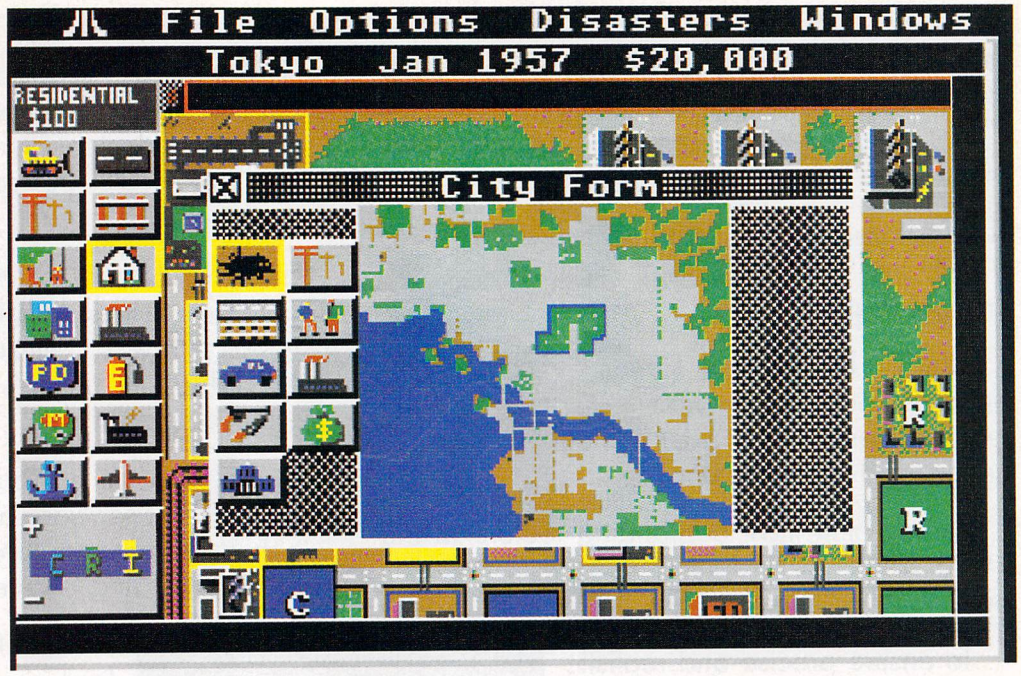
ATARI 1040STE

WITHOUT IT YOU'RE JUST PLAYING GAMES

RIGHT: It is best to first look at the shape of the land you are about to build - that way you can decide where to place the various areas that come together to make a city



ABOVE: Arrgh! It's Godzilla! As this large green lizard rampages through your new city, you wonder if there is any stopping him. What do you do? Send for the national guard? Blow him up with a cannon? I know, give him a packet of Chewits!



SIM CITY

House: INFOGRAMMES Price: £24.95

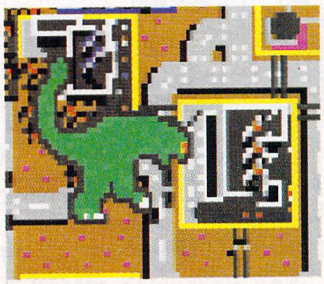
Like to become the mayor of your very own town? Yes? Good, then I'll start. You begin with a fresh piece of land that has been newly terraformed creating a flat landscape with patches of water which should soon be transformed into your metropolis, you also receive a lump sum of twenty thousand dollars (be careful - it'll be spent before you know it).

The first project that should be undertaken is to build a power station - you must decide whether it's best to build a coal or a nuclear station. The next thing to plan is a residential area and you must decide where to locate the cheap and expensive parts of the city (keep the posh parts of town well away from power stations due to fumes).

Also a town isn't any good without commercial or industrial zones, both need to be strategically placed (bear in mind land-prices and accessibility among other factors). Once all of this has been accomplished you'll have to construct roads and lay power lines (remember room must be left for expansion of the urban area).

Keep your eye on the evaluation as you don't want thousands of residents leaving your city empty - try to get the balance right between bringing in enough money but not raising the taxes too high.

Crime will rise as the game progresses, and therefore you will need police and fire departments. Parks and stadiums must also be built to keep the population happy. Another important factor is commerce. If you find yourself with plenty of money, it's a good idea to invest it (maybe in a harbour or an airport).



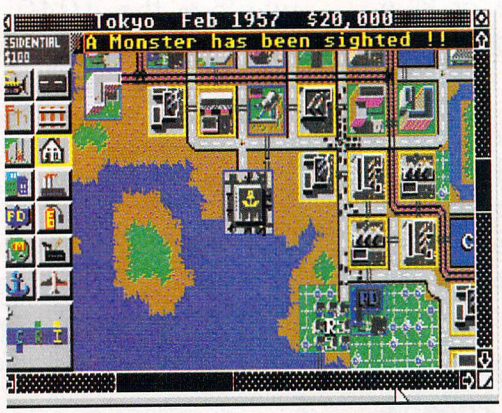
TRIED AND TESTED:

REVIEWER: .....ALEX
GRAPHICS: 75%
SOUND: 65%
GAMEPLAY: 87%
OVERALL.....96%

Your town could be running silky smooth one minute, but then suddenly turn into a disaster area and if the 'disasters' are allowed all sorts of bad things can happen - riverside apartments could be flooded, an earth-quake may occur or to be totally ridiculous, Godzilla could decide to stroll across your nice new city!

Lastly, a complete selection of scenarios has been included with the game, allowing you to rectify a certain problem that a previous city may have had, like dealing with a nuclear meltdown at Boston or simply turn Dullsville into a interesting place to visit!

Sim City has certainly taken its time to get here, but it has been worth the wait - Sim City is an experience! It may not look or sound brilliant, but the game plays so well. Everything is mouse driven, making the game easy to play for anyone. If you decide to purchase Sim City (I recommend you do), you'll probably find it is the best twenty quid you will have ever spent!

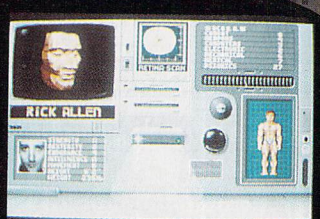


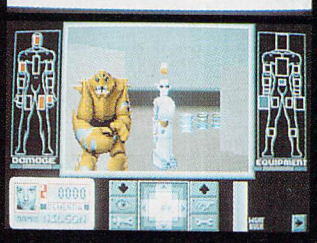
Your city may start slowly but once you have a steady cash flow, you can start thinking about the bigger things in life, such as a harbour. Until then, keep gritting you teeth and above all, keep at it

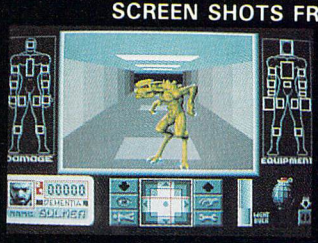


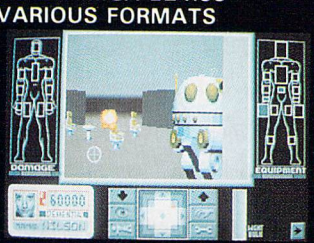
Although an airport is one of the most expensive features that money can buy, it will bless your city with large quantities of trade - handy if you have the capital

CORPORATION

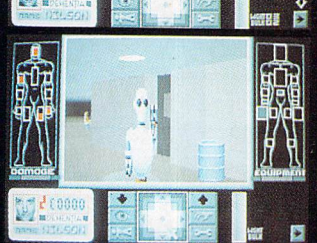












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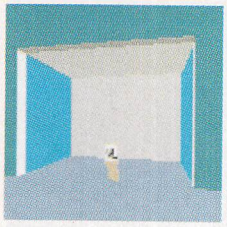
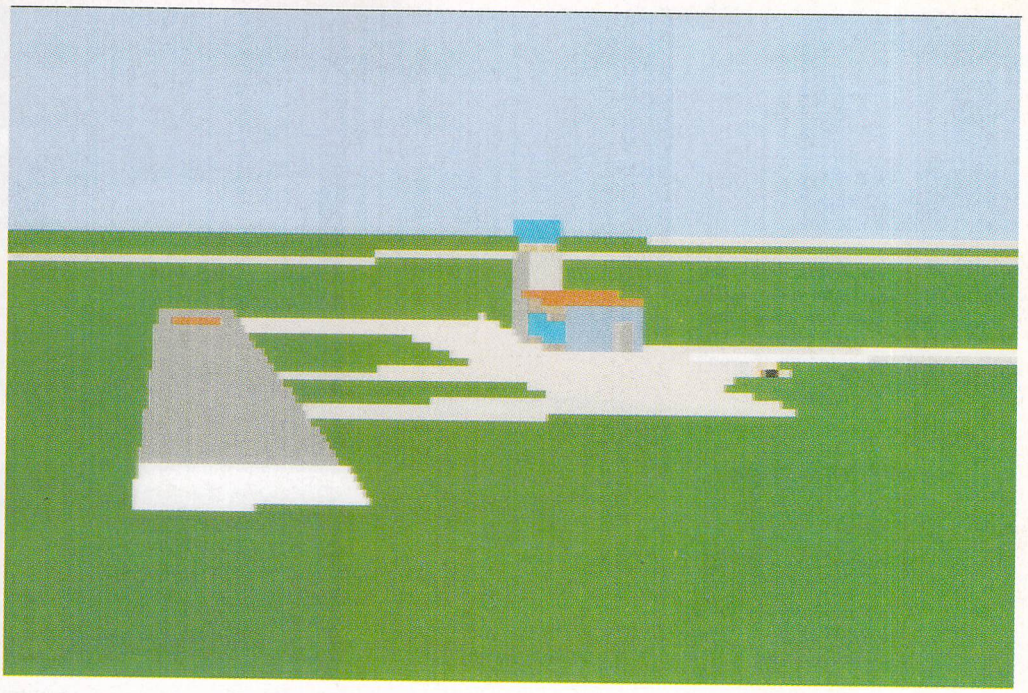
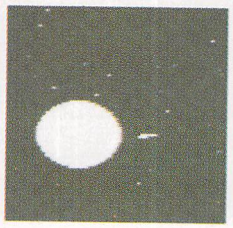




RIGHT: Eventually, you arrive at Eris four years late and now the comet Damocles is only hours away from impact. After turning your ship to autopilot it glides gracefully towards the landing bay



DAMOCLES

House: FIREBIRD Price: £24.95

A terrible disaster is about to take place. Somewhere far, far away in a distant galaxy there lies a solar system that is about to be changed drastically.

A large comet by the name of Damocles is heading towards the planet Eris at horrendous speed. Its trajectory is dead on line with the planet and if it hits then the whole planet will be destroyed.

Four years ago you received a message from the president of Eris, informing you of the imminent disaster and a request for your help. A fee was arranged and with this added incentive you leapt into the star cruiser and headed for Eris. Unfortunately, something happened along the way and your journey was lengthened by four years. Now things are more desperate than ever, and as the comet moves ever closer there are but a few hours left before impact and destruction.

On entering the planet's atmosphere, you turn the ship onto autopilot and head for a landing strip. Unfortunately, the ship takes a bit of a battering on landing and is rendered unfit for travel. After leaving the ship you're informed by a presidential message that their is a key to a limousine in the hanger. Collect the key and step into the car.

Pulling away, you turn to the right and head towards the president's palace where you'll be briefed on the mission. The president greets you and hands over the Damocles file. He also gives you a key to a powerful spacecraft that will enable you to travel between the different planets which surround Eris. The President gives you a hint on where to travel first and bids you farewell and good luck.

When you eventually reach the airport, you'll see the spaceship parked on the airstrip outside. Leaving the limo, you step into the craft and take off into the night sky. As you leave the planet's atmosphere you spot several other planets in the sky and after consulting the map, decide on a destination and switch the ship into hyper-speed 0.

The cities are present on each location are based on sets of three islands. You will need to control your speed when landing as it is easy to crash! Fortunately, your plane is force-field protected and will not be damaged. You must leave the ship then travel around the various cities picking up clues that will lead to the destruction of Damocles.

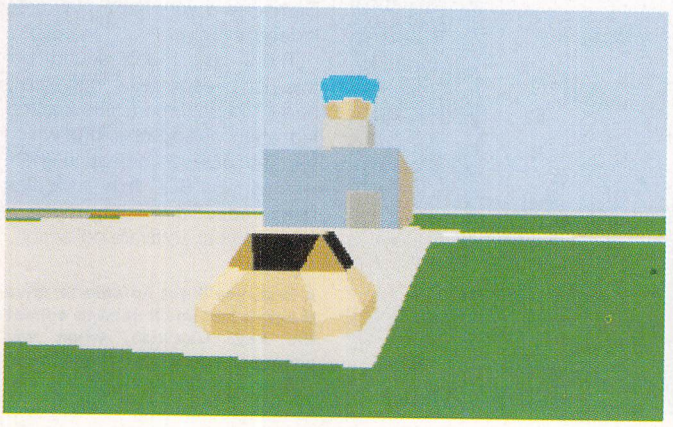
The clues can be found in the buildings, although not all will hold an object. Some of the buildings are several stories high and access is made by using the lift shafts, pressing the corresponding key for the floor that

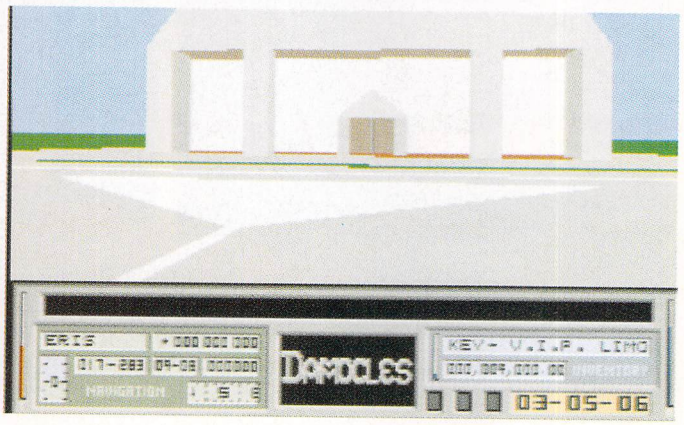
TRIED AND TESTED:

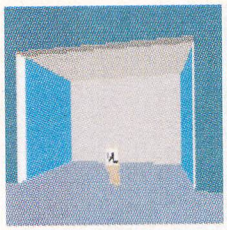
REVIEWER: .....STEVE
GRAPHICS: 82%
SOUND: 60%
GAMEPLAY: 78%
OVERALL.....80%

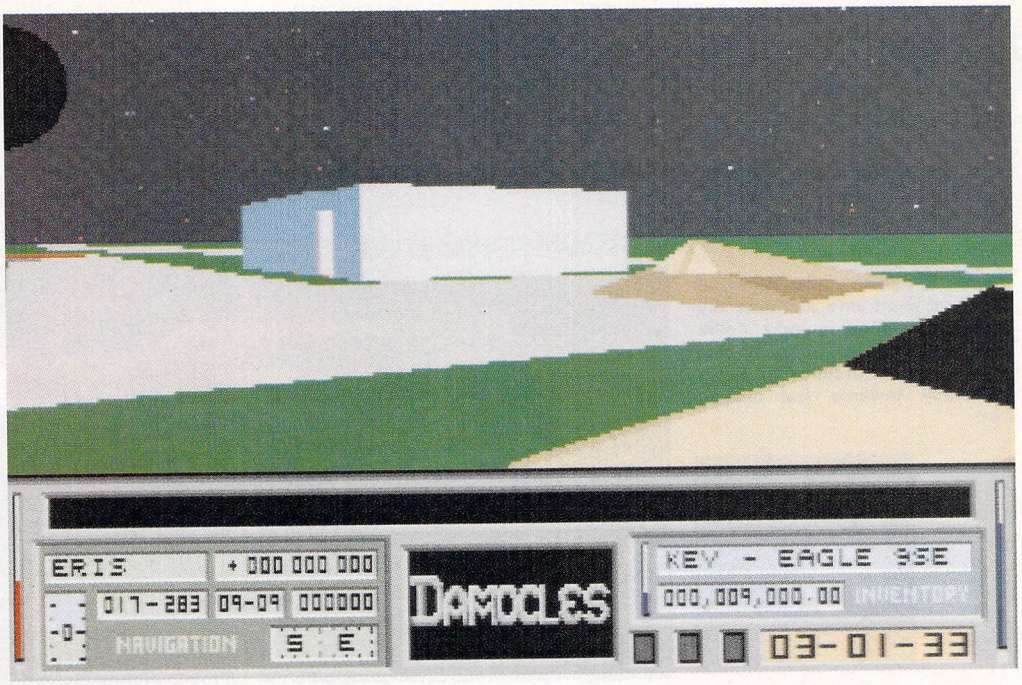
BOTTOM LEFT: On arriving, you find that the president's security have thoughtfully left a limo for your use. You'll need a key to pilot it and this can be found in the hangover

BOTTOM RIGHT: Step into the limo and head off towards the President's place. No sooner have you entered, when the President informs you of the mission

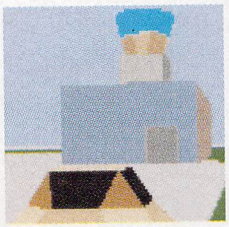


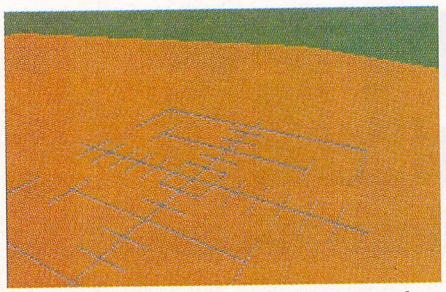




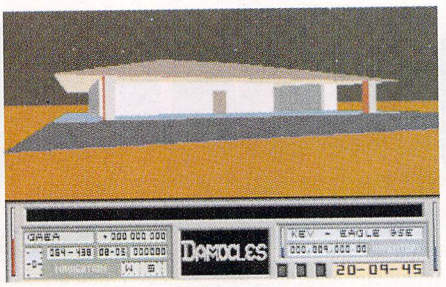


RIGHT: The president tells you that a ship has been awarded to you in order that you can travel around the different planets. The ship is damage proof so it won't matter if you crash it

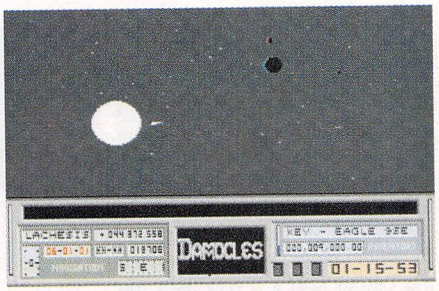




From the ground, cities can be fairly daunting. To get yourself a good view of the city, hover above it then draw down the details and buildings of particular importance



Cities are littered with individual buildings and while some may house objects, others will have nothing in them. It's even possible to pick up a sofa



On leaving the planet's atmosphere you enter space after scanning around, you're able to pick out several other planets. Maybe there's something important on one of these.

you require. Some have a basement that may contain a hidden object which may prove important to the successful completion of your task and this can be reached by pressing B on the keyboard.

There are 10 different hyperspeeds, the slowest being 1 and the fastest being 0. These speeds are all accessed via the keyboard numerics. To be credited with an object's value, trade your goods at one of the trading posts provided (if the post has something that you can actually trade with).

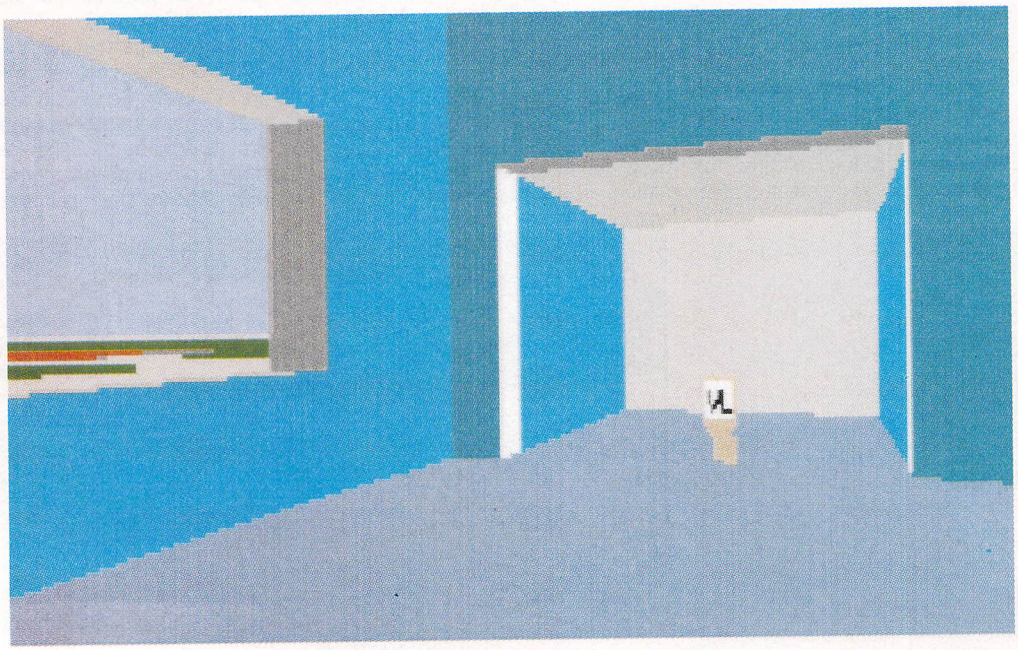
You can only purchase an item provided you have the equivalent funds. You trade by dropping an object at the premises and then leaving. The cities are based around a grid system that corresponds to the co-ordinates display present on your control panel. This will prove useful for pin-pointing certain locations.

There's an inventory window on your ship display that holds any objects you've managed to collect. These can then be selected and examined. As well as the usual IAS and altimeter, there's a clock which indicates the predicted time before Damocles smashes into the planet Eris.

Not all of the planets are hospitable - some have no air supply while others have toxic gases in their atmospheres. There are four modes of transport in Damocles. Walking, ground vehicles, spacecraft and aircraft - extremely useful for drawing maps of the city layouts.

Novagen are really improving their Mercenary games. Graphics are extremely impressive and update is fast while remaining relatively smooth. There are plenty of locations to visit and the addition of other planets gives Damocles a very large play area indeed.

There isn't much sound but this isn't especially necessary and it did become a little frustrating when visiting buildings which had no clue or object in them whatsoever. Still, this is a first rate product that really merits a place in your software collection.



A first, you'll not be able to drive the limo and you'll need to collect the key. Likewise, when you accept the mission the basement will be unlocked so that you can collect your spaceship key

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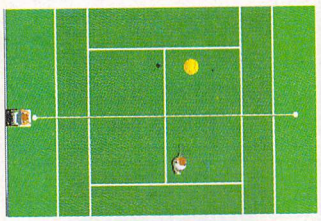
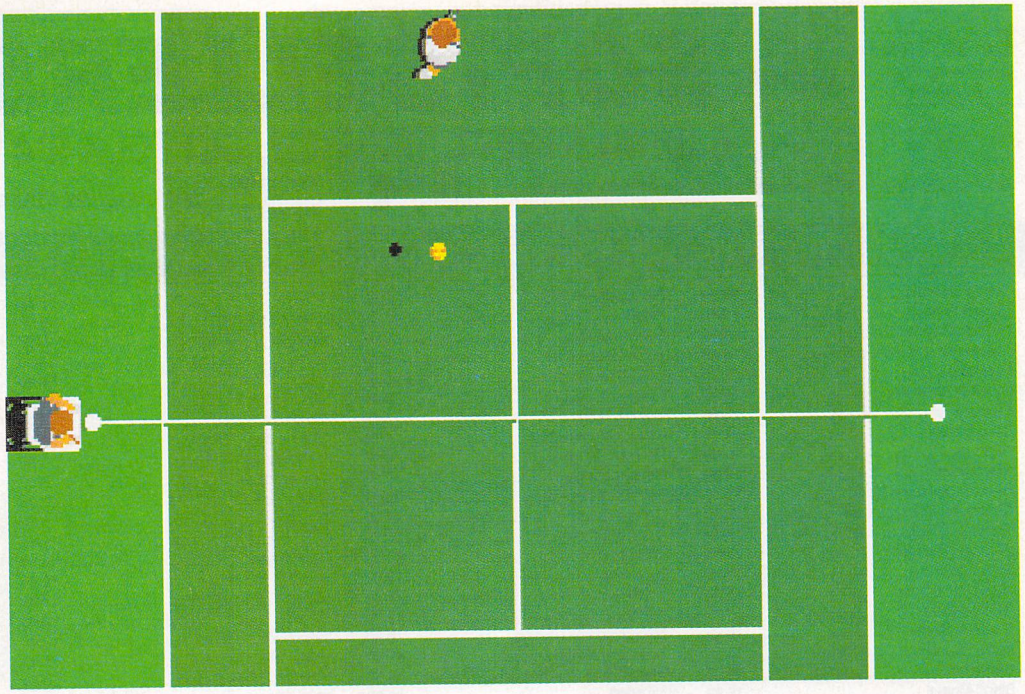
RIGHT: The ball's coming your way but where the hell are you? Is it going to your backhand or forehand? The suspense is killing!

BELOW: Send a lob soaring into the sky and hope to catch out your opponent at the net. He's a nippy fellow though, so it'll have to be a deep one





TIE BREAK

House: OCEAN Price: £19.95

Tie Break is the latest in a long list of tennis simulations to enter the home computer market. Consequently, it must be something special to make a significant impact on an already saturated market.

There are three sections to the game world tournament, tournament, and training. Training provides the necessary practice to compete with the ranked players in the tournament competitions. World tournament has you playing against the best seeded players around such as the infamous Igor Przchst and Franco Plazzo and with Tournament playyou define your own seeds between your friends. Play commences and the objectives are set, including winning all the Grand Slam events, plus the Davis Cup and the Masters - no easy task by any means.

A number of specifications have to be determined before play takes place. Firstly, the type of racquet you're going to use. They vary in weight and this is supposed to affect the way you strike the ball, in practise this made little difference and therefore wasn't worth worrying about.

You must decide on a type of court to play on ranging from fast grass courts to slow clay courts. The effect of this decision is noticeable during play as either the ball thunders across the court or is reduced to a slow bounce. After everything has been set, play begins.

TRIED AND TESTED:

REVIEWER:	ALEX
GRAPHICS:	63%
SOUND:	67%
GAMEPLAY:	68%
OVERALL	65%

Only one half of the court is presented on the screen, meaning it has to scroll quickly to keep up with the ball - not exactly BBC camera-man work! It's convenient that the computer controls the movement of the players, leaving players to concentrate on shot making, but it does take a little time to get used to.

When serving the ball, push your joystick up to toss the ball in the air, and centre the joystick to hit the serve. Varying when the ball is hit, determines the length of the serve into the opponent's service area.

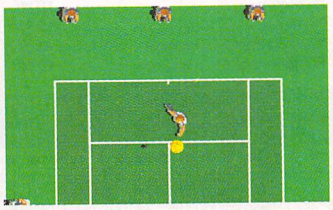
A variety of shots are at your disposal. Whenever the joystick is moved in a particular direction, it causes the player to swing back. Upon release, the shot is made. A right movement executes a top spin shot, and a left movement leads to a sliced shot. A lob is achieved by pulling back on the joystick. Varying angled shots can be made by releasing the joystick at different moments, including cross court shots and down the line drives.

One complaint is that because the screen scrolls, you have very little time to decide a shot before the ball is upon you and some become instantaneous reactions.

The graphics are clear but not very detailed, and that's because there aren't many intricacies on a tennis court A graphical portrait is provided of each of the sixteen seeds. Speech is used when providing the score, and other sound effects are included when striking and bouncing the ball. Actual playability is lacking due to the scrolling and the element of luck is a shade too predominant.

A complete view of the court would have been better, along with more player participation (as far as character movement is concerned), although this would have meant less options when striking the ball. On the whole this is a neat production, but the player is left lacking that feeling of being in control.





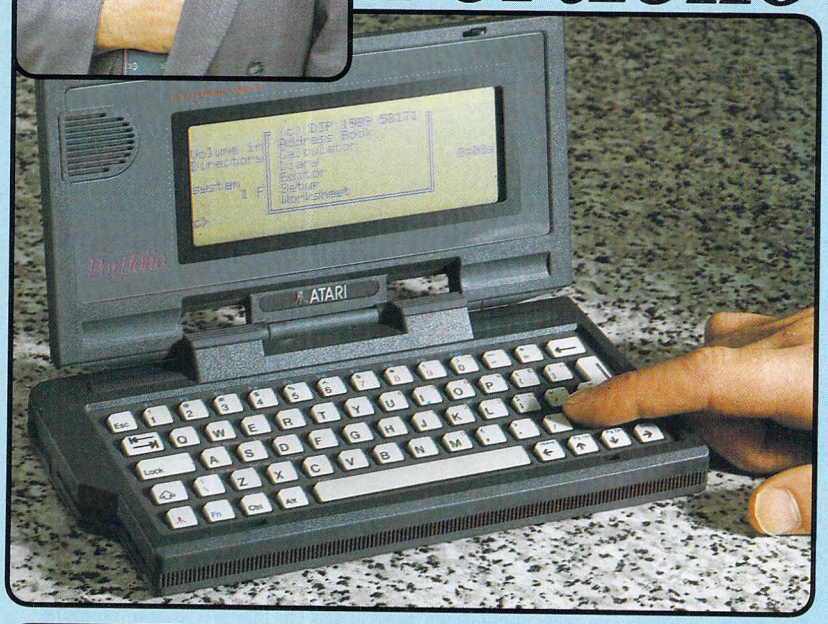
ABOVE: Dan Maskell would struggle to keep up with the fast pace of this game.

LEFT: Your opponents are lining up, intent on keeping you out of the seedings. Are you good enough to rank amongst the best?

★ POCKET SIZED ★ PC-COMPATIBLE ★ PERSONAL ORGANISER ★



ATARI Portfolio



THE PC IN YOUR POCKET

The new Portfolio from Atari is the world's first pocket-sized electronic organiser that is also a powerful PC compatible computer, with a full QWERTY keyboard and scrolling 80×25 character display.

Portfolio includes everything you would expect from an electronic organiser - an address and telephone book, time manager, diary and sophisticated calculator.

Portfolio also includes several functions that you would not expect - a spreadsheet for your personal budget and expense records, as well as a text processor for typing memos and letters.

And, because Atari's Portfolio is PC compatible, it can communicate with your desktop PC at home, or in the office. You can transfer files from one to the other, to enable you to update your reports and figures with the Portfolio while you are on the move.

FOR ONLY £249 INC VAT

SPECIFICATION

- ★ ***Processor:*** Intel 80C88 at 4.9152Mhz.
- ★ ***Operating System:*** Compatible with MS-DOS 2.11.
- ★ ***Internal ROM:*** 256K containing BIOS, operating system and applications suite.
- ★ ***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).
- ★ ***Mass storage:*** credit card sized memory cards (32K or 64K or 128K RAM).
- ★ ***Display:*** Graphics LCD, supertwist technology, MDA compatible, 40 columns x 8 lines, 240 x 64 pixels (with the option to window a full 80 x 25 character display). Keyboard controlled contrast.
- ★ ***Peripherals:*** 60 pin expansion BUS to take serial and parallel ports and memory expansion units.
- ★ ***Size:*** 8" x 4" x 1" (200mm x 105mm x 29mm).
- ★ ***Weight:*** 495 grammes (with batteries).
- ★ ***Applications:*** calendar and diary, address and phone book, Lotus 1-2-3 compatible spreadsheet, text processor, communications 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.

5 BUILT-IN APPLICATIONS TO GET YOU ORGANISED!

To get you started, Portfolio comes with a suite of five useful functions built-in, all accessible from a simple menu display.

TIME MANAGER

More than just an electronic diary, the Portfolio Time Manager enables you to plan your appointments via a comprehensive calendar and diary. It can even be programmed to sound an audible alarm at specific times to remind you of important appointments.

CALCULATOR

Your Portfolio will be invaluable in the office or at home as a powerful pocket calculator. It has a full range of functions, including factorial, power and root calculations, all with multi display formats and memories.

ADDRESS BOOK & DIALLER

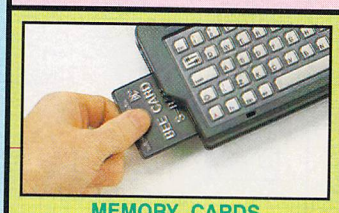
Portfolio has a complete address book facility that allows you to store hundreds of addresses and phone numbers. And, at the touch of a button, you can retrieve any one of them, or search for a specific grouping, such as "all Italian restaurants". And, when you are ready to book your table, hold your Portfolio to your telephone mouthpiece and use its special built-in tone dialler to dial the number for you.

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.



MEMORY CARDS

Portfolio can store and retrieve data and programs from its own RAM, or from small credit card size memory cards, that slot into its built-in card drive. The cards are available in three sizes, 32K, 64K and 128K, so you can carry a library of data in your pocket. The card drive also accepts ROM cards, which can contain commercial or custom software.



POWER SUPPLY

Portfolio is powered by three AA batteries which will run for up to six weeks with normal use, or from the mains using an adaptor. All the peripherals take their power from the Portfolio, so no extra batteries or adaptors are required. A 'battery-low' warning and memory back-up ensure that information is not lost when the batteries are changed.



INTERFACES & PERIPHERALS

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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Before you decide when to buy your new Atari Portfolio, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Portfolio, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new Portfolio products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is a new division of Silica Shop, the UK's leading Atari specialists. This new division has been established to provide a service to the more serious home user, as well as to business and education purchasers. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature and begin to experience the "Silica Systems Service".

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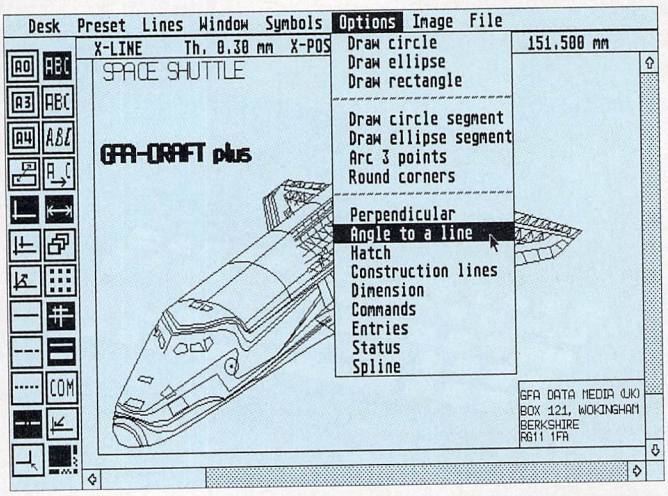
Product: Draft Plus v3.13
Supplier: GFA
Telephone: 0734 794941
Price: £149.95
Configuration: All STs, mono and colour

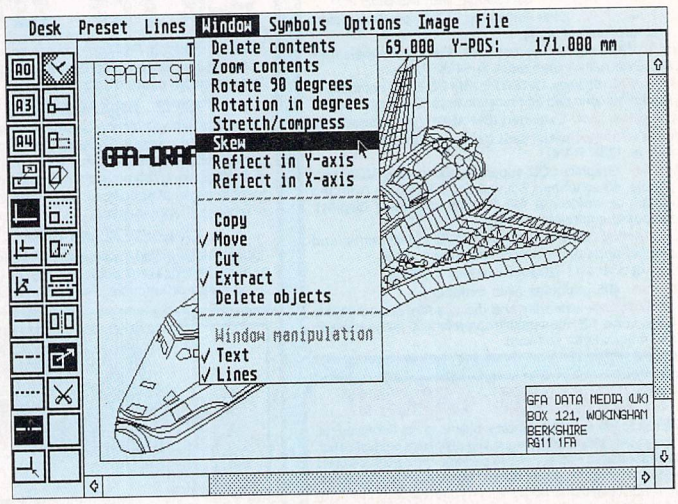
Highly sophisticated professional CAD packages cost several thousand pounds and run on equally expensive and sophisticated hardware. Budget CAD programs for small computers such as the Atari ST often cost several hundreds of pounds so GFA Draft Plus v3.13 is a pleasant surprise. The program has lots of features and costs only £149.95.

Draft Plus can handle drawings up to A0 format and most of the screen acts as a window on this larger drawing area. Scroll bars are used to move around the drawing, but they can be switched off to gain a slightly larger drawing area. Control is via a GEM menu bar and a



ABOVE: The icon panel down the left-hand side of the screen and the pull down menus at the top provide all the basic CAD tools

BELOW: Window menu contains some useful functions, and in window mode you get a new icon panel full of tools



WHAT ON

CAD is an acronym meaning Computer Aided Design and is used to describe programs which architects and engineers use to create technical drawings.

At first sight, CAD software looks similar to a drawing or painting program, but there are important differences and the two types of program can't be compared.

Paint programs are pixel oriented which means that everything they do alters pixels on the computer screen. When you draw a line the art package paints a straight line of pixels across the screen, and when you fill a shape with colour, the software makes all the pixels in the shape the same colour. Draw a circle or triangle and the art program thinks of the shapes as dot patterns on the screen.

CAD programs on the other hand, treat drawings as a collection of geometric objects and a completed design is simply a collection of geometric shapes, lines and text. When you draw a line, the program remembers exactly how long it is and at which angle the line was drawn. It might seem strange, but a circle is also drawn as a series of lines. They're so short and there are so

DRAFTSMAN'S CONTACT

Everything from a circuit board for our DIY series to your own house - design it all with Draft Plus. Roland Waddilove puts propelling pencil to electronic drawing board...

panel of icons down the left-hand side of the screen.

The software behaves like its professional big brothers in that drawing is object oriented and component based. Each item you draw on-screen can be enclosed in a rubber banded box and saved as a component. If you were designing the interior of a house, you could draw four chairs and a table then group them as a single component, or 'symbol' as Draft Plus calls it.

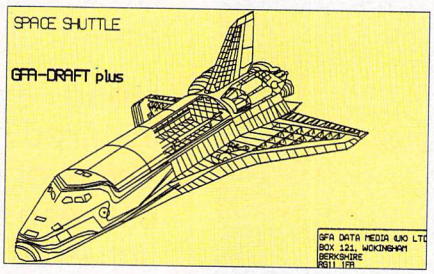
The component can be saved to disk and if you want it again, you don't need to redraw everything because you can simply load it in from disk.

A drawing is constructed using up to 10 different layers (or levels) of information. This means that you can draw a printed circuit board on one layer and the components on another. They can then be overlayed to see what the finished circuit will look like. Another use is for hiding or viewing construction lines. The 10 level limit isn't overly generous, but at this price point it's adequate.

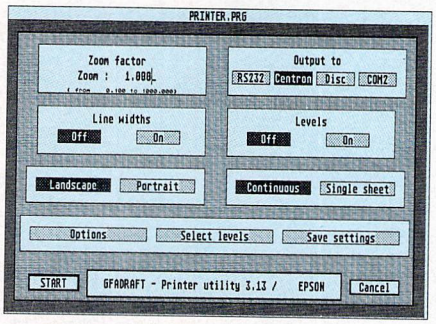
Each level is stored in a separate file and is normally worked separately, but it is possible to overlay them on-screen using one of the icon tools and also when outputting the drawing to a printer or plotter. A different colour can be assigned to each level.

The basic CAD functions such as lines, circles, ellipses, polygons, arcs and freehand drawing are all present and correct. Lines can be drawn in thicknesses varying from 0.3mm to 4.5mm and can be unbroken, long or short dashed and dashed chain. Existing lines can be lengthened or shortened and two short lines can be joined together to make one long one (and broken again).

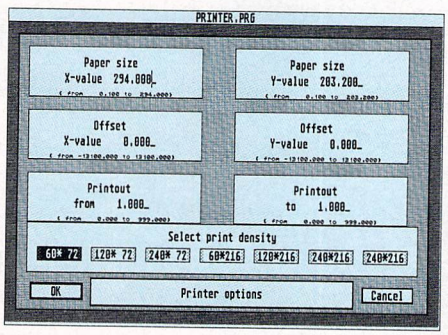
Lines which are supposed to meet can be snapped together but if they do meet and overhang, the ends can be trimmed. Parallel lines and tangents to circles are easily created by clicking on the appropriate icon tool.



The output from a simple 9-pin dot matrix is excellent. A plotter would give even better results than this



ABOVE AND BELOW: Comprehensive printer and plotter facilities enable you to output almost any size picture, portrait or landscape in a variety of dot densities



Three character sets are provided which can be printed in a variety of sizes. There's normal text, bold (written with variable width lines) and a user-defined character set. Text can be printed at 0, 90, 180 and 270 degrees with or without proportional spacing. It can be reflected, too.

Windows are defined by dragging a rubber banded box around an object or group of objects. The contents can then be manipulated in a variety of ways such as cut, copied, zoomed, moved, skewed, reflected or rotated. The rotation function enables angled text and components to be easily constructed.

Once a window has been drawn around an object or group of objects, it can be saved as a symbol. This enables you to build up a library of ready-made symbols which can be slotted into a new drawing.

The libraries supplied with Draft Plus are very basic and perhaps indicate the market for this package. In the architect's folder for instance, there are symbols such as a bath, chair, cooker, cupboard, bed and so on. This is OK for interior designers and space planning, but it's hardly typical fodder for architects.

At this sort of price level, there are bound to be shortcomings in the software - for instance there are no line endings available, if you want arrows in and out, filled and open arrows, circle and slash so you'll have to draw them yourself. Ten layers limit the size and complexity of the drawings which can be created. The package is fun to use however, and copes quite well with simple projects without lightening your pocket by too much.

An essential utility is one that converts Draft Plus-format drawings into the almost universal DXF file format and vice versa. It has been estimated that there are around 2,000 users of DXF compatible systems in the construction industry alone, so files can easily be swapped between the ST and other CAD packages, even when they're running on completely different machines.

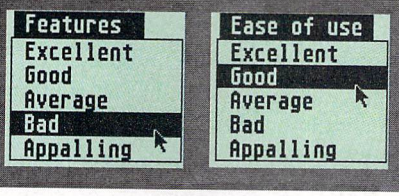
Output devices for Draft Plus drawings range from 9-pin dot matrix printers through 24-pin and plotters. The quality of the dot matrix output is excellent and you can zoom, reduce and print on any size paper by entering the dump dimensions into the print dialog box. Plotter output can either be direct, or you can create HPGL files by directing output to disk.

This rock bottom-priced offering (£150) has limited facilities, but for the amateur and occasional dabbler, the program's got everything you need. If you want to produce simple drawings quickly and easily, Draft Plus definitely fits the bill. ●

THE BOTTOM LINE

Features: Bearing in mind its low price, the range of features is quite good. However, it won't make any impact on the sales of DynaCADD.

Ease of use: The software is easy to use and the manual leads you gently by the hand through all its functions.



EARTH IS CAD?

many of them however, that the circle appears to be round except when drawing extremely large circles.

Architect use CAD programs in building design. S/he'll use it to draw some preliminary sketches and then the final blueprints that tell the construction workers exactly what to do.

A civil engineer uses CAD packages to draw force diagrams that calculate the stresses and strain on the walls and girders that the architects put in their plans. Electrical engineers use CAD to draw complicated wiring diagrams.

There's also a further use of CAD - the design of circuit boards. With a CAD program, a circuit can be drawn very easily and a parts list printed. Then the printed board is designed and the finished product can be etched from the printout.

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Gasteiner Technologies introduces AT-Speed the 80286 PC AT emulator for Atari ST (fm) and Mega ST owners.

Measuring just 8.5cm x 7cm, AT-Speed incorporates a 80286 processor to give a Norton speed factor of 6.7 as opposed to PC-Speed's 4.2. AT-Speed also offers CGA, Hercules, Olivetti and Tandy screen display modes.

Using new software, AT-Speed can be installed as a Desk Accessory (2Mb and over only) so that swapping between ST and PC modes can be achieved with ease. When used with MS-DOS 3.3, AT-Speed will take advantage of all the ST's memory up to 4Mb.

AT-Speed is installed inside the ST's case and sits on top of the 68000 processor – like PC-Speed. Because installation is the same, swapping from PC-Speed to AT-Speed is simply a case of removing one board and replacing it with AT-Speed.

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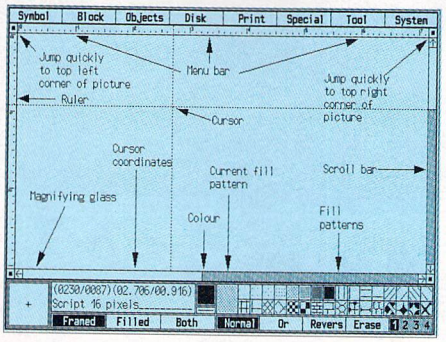
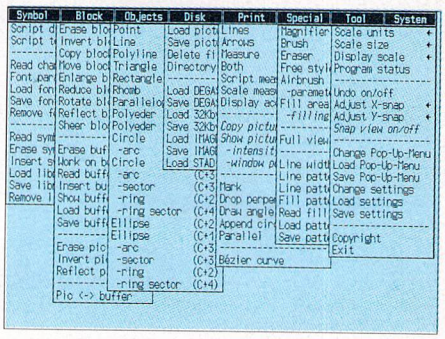
Product: Mega Paint II
Supplier: Silica Systems
Telephone: 081-309 1111
Price: £99.95
Config: 1Mb of RAM, mono only



Mega Paint's main screen showing the menu bar, fill patterns, drawing modes and magnify window



Not only all these menus, but also many of the items lead to further sub-menus

YOUR ART'S DESIRE?

Be-smocked and paint spattered, Roland Waddilove erects his easel and tries the latest paint package vying for your clams...

Mega Paint II must be one of the most fully-featured art packages on the market. Its specification is truly astounding, yet the program is simple to use. Combining art and CAD, Mega Paint blurs the dividing line between the two subjects.

The program's entirely mouse driven (except for the odd occasion when you want to input some text), it isn't GEM-based but provides a user-friendly interface which is easy to get to grips with. There are eight main menu headings across the top of the screen and moving the mouse into these causes menus to drop down.

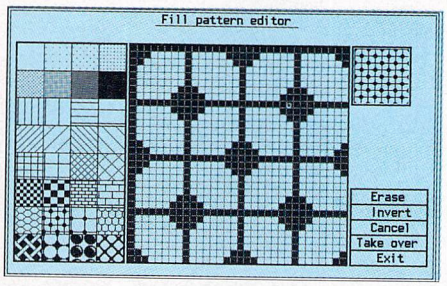
Many items on the drop down menus have an arrow next to them and holding down the mouse button while sliding the mouse pointer off the side of the menu, causes a second sub-menu to appear. This clever technique of extending the menus is rarely seen on the ST, but is common on machines such as Apple's financially remote Macintosh. It's simple and I like it.

All the drawing functions, such as lines and circles, are contained in two icon-filled boxes which pop up when the right-hand mouse button is pressed. Extra functions, such as setting line style and thickness, are accessed by pulling down menus at the top of the screen.

The range of drawing tools is incredible. There are for instance, seven circle functions - two ways of drawing a circle, two types of arc, sector, ring and sector of a ring. And the same is true of ellipses - a sector of an elliptical ring is a very powerful function indeed. There's also all the usual point, line, polyline, polygon, parallelogram, rhombus and triangle functions, too.

Dozens of brushes and erasers, 32 fill styles plus an editor to create even more, variable spray airbrushes and Normal, OR and Reverse drawing modes ensure Mega Paint is one of the most comprehensive drawing packages available. And for extra fine artwork, there's a powerful magnify facility.

Mega Paint also has a wide range of block functions such as erase, invert, copy, move, enlarge, reduce, rotate and sheer. A block is defined by a dragging a rubber-banded box around a section of the picture. After setting the top left corner, it's still possible to use the scroll bars to scroll down (and right) to define a block that's bigger than the screen.



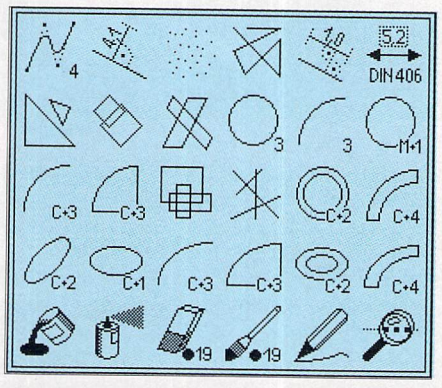
If you don't like the 32 fill patterns provided, design your own using this editor

The resolution and size of the drawing area are handled in an unusual way - determined by the resolution of the output device and the amount of memory in your ST. At the bottom of the range is a 1Mb 1040ST with a 9-pin dot matrix printer running at 180 DPI in landscape format. At the top of the range is an Atari Laser printer running at 300 DPI in upright format.

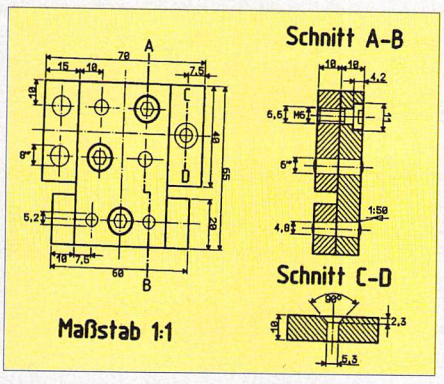
A useful feature of Mega Paint II is that you don't need to output the whole screen, a small section can be enclosed by a rubber banded box and printed separately. Printing is fast and the quality amazing. A battered old Panasonic KX-P1081 (using a ribbon about to be thrown away) produced stunning hard-copy, and replacing the old ribbon with a new one, gave almost laser quality output!

Mega Paint does have a couple of major drawbacks which severely limit its use. The program can only be used in monochrome, and unfortunately, needs an enormous amount of memory in order to operate properly. You can operate the art package with only a meg, but some of the higher resolution modes won't be available because picture files can take up almost 1.5Mb of memory and of course, the same amount of disk space when you save them. The ideal hardware configuration is a 4Mb Mega ST with a 60Mb hard disk (rich kids and those with rich but recently-deceased relatives only!)

If you need a mono-only art package, Mega Paint II is recommended - it's brilliant.



These drawing tools are accessed by clicking the right-hand mouse button

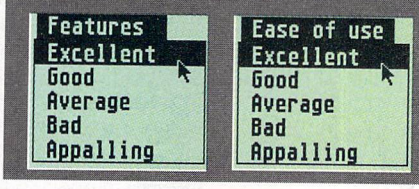


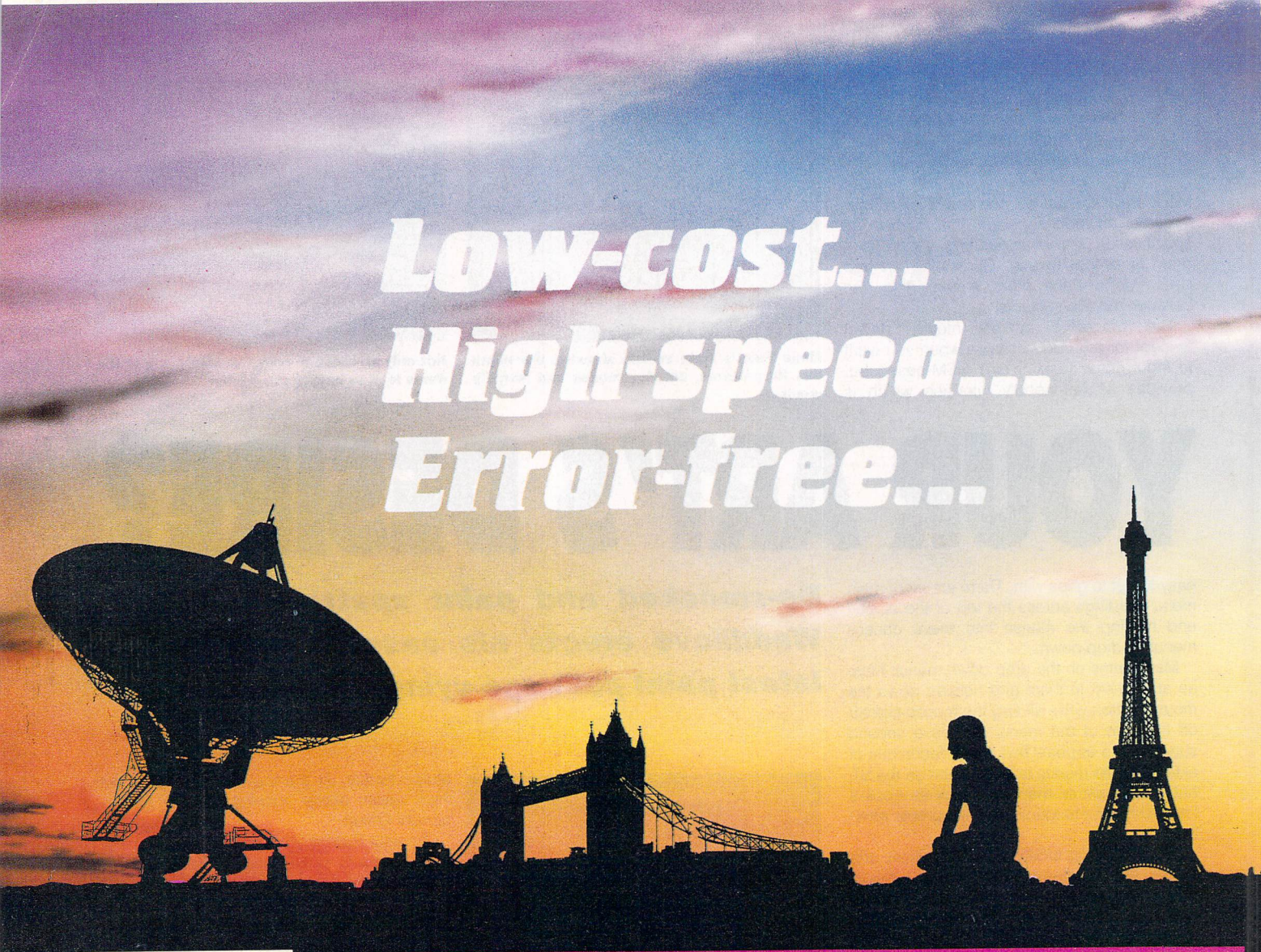
The output from Mega Paint is outstanding, even from a 9-pin dot matrix printer

THE BOTTOM LINE

Features: Every drawing tool you could ever want is contained in this easy-to-use package.

Ease of use: Good documentation smooths the learning curve. Simple icons and an unusual but good menu structure, make Mega Paint II a doddle to use.





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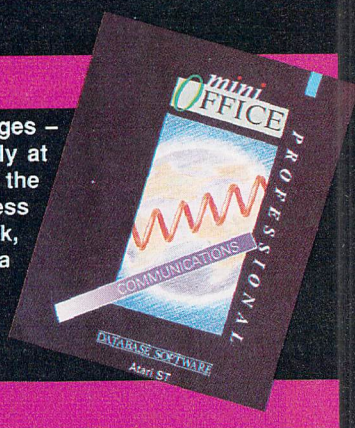
The EuroLink modem is a robust and sophisticated device which turns data from your Atari ST into signals which can be sent along a telephone line. It can handle speeds up to 2400 baud – about 40 words a second. Although it has many powerful features, it is simplicity itself to use when combined with its accompanying software. Built into the Hayes-compatible modem is MNP error correction – your guarantee of a corruption-free connection. Its wide range of other features include auto dial and auto answer, auto redial, baud rate scanning, auto terminal baud rate sensing, 32-entry number store, internal loudspeaker, call progress monitor, bell tinkle supression, external plug mounted power supply unit and built-in 'watchdog' circuitry.

THE SOFTWARE

Accompanying the modem is one of the ST's best-selling comms packages – the complete Mini Office Professional Communications. Sold separately at £24.95, it simplifies connection to MicroLink. Two mouse selections and the rest is automatic – straight to the service you require and with all the access formalities taken care of. After that you can move freely around MicroLink, capture text on disc and send pre-prepared documents – all with a minimum of keystrokes. It can also be used to access Prestel and other services in addition to MicroLink. Included in the software is a text editor and other desk accessories.



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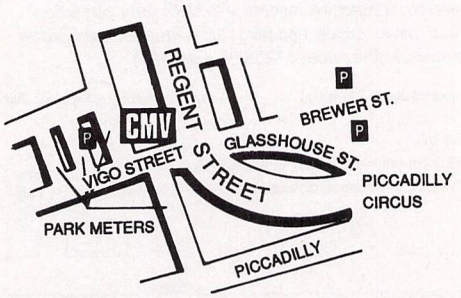

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PROTECT and SURVIVE

Forget the hype, the virus is not invincible! Dr. Roland Waddilove wields the electronic scalpel...



Over the last couple of years we've all been constantly regaled with shock-horror stories of that insidious fragment of code, the virus. Self-styled 'experts' predict doom and gloom for all computers, and sooth-sayers warn of massive epidemics that will infect thousands of new computers every month. The prospect of half the micros in the country (ST, Amiga or PC, it doesn't matter, they can all catch viruses), coming down with a serious dose of digital flu and wiping out their data is enough to strike fear into all but the most hardened hacker.

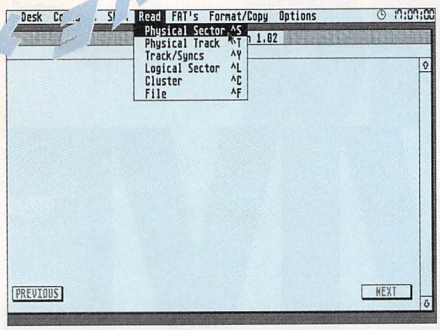
Are the so-called experts right? Is the future really so grim or is it all hype? It's been said that more money has been made by people writing software and articles attempting to prevent the spread of viruses than has been lost by the nasty micro microbes themselves. So now 'USER delivers into your hands the complete guide to eradication. We tell you what a virus is, how it works and what you can do to stop your machine becoming infected.

First of all, forget living organisms, forget the comparisons with AIDS, forget all of the gosh-wow stuff you've read over the last year or so. The computer virus is quite simply one more common or garden computer program, just like your art package, word processor, database and so on. The name virus is valid however, and has been given to this type of computer program because of the way in which the fragment duplicates itself and passes from one computer to another. The process is reminiscent of the human virus which multiplies and infects other humans who come into contact with it.

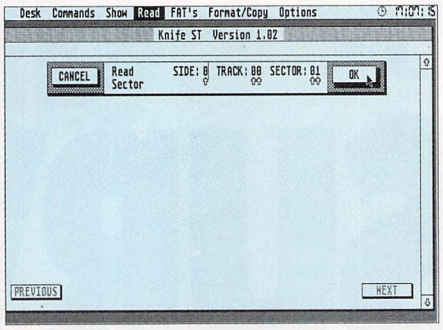
When computer viruses were first discovered (after a bored, twisted genius programmer decided to write the first one), many, many rumours and scare stories

PROJECT VIRUS

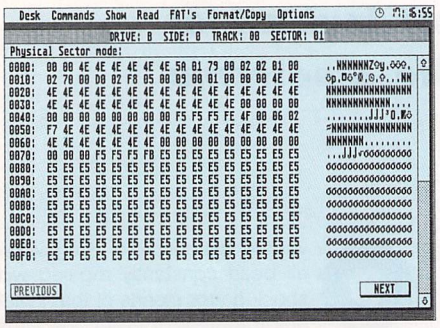
KILLING A VIRUS USING HISOFT'S KNIFE ST



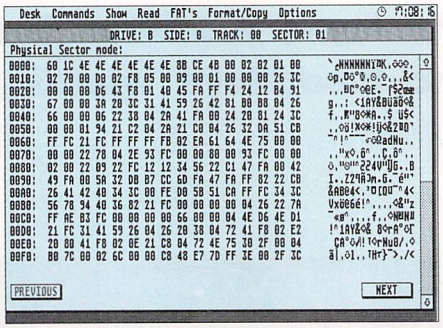
Boot up Knife ST and select the Physical Sector option on the Read menu



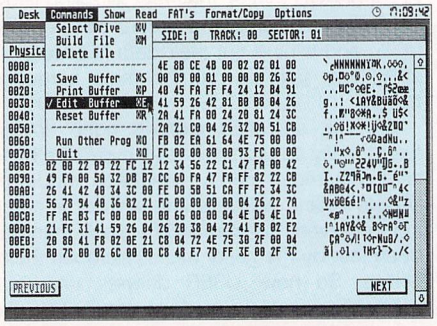
Read side 0, track 0, sector 1



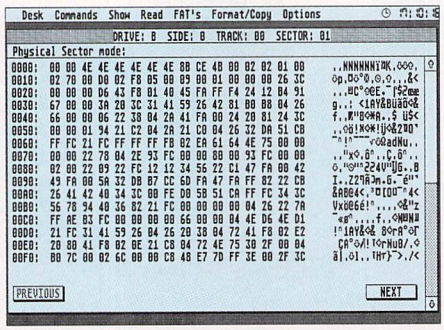
Here is a normal single sided disk. Note that the first two bytes are both zero



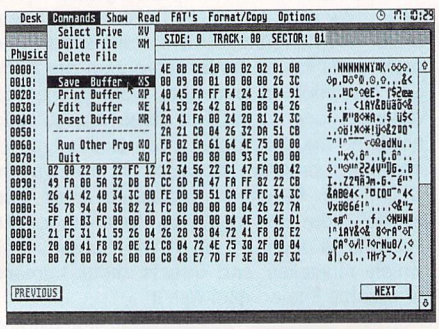
This is the same disk after it's been infected by the Ghost virus (deliberately!) Notice that the first two bytes contain a machine code instruction which points to the start of the machine code virus program in the boot sector



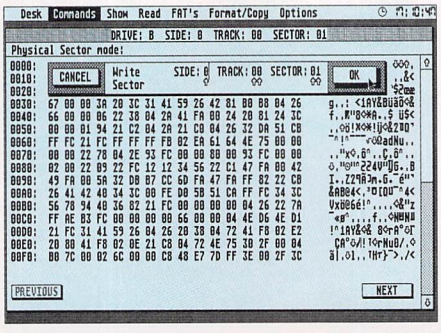
Select Edit Buffer on the Commands menu



Set the first two bytes of the sector to zero. They no longer point to the virus code so it will never be executed. Stick that in your pipe and smoke it you evil creature!



Select Save Buffer on the Commands menu Read side 0, track 0, sector 1



Write the modified boot sector back to side 0, track 0, sector 1. The virus is now dead

passed around. Computer novices were convinced that their computer had been infected because it stood near to an infected machine, or that viruses were transmitted by touch, or that they had even switched off their ST yet the virus was still present, lurking among the innards of the RAM and ROM chips.

Thankfully, there aren't too many people who still harbour these views (contrary to the belief of the tabloid dailys). A virus is a simple program and just like any other, it's completely lost when you switch off the power. There used to be a rumour about battery-backed clocks being infected but don't worry, I've yet to come across a virus that could live in a clock (imagine the difficulties involved in replication - how many people have battery-backed clocks?)

Cutting the power is like cutting the jugular vein of the virus. What often happens however, is that the virus-free machine is re-infected when the power is switched on.

Like human viruses, the computer variety takes many forms and their effects range from mildly annoying to extremely unfriendly. Viruses can infect your computer, hard and floppy disks without you ever being aware. Only when the virus starts interfering with the operation of your computer or programs, people begin to suspect that something is wrong.

Some viruses are quite harmless, but the effect of others can be devastating. A relatively benign virus may simply display a silly message on the screen, make a sound, cause 'mites' to eat away the desktop or reverse the Y coordinates of the mouse (this latter being the especially prevalent Ghost virus). But a virus programmer could easily make it format your hard disk - 60Mb of lost programs and data is enough to make you want to throw yourself under a bus!

If something such as a hard drive format started happening you might be able to pull out the plug fast enough to stop the virus dead in its tracks. Then with a disk sector editor and the help of a friendly hacker you could salvage some of the data. Some viruses however, are more devious than this. Every so often they alter a single byte in a file, choosing a different byte and a different file each time. Before you realise it, you'll find most of the programs and files on your disk are corrupted.

UNDER THE MICROSCOPE

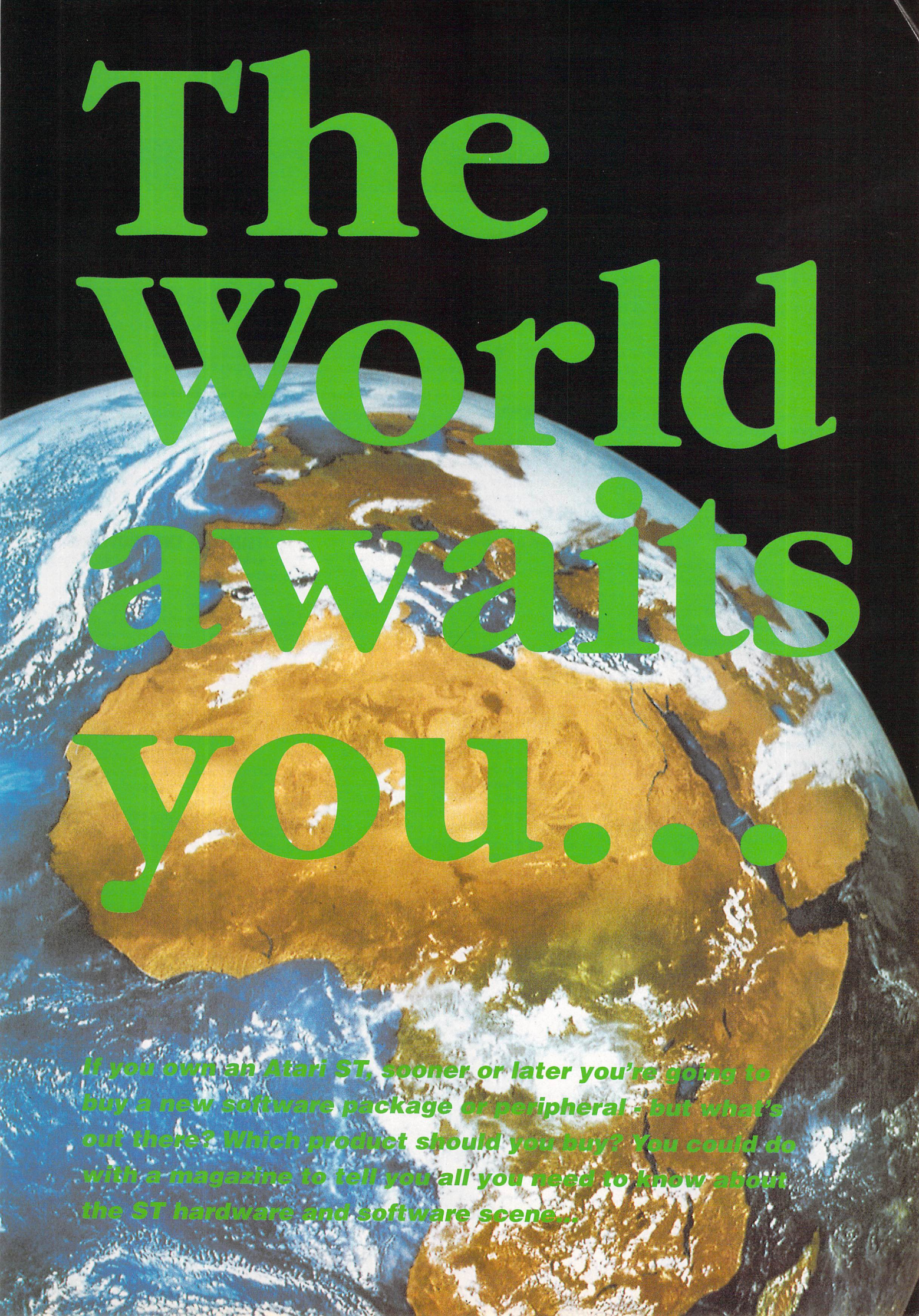
A virus consists of two parts - some self replicating code and the payload. The former is responsible for making copies of the complete virus program distributing them whenever possible, the latter causes any of the nasty side effects mentioned earlier.

There are several ways in which a virus program can duplicate itself and the simplest of these is via the boot sector. These viruses are known as - not surprisingly - boot sector viruses.

The first sector on a floppy disk is special and isn't used for storing programs or data like the rest of the disk. The ST's operating system holds important information in the first few bytes of side zero, sector one, track zero - the boot sector. The data here informs TOS whether the disk is single or double sided, how many tracks there are, how many sectors each track contains, the number of bytes stored in each sector, where the FAT is and so on.

This doesn't take more than a couple of

The World awaits you...



If you own an Atari ST, sooner or later you're going to buy a new software package or peripheral - but what's out there? Which product should you buy? You could do with a magazine to tell you all you need to know about the ST hardware and software scene...

dozen bytes so there's a lot of free space left in the 512 byte sector. It's possible to make use of the free space by storing a short machine code program. When the ST is switched on or the reset button pressed, the operating system looks at the boot sector to see if it contains a program and if it does, it's loaded and run.

Nearly all arcade games use this space in the boot sector to store the loader for the game. All you need to do to run the game is to switch on the ST with the disk in the drive. TOS looks at the boot sector, finds a program, loads and runs it. The rest of the game is then loaded.

Virus programmers also use this free space to store the virus machine code so that every time you switch on the computer TOS loads and runs it. Your ST becomes infected because the program hides itself away in memory and returns you to the desktop similar to snapshot utilities, desk accessories and so on. Unlike those programs however, the boot sector virus program doesn't appear on the desk accessory menu and its program icon doesn't appear in the disk contents window when you click on the drive icon. You don't even know it's there!

Boot up with a disk containing a boot sector virus, and it's installed in memory infecting your ST. It then replicates and infects other disks by copying itself (the machine code program), to the boot sector of any disk you put in the drive.

The only disks that normally have boot sector programs are arcade games. It doesn't make any difference to the virus program and when you put a game disk into your drive, the virus will overwrite the game loader and install itself. Once the game loader has been destroyed you won't be able to load or run the game!

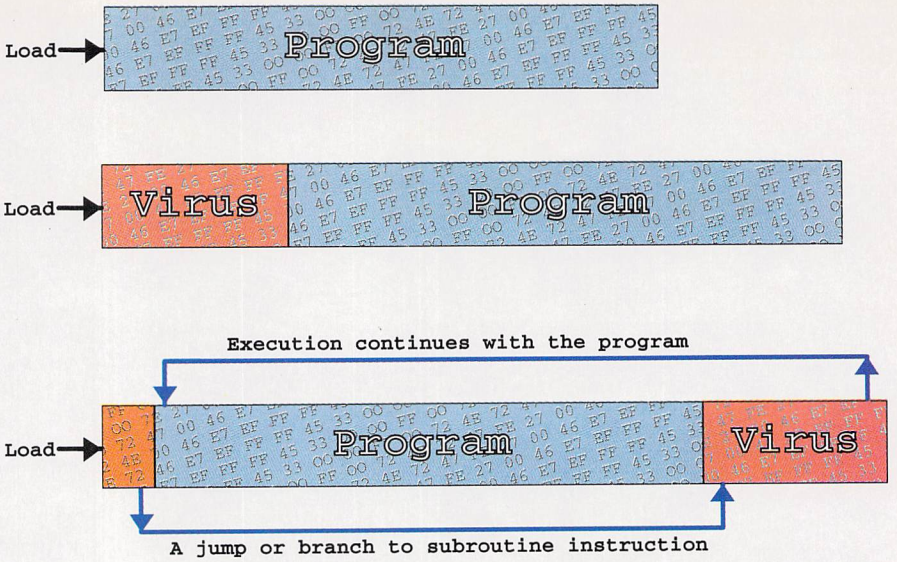
Another 'popular' virus format is known as a 'parasite' because like a living parasite, the virus lives on a host program. This virus attaches itself to any executable programs stored on disk consequently infecting them. The virus code could be placed at the start of the program or it could be at the end but no matter which way it is, the bulk of the program remains intact. When you boot up the infected program (it might be 1st Word or Degas), the virus code is executed before the true program. If the virus is at the start, the code is executed then the program follows afterwards. If it's at the end, a machine code jump or branch to subroutine instruction jumps to the code before the true program is started.

The virus code is so small and runs so quickly you won't notice any delay in loading and nothing is printed on the screen. You won't know your ST has been infected - until the damage has been done.

These parasitic viruses may be memory resident (they tuck themselves away in an unused part of memory and stay there until you switch off the power), or they may be run once only, when the program is first loaded. Whichever virus it is, they infect other programs in the same way by searching the disk for executable .TOS or .PRG files then copying themselves onto the end or start of the program.

THEY CAME FROM OUTER SPACE

Where do viruses come from? The only way your ST can become infected is by loading and running a virus program. If you boot up with a disk containing a boot sector virus or run a program with a parasitic virus, the unwanted visitor enters the ST's memory.



Parasitic viruses latch on to the end or insert themselves at the start of executable PRG and TOS programs

When they first appeared, little was known about the virus and so they spread rapidly throughout the public domain. Buying a PD disk was a hazardous pastime because you could quite easily obtain a nasty virus along with the free software. PD and shareware software is intended to be copied and passed on without restriction, and whenever anything is freely passed around in this way, it's likely the software will pick up nasty viruses.

Luckily, many virus killers have spread equally quickly over the past year, and now all reputable PD libraries check for infection. It's now quite safe to buy PD (but be careful...). Unfortunately, although it's easy to spot boot sector viruses, there's always the danger of a parasitic virus slipping through the net. Commercial programs should be virus free.

The most common source of viruses is pirated software. Arcade games are commonly pirated and apart from the process being illegal, they often carry viruses too - steer well clear. Bulletin boards carry large amounts of software that you can download and the programs aren't always tested for parasitic viruses because it's difficult to keep track of such a large amount of software which changes so frequently.

The last source of possible infection is your friends(!) If anyone gives you a disk and asks you to try it, run it through a virus checker first before loading or booting it. - you may save yourself a great deal of lost data...

PUTTING UP THE SHUTTERS

A disk which has been write protected can't be infected with a virus, so the best way to prevent infection is to keep all your floppy disks write protected. Obviously, this isn't always possible because you'll need to update databases, save word processor files and so on. But master disks should always be write protected and only back-ups used.

Hard disks are more of a problem, but some drives have a write protect switch on the back that can be flicked to prevent software writing to the disk. Other drives are supplied with utilities that write protect the hard disk by intercepting all disk accesses. This isn't 100 per cent safe however, because clever viruses may by-pass the operating system disk write routines.

Any new software you receive from an unreliable source be used only after switching off your ST. Once the program is run, switch off the machine again before using any other software. In this way, you'll be certain the program isn't harbouring any viruses. At the very least, you should allow a virus killer to check new programs.

FIGHT INFECTION

If, after all the checks and safety precautions, your ST does become infected with a virus, there's a 100 per cent sure way of killing it and disinfecting the machine: turn off the power. Be aware however, that the virus program will still be on your floppy or hard disk, and next time you switch on, you could easily re-infect the computer. In this case, switch on the ST without a disk in the drive. The Desktop will appear after about two minutes and then you've got a completely clean machine.

If you've got a hard disk that autoboots, you'll have to use a utility to switch this facility off. Switch on without a disk in the drive and wait for the desktop to appear. Now you can run your hard disk driver software from awrite protected master disk to install the hard drive. Your ST will remain virus free.

...the NEW Quarterly guide for ALL Atari ST owners.

● BUYERS' GUIDE

The most up-to-date list of all ST hardware and software currently available in the UK. You'll find it all in the 'World buyers' guide.

● SUPERTESTS

Exhaustive back-to-back testing of all products in a range of categories. World does all the hard work and you find the best product for your needs. This issue...

Hard disk drives - one of the most important peripheral purchases you can make. ST World Supertests a complete range of ST hard drives.
Database packages - your ST can help you keep track of all forms of information for quick and easy recall, but which software package is the best?
Mice and trackballs - Need a new pointing device? Let ST World help you choose the best replacement mouse or trackball. We test them all.

● REVIEWS

More depth, more detail, and more of the information you need to know about the latest ST product releases. Some of the major reviews in the next issue include:

Pandaal 400dpi hand scanner - a low-cost high spec. scanning package. It could be all you'll ever need for mono image capture.
Universal Item Selector III - not just a replacement file selector, but a versatile disk and file utility too. 'World pulls it to pieces before your very eyes.
Harlekin - the most comprehensive desk accessory known to man. ST World digs deeper than ever before to reveal the true potential of this amazing utility.
Tower Power - got an ST? Get a new case! Discover the sheer versatility of this Tower Case system.
Lattice C version 5 - the big new C compiler from HiSoft gets a thorough work-out on ST World's unforgiving C compiler testbed. Find out what the package is really all about.
HyperChart - powerful business graphics for slide shows, graphics, statistical charting, rolling presentations and slide generation.
MegaPaint II - a high performance monochrome bit image editing program with a promise to out perform its rivals.
Fast FAX - send and receive FAXes from your ST, but is it only a mouse-click away? ST World probes the ins and outs of Michtron's FAX modem and software.

● NEWS

ST World gives you the complete picture! What's been happening in the ST scene and what's coming along next. Including product updates and version numbers to help you stay in touch.

● PLUS...

Putting a complete WP system together - the ST World team recommends a selection of ST-based word processing systems - both hardware and software - suited to all needs and budgets.
DTP books - if you're into ST DTP there's some essential reading here to help you make the most of your DTP software.

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STU9



Boot sector viruses are easily disposed of using a disk editor such as HiSoft's Knife ST or even a simple PD offering such as DLII. Examine the first sector on the disk and see if the first two bytes are zero. If they are, the disk is virus free, but if the first one is $60 and the second one is something like $1C then it's almost certain that you're looking at a virus program. The $60 is a machine code branch instruction and the second byte tells the ST where the program is stored in the boot sector - it's an offset from the start. Zap those first two bytes and set them to zero to kill the virus. Two zeros tell the ST that it should ignore any boot sector program. In this way, a disk infected with a boot sector virus can be easily cured.

If you have an infected hard disk, try resetting the drive to autoboot. The driver that's installed is likely to overwrite any virus code present. If that fails, then you'll have to backup your disk, reformat it, then copy all the files back again - a long process with a large capacity disk.

Parasitic viruses are more difficult to dispose of because of the way they are entwined with legitimate program code. The best solution is to delete any suspect programs and re-install them from your master disks. Keep any data files you've created (text files, databases, pictures and so on), because these can't be infected with a virus.

The best way of ridding yourself of a nasty dose of infection is to use either a public domain or commercial virus killer to check out all your disks and programs.

There are many excellent virus checkers and disinfectants in the public domain, but be aware that even a virus killing program can be infected with a virus it doesn't know about (a virus killer for PCs revealed itself as a Trojan and destroyed data). You're probably better off sticking with commercial offerings. One of the best virus killers around is CRL's aptly named Virus Killer. This will detect, name and destroy all viruses including Signum, Mad Virus, Mutant Signum, ACA, Ghost, Virus Construction Set (yes, there's even a DIY construction kit for creating viruses), LAB, FAT, Papa, Garfield and many more.

The software is easy to use and you can search for boot sector and parasitic viruses and wipe them out with a click on the mouse button.

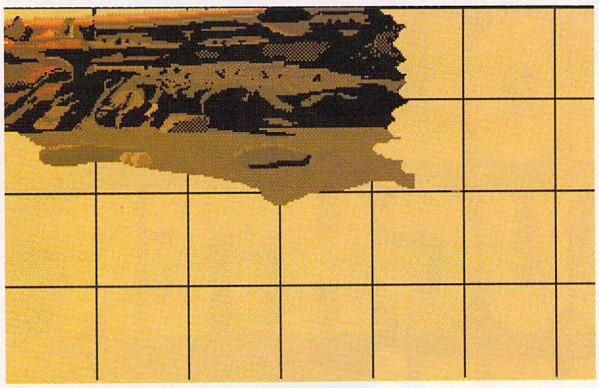
And above all, don't panic! Although it's difficult when you've been infected, remain clear headed. You don't have to bin all your disks, trash your hard drive and lose all your programs and data. With a bit of time, effort and common sense, any virus can be eradicated! ●

WHOLESALE SLAUGHTER - FREE!

That's right, create your very own killing fields with CRL's Virus Killer. We've got 50, yes 50, copies to give free to lucky boys and girls who can answer this simple question.

In 1903, Heinrich Schroder discovered the theory of latent plasto-mechanical molecular change using plasma-driven surface stretch compositions. What were Heinrich Schroder's initials? Answers - and your name and address - on a postcard (or stuck-down envelope) to...

LORDY! ANOTHER TUMULTUOUS ATARI ST USER COMPETITION, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP.

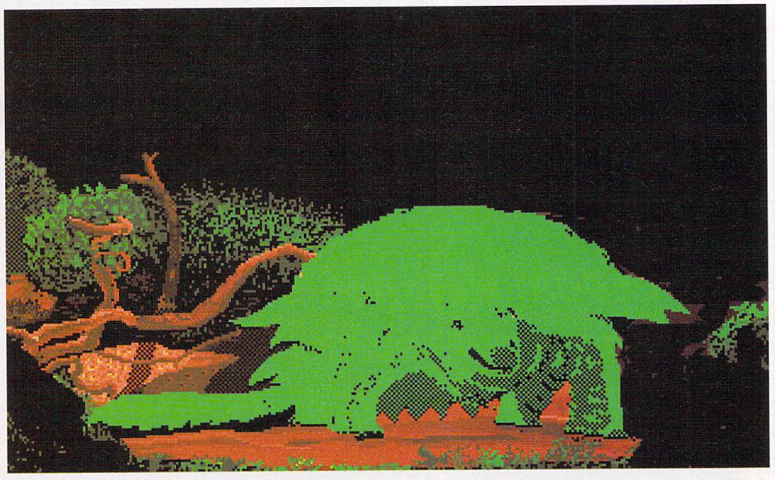


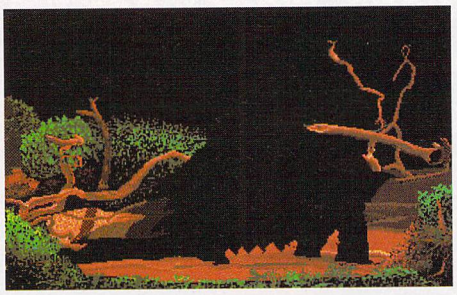
1 LEFT: Select a palette, draw a grid, then start painting the background

2 RIGHT: Here's the completed background scenery



3 BELOW: When you create the background, draw the other parts using a single colour then paint around them (erase them when you've finished)





4 LEFT: The completed foreground with the main object blanked out

5 BELOW: The main foreground subject is now drawn in detail

6 RIGHT: The finished picture after all the different elements have been

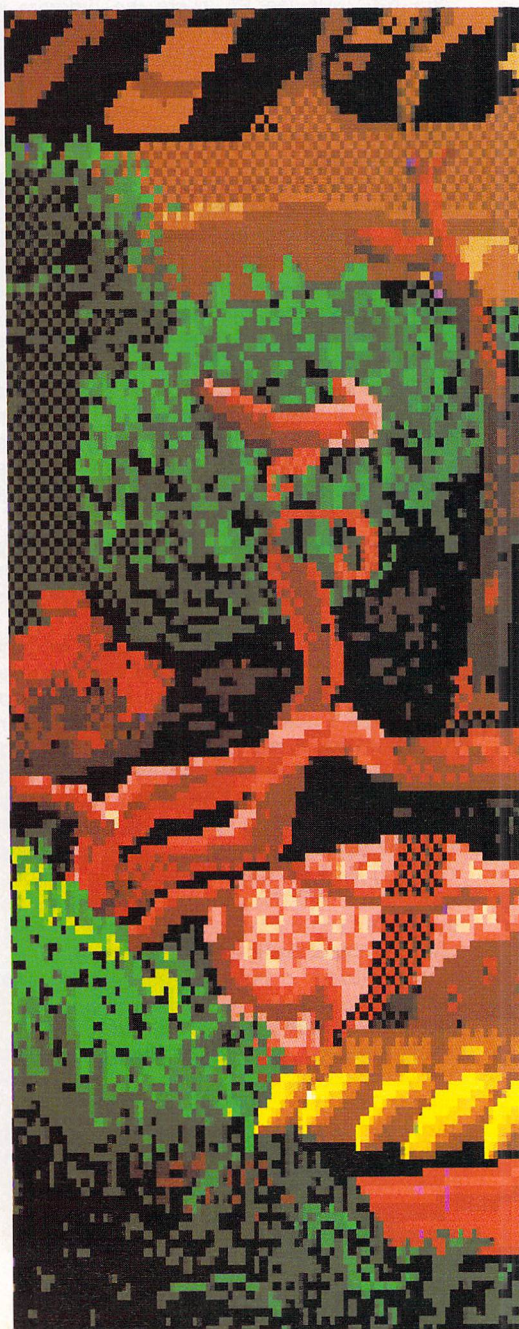


There are over a dozen superb painting packages for the ST each with advantages and disadvantages. I like pictures created with Antic's Spectrum 512 because of its ability to show the ST's full range of colours on one screen. Unfortunately, it's not the easiest of packages to get to grips with and this makes painting a complex picture using its extended palette facilities a chore rather than a pleasure.

For ease of use, I prefer Degas Elite's powerful tools and flexible menu system, but the program's main fault is that it can only display 16 colours in lo-res screen mode. My ideal package would offer the best of both worlds by combining Degas Elite's easy-to-use interface and drawing tools with Spectrum 512's enormous range of colours.

There is however, a way to do it and that's to use the following method. First make a rough sketch of the picture and then cut it into sections. One of these could be the foreground, then there's the background and perhaps a main subject, too. Each of these sections is drawn using Degas Elite and then parts are slotted together just like a jigsaw puzzle using Spectrum 512.

First boot up Degas Elite. Each part of the picture can have its own colour palette, so choose your palette of 16 colours from the ST's 512 and draw the background. Objects



ART-WORK!

in the foreground should be sketched as silhouettes to give you a rough idea of where they will appear in the finished picture.

Drawing a grid on screen may also help you with the layout and positioning of the picture's pieces and the process can be repeated for foreground objects.

Clear the Degas screen and select another 16-colour palette. Now draw the next part of the picture. Repeat this procedure with the main subject or next section.

The more sections you create (each with its own palette) the more colourful the finished picture will be.

When all the parts have been drawn, quit Degas Elite and boot up Spectrum 512. Load each part (it will load Degas PI1 picture files) and paste them into the buffer. Now erase the painting area and begin the jigsaw puzzle!

Working from back to front, (the part of the picture furthest away from your view), cut out the background from the buffer and paste it onto the drawing area.

Cut out the next furthest-away part, and slot that into the correct position in the drawing area.

Continue working towards the viewer while adding parts, until all the different bits have been pasted onto the drawing screen.

When you block copy sections, make sure the drawing mode is set to 'OR' to achieve a transparent effect, otherwise you'll blot out the previous piece of the jigsaw.

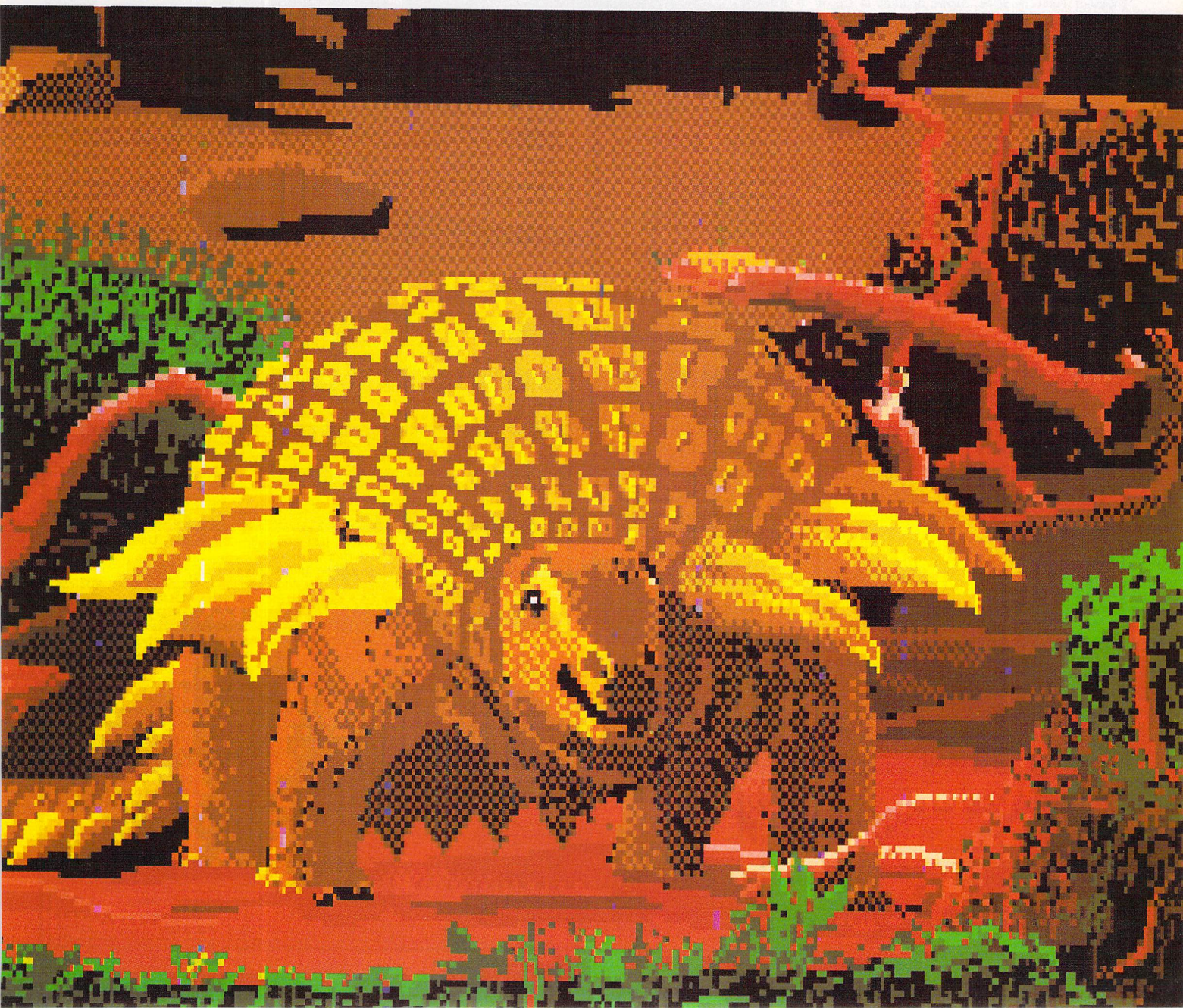
And now the only task left is to make any final alterations using Spectrum 512's tools. Finally, the last and most satisfying step: stand well back, take a deep breath and admire your handy-work.

YOUR MAN WITH THE PAINTBRUSH...

German artist Henrik Schroder first became interested in computerised artwork on the Spectrum. Unfortunately, Henny didn't send us a picture so close your eyes tightly, think about Wartburg knights, VWs and The Wall and when you're in suitably German mood, a likeness of his face may come to you...

PIXEL PUNCHERS SIGN HERE...

HAve you created a stunning image using obscure tricks and wrinkles? We want to see it. Each month, a lucky artist will receive their very own exhibition on these pages. Send at least six images (a finished image and several 'stages') with brief notes detailing how the effects were achieved. Oh! And tell us a little about yourself and include a picture, OK?



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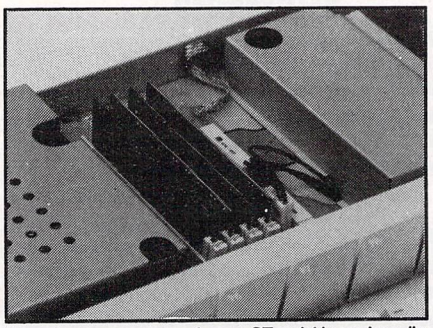
Buy with confidence from one of the longest established companies in their field, with a reputation for good service and prices. We have invested heavily in a computer system to enable our Telesales staff to provide up-to-the-minute stock information, coupled with highly efficient order processing. Our fully equipped Workshop enables us to carry out almost any repair on our premises. We feel sure that you won't be disappointed if you choose Evesham Micros.

NEW

SOLDERLESS MEMORY UPGRADES FOR ANY ST



- ✔ Fits Any pre-STE Machine in Minutes !
- ✔ Uses SIMMS RAM Modules for Effortless Upgradeability
- ✔ Probably the Neatest ST RAM Upgrade available !

Upgrade the memory of your ST quickly and easily with our new, fully software compatible RAM upgrade board. Designed for pre-STE machines, the unit accepts SIMMS slot-in memory modules, making RAM fitting simplicity itself. *No soldering required! No electronics knowledge needed!* Available with or without RAM modules. Allows upgrade in stages of 1Mb, 2.5Mb and 4Mb, as and when necessary. Straightforward installation - full instructions provided.

RAM Upgrade Kit with board unpopulated	£59.95
RAM Upgrade Kit With 512K RAM installed: upgrades a 520 ST to total of 1Mb RAM	£99.95
RAM Upgrade Kit With 2Mb RAM installed: upgrades a 520 1040 Mega ST1 to 2.5Mb	£199.00
RAM Upgrade Kit With 4Mb RAM installed: upgrades a 520 1040 Mega ST1 to 4Mb	£339.00

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Prices include VAT, delivery and cable

Star LC10, inc. 2 extra black ribbons	£159.00
Star LC10 colour, inc. 2 extra black ribbons	£209.00
Star LC10 Mk.II improved speed 180/44 cps	£199.00
Star LC24-10 24 pin, excellent value	£239.00
12 months On-site Maintenance included with all Star FR and XB models: also available for any other Star printer for only £7.95 extra !	
Star FR-10 9pin 300/76cps 16 NLQ fonts	£399.00
Star FR-15 as FR-10, wide carriage	£499.00
Star XB24-10 24pin; 4 SLQ, 25 LQ fonts	£499.00
Star XB24-15 as XB24-10, wide carriage	£649.00
Star Colour Upgrade unit for XB or FR models	£ 39.00
Star SS10DM c/s/feeder for FR10/XB24-10	£100.00
Star SS15DM c/s/feeder for FR15/XB24-15	£170.00
Star LC15 wide carriage vers. of LC10	£329.00
Star LC24-15 wide carriage vers. of LC24-10	£409.00
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Olivetti DM100S 9 pin printer 200/30 cps price includes 1 year on-site warranty !	£129.95
Olivetti cut sheet feeder for DM100S	£79.95
Olivetti PG-306 laser; 512K RAM, HP compatible	£976.35
Olivetti PG-306 as above, with PostScript fitted	£
Epson LX400 budget 10"	£159.00
Epson LQ550 10" 24pin	£349.00
Epson LQ400 (like LQ550 model above)	£229.00
Panasonic KXP1180 multi-feature 9 pin	£179.00
Panasonic KXP1124 24pin printer	£259.00
Panasonic KXP1624 24pin wide carr. printer	£399.00
Panasonic P37 cut sheet feeder for KXP1180	£ 95.00
Panasonic P36 cut sheet feeder for KXP1124	£109.00
NEC P2+ 192/64cps multifont	£289.00
Hewlett Packard Deskjet Plus	£595.00
Hewlett Packard Laserjet III fine 300dpi laser	£1595.00

ATARI

Our Atari ST prices include mouse, user guide, etc., PLUS 5 disks of Public Domain software including 'Neochrome' graphics utility, 'First Word' wordprocessor, games, graphics and utilities.

520 STFM 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:

STOS Game Creator, Carrier Command, Space Harrier, FirST BASIC, Outrun, Bomb Jack, Neochrome, Atari ST Tour
plus 'Discovering your Atari ST' Book

£259.00 Inc. VAT & delivery

Also available with 1Mb RAM fitted for only £339.00

520 STE POWER PACK

Includes the latest 520STE with 1Mb drive, joystick, mouse, user guide, 5 disks of public domain software, plus an incredible selection of chart-topping software (£500 RRP) ! Software included is:

R-Type, Afterburner, Double Dragon, Super Hangon, Space Harrier, Overlander, Pacmania, Starglider, Super Huey, Eliminator, Predator, Bombjack, Out Run, Bombuzal, Xenon, Gauntlet II, Black Lamp, Starray, Nebulus, Stargoose, First Music, First Basic, Organiser

£339.00 Inc. VAT & delivery

520 STE Power Pack with 1Mb RAM installed £388.00
520 STE Power Pack with 2Mb RAM installed £484.00
520 STE Power Pack with 4Mb RAM installed £629.00

1040 STE Professional Package

Superb starter package, consisting of a 1040 STE with an excellent selection of starter software. Pack includes:-

Kuma Wordprocessor, Kuma Database, Kuma Spreadsheet, Kuma Business Graphics, FirST BASIC, Hyper Paint, 'Prince' game, STAC Adventure Creator

£429.00 Inc. VAT & delivery

1040 STE Professional Pack with 2Mb RAM installed .. £574.00
1040 STE Professional Pack with 4Mb RAM installed .. £719.00

Atari Mega ST1 with SM124 monochrome monitor (1Mb RAM)	£599.00
Atari Mega ST1 as above with SM124, upgraded to 2Mb RAM	£789.00
Atari Mega ST1 as above with SM124, upgraded to 4Mb RAM	£929.00
Atari Mega ST2 with SM124 monochrome monitor (2Mb RAM)	£849.00
Atari Mega ST4 with SM124 monochrome monitor (4Mb RAM)	£1099.00

ATARI ST ACCESSORIES

MONITORS & ACCESSORIES

Atari SM124 Monochrome Hi-Res Monitor	£99.00
Atari SC1224 Colour Medium Res. Monitor	£269.00
Philips CM8833 Colour Monitor with stereo sound, includes cable	£259.00
Monitor Switch Box - for connection of both colour & mono monitors	£13.95
Philips TV Tuner AV7300 for monitors with composite input	£74.95

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Atari Megafile 60Mb Hard Disk	£589.00

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520/1040 STE upgrade kit to 2Mb, inc. 2x1Mb SIMMS modules	£145.00
520/1040 STE upgrade kit to 4Mb, inc. 4x1Mb SIMMS modules	£290.00
520 STFM 1Mb RAM upgrade kit, requires soldering	£59.00
520 STFM 1Mb RAM upgrade, fitted by us	£84.00
Mega ST2 RAM upgrade to 4Mb, fitted by us	£200.00

VIDEO DIGITISERS

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Kempston DAATAscan 105mm/200dpi handy scanner package with scan window and control button. Comprehensive software facilities	£229.00

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PC-Speed Hardware PC emulator; fast and fully compatible. Uses the ST's RAM for operation. Includes software	£215.00
Supercharger Hardware PC emulator: unit features NEC V30 processor & 1Mb RAM. MDA & CGA video. Simple to install	£339.00
Spectre GCR Macintosh emulator package. Includes Mac ROMS	£369.00

MISCELLANEOUS

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Contriver Hi-Res Mouse package, superb value; includes pocket & mat	£22.95
Naksha Mouse package (also compatible to Amiga & Amstrad PC)	£28.95
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Allows connection of both Colour Monitor and Monochrome Monitor to the ST at the same time, without the need for unnecessary plugging and unplugging. Toggling the switch conveniently activates a reset to the computer, since changing from Low/Medium resolution to High resolution (or vice-versa) mandatorily requires the computer to be re-booted. Excellent low price !

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- Uses 6 x AA batteries (not supplied) or AC adapter (supplied)

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GFA BASIC Compiler	£22.50
GFA BASIC Version 3	£37.95
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MISCELLANEOUS

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Epson Emulator for Atari SLM804 printer	£29.95
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"... a very smart looking drive indeed ... a very slim and quiet device ... it is very keenly priced too."

- ST WORLD, September 1989



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With its dedicated monitor input, this model combines the advantages of a high quality medium resolution monitor with the convenience of remote control Teletext TV - at an excellent low price !

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- ✔ SCART Input/Output Connector
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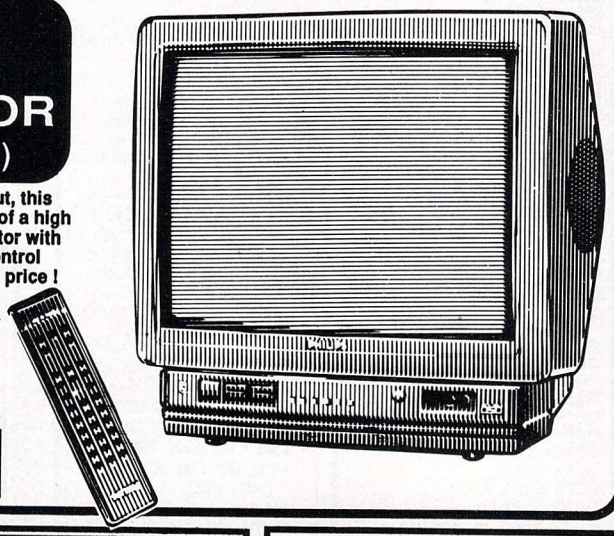
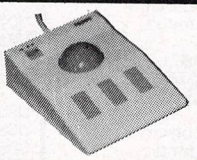
- ✔ Headphone private listening jack
- ✔ External aerial input (aerial supplied)

£269.00 inc. VAT, delivery & cable



KRAFT TRACKBALL



Very high quality trackball, directly compatible to any ST, Amiga or CBM'64, plus many others. Operates from the mouse or joystick port, and features selectable drag / autofire button for versatility and better action. Left or right hand use, with total one handed control. Top quality construction and opto-mechanical design, delivering high speed and accuracy every time. No driver software required!

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Atari ST Tricks and Tips	£14.95
Atari ST Introduction to MIDI Programming	£14.95
Atari ST Disk Drives - Inside and Out	£16.95
Concise ST 68000 Reference Guide (Version 2)	£17.50
First Steps in 68000 Assembly Language	£ 9.95
GFA BASIC Advanced Programming Guide	£11.95
GFA BASIC V3 Software Development	£14.95
Your Second Manual	£14.95

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We can now offer fixed price repairs on any ST computer. Our price is inclusive of return postage, and covers any fault occurring in normal usage, including disk drive problems. We reserve the right to refuse any machine that we consider to have been damaged other than in normal use, eg. substandard repair work, lightning and physical damage - these will be quoted for separately.

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G102 - ST-umped - Cricket
G049 -Tennis Simulation
G086 -1st Serve Tennis
G103 -Top of the Pops
G104 -Bermuda Race 2
G105 - Joke Selection
G100 -Slalom, Galactic Ranger, Widow maker
G114 -Skidpan - Racing
G116 -Chunnel - French Tutor Game
G072 -Bumper Jack
G056 -Empire Builder, Jumpster, Lost Treasure
G045 -England Team Manager
G019 -ST-Vegas
G011 -Give Us a Break
G039 -Heads and Hammers
G043 -Treasure Search
G079 -Monkeys + Balloons, Spectral Sorcery, Racing.
G070 -Space Baller, System 5
G061 -Stocks and Bonds
G071 -Rush
G081 -Money Run, Atari Wars, Wall War, Twisty
G040 -Bunny Hunt (not STE)
G018 -Floyd the Droid
G001 -Pacman, Laserchess, Windball, Royale
G002 -Strip Breakout
G020 -Lunar Lander, Spacewar
G031 -Megaroids, Star Battle, Time Bandit
G017 -Cribbage, Minigolf, Pickpocket, Quiz
G077 -Motorbike, Blackjack, Patience
G003 -Azarian, Bridge, Baller
G007 -Cubemaze
G027 -Backgammon, Yahtzee, Stone Age Deluxe
G033 -Cube World
G042 -Rebus, Blockade
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G058 -Dungeon Master Levels
G059 -Horoscope
G068 -Ayatolla
G069 -Upstart
G082 -Yahtzy
G083 -Companion
G010 -ST Invaders, Barnyard, Happy 4, Star Trek
G074 -Tunnel Vision, Patience
G109 -Fruit Machine Simulator (not STE)
G110 -Company (not STE)
G111 -Masterbreak, Battleships, Escape
G112 -Slider
G099 -Addiction

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G087 -Tark
G085 -Snatch + Crunch
G084 -Elven Crystals
G095 -AGT Companion Disk
G096 -Dudleys Dilemma
G078 -Time Adventure
G054 -Tombs of Death
G055 -HERO- Dungeons and Dragons
G057 -DDST-Dungeons and Dragons (SH)
G052 -Invasion
G053 -Assassin
G075 -Nethack (DS) (1 meg)
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G040 -Asylum
G037 -Under Berkwood
G015 -King Text Adventure
G006 -Darkness is Forever
G012 -Colossal Cave Adventure
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G034 -HACK - the original version
G035 -Eamon - Fantasy Role playing

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G097 -Hi Tec Trivia, Chordmaster (not STE)
G014 -Anduril, Runners Revenge
G021 -Pacman, Puzzle
G029 -Space Invaders, Chess, Arkanoid
G062 -Arkanoid Construction Kit
G063 -Around the World in 80 Days
G064 -El Bozo, Sherlock, Squixx, Happy 4
G067 -Pentimo
G076 -Shanghai

EDUCATION

G09 -Spelling Made Easy (not STE)
G016 -Maths Made Easy (not STE)
G080 -Speller (not STE)
G022 -Kidpotato, Kids ABC, Kidsketch, Kidstory
G023 -Kidsong, Numeric Go Round, Kidpublisher, No Maze
G041 -Kidmusic, Kidpiano, Kidgraph, Kidgridz
G036 -History File (3 disks)
G094 -Colouring Book
G098 -Shipwrecked - Maths, Hangman

EDUCATION PACK 1
5 DISKS ONLY £10.99
Lots of educational program for the youngster. Includes Kidpotato, KidsABC, Kidsketch, Kidstory, Kidsong, Numeric Go Round, Kidpublisher, Number Maze, Kidmusic, Kidpiano, Kidgraph, Kidgrid 2, Colouring Book, Shipwrecked, Hangman

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M009 -TX812 Voice Editor
M010 -FB01 Voice Editor
M008 -MT32 Editor (Demo)
M003 -Casio CZ Ed/librarian
M005 -CZ Voices + Librarian
M029 -Kawai K1 Ed/Librarin
M027 -Music Studio Player
M028 -50 New Quartet Sounds
M014 -Midi Channel Scope (mono)
M017 -DSO Librarian
M015 -Synth 50
M016 -Composer
M018 -Sampled Sounds + Player
M021 - Music Writer (mono)
M022 -Piano
M023 -Stacatto
D014 -EZ-Track demo
D018 -Steinberg Pro 24 demo (mono)
D029 -Quartet + Replay Prof Demo
D062 -Mastersound Demo

BUSINESS

U009 -1st Base- Database
U012 -DB Master - Database
U013 -Datahandler - Database
U036 -Card ST-Database
U039 -WG Data - Database
U072 -TCOS-Graphical Database
WP01 -ST Writer Elite
WP02 -Mailmerge, Spellchecker, Word Counter
U017 -Home Accounts
B031 -Electronic Bank Statement
U030 -ST Sheet- Spreadsheet
U078 -Sheet V2-Spreadsheet (DS)
U034 -Double Sentry Accounts (SH)
U041 -Typing Tutor
U082 -Typing Tutor
U040 -Inventory Pro
U042 -Opus 2000 - Spreadsheet (DS) (SH)
U056-Word 400
U070-Address Book
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A005 -Public Painter
A009 -Vangogh, Studio 2
A010 -Pubishing Partner Fonts
A012 -Pearle-3D Raytracing
A013 -Printmaster Library Disk
A019 -Easytext + Demo
A020 -Fractal Zoom
A021 -Simple Draw
A022 -Electrical Planning (mono)
A023 -Movie Constructor/Face animator (mono)
A024 -ANI-ST
A026 -Doodle
A029 -Flexidump Demo
A030 -JIL CAD (mono)
A031 -ST CAD
A032 -Hyper-Text
A033 -Canvas, GFA Raytrace - useable demos
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P030 -STOS Example Programs
P022 -STOS STE Upgrade
P008 -C Tutorial (3 disks)
P017 -C Programs
P019 -Sozobon C
P020 -C Compiler
P015 -68000 Assembler
P012 -Disassembler, Tiny Basic, C Compiler
P000 -TOS 2 - Old Op. System
P001 -ST Basic Programs
P011 -ST Basic
P003 -GFA Basic Programs
P028 -Fast Basic Programs
P014 -Gem Information
P021 -Pascal Compiler
P025 -Pascal Programs
P026 -Pascal Information
P005 -Adventure Writing System
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U074 -Speech Synthesis
U068 -Geneology (shareware)
U083 -Neugen-Geneology (shareware)
U075 -Film file- lots of info
U065 -Planets - guided tour
U045 -Planetarium
U084 -Amateur Astronomers Guide to the Night Sky
U053 -Orbit-Satellite Tracking
U060 -Welcome to Chemistry
U064 -Chemistry
U081 -Patcard-Knitting Patterns
U054 -Assistant Chef
U043 -Starnet, Mini BBS
U048 -Citadel BBS (DS)
C008 -Vanterm - Communications
C003 -Packet/RTTY System
C004 -Morse Tutor
C011 -PK232 Fax

STE DEMONSTRATIONS

D074 - STE Atari France
D069 -STE - Sound Off
D065 -Movie STE
D066 -Boing STE (1 meg)
Do67 -Fantasia (1 meg)
D068 -3D Scroller (1 meg)
D084 -ACID (1 meg)

PRODUCT DEMOS

DO41 -Flair Paint
D036 -Calamus (DS) (1 meg)
D015 -Autoroute
D077 -Personal Finance Manager
D012 -Superbase Personal
D058 -Funschool 2 (2 DISKS)
D012 -STOS Demo
D024 -K Spread 2
D030 -Space Ace

GENERAL DEMOS

DB20 -Mindbomb
D056 -Predator
D054 -Robocop (2 disks)
D038 -Union Demo
D071 -Selver Demo
D075 -Elvira Demo
D073 -Star Wars
D057 -Snowman Demo
D052 -Hard Driving
D016 -Spitting Image
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B3 -Blitz III
B4 -Othello
B5 -Pro-Darts
B6 -Dr Boris
B7 -Ballzone
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B10 -Moneyspinner
B11 -Maelstrom
B12 -Ace Invaders
B13 -Zenith
B14 -Goldrush
B15 -Perils of Penfold
B16 -Word Puzzle Generator
B17 -Make A Break
B18 -Parabellum
B19 -Tri-Heli + Cosmoss
B20 -Operation Angelica
B21 -Impulse
B22 -Bandit
B23 -Space Blob
B24 -Slippery Sid
B25 -Scary
B26 -Subhunt + Sea Fisherman
B27 -Death Camp
B28 -Psycotic
B29 -Carrier Attack
B30 -Quest for Galaxia
B32 - Runaway
B33 -Sprite Master
B34 -Safe as Houses (Monopoly)
B35 -Crystal Caverns
B36 -Dogfight, Lightcircles
B37 -Mr Dig, Tank Battle
B38 -Inferno
B39 -Onyx
B40 -Crosswords
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B42 -Dizzy Lizzy
B43 -Bounty Hunter
B44 -Exterminate

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The above illustrates a small selection from our catalogue. Many of the disks are also available as double sided compilations - please see our catalogue or ring for details.

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1 MEG -1 meg of memory required
MONO -High resolution **NOT STE**-Not STE compatible

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PUBLIC SECTOR

'USER's new staff writer gets into the free software like a hot knife through Butters...

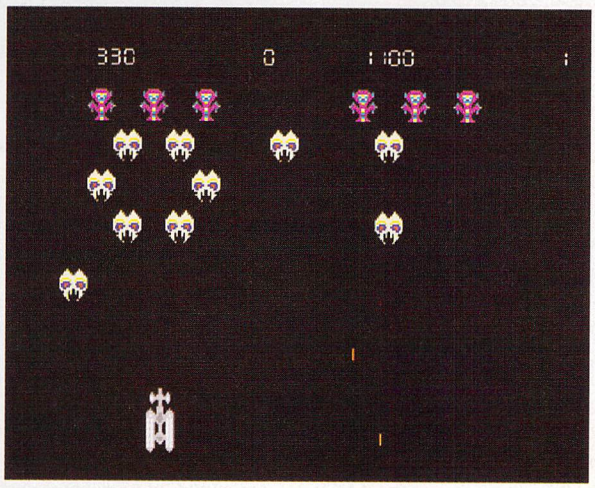
RETURN OF THE LITTLE GREEN MEN

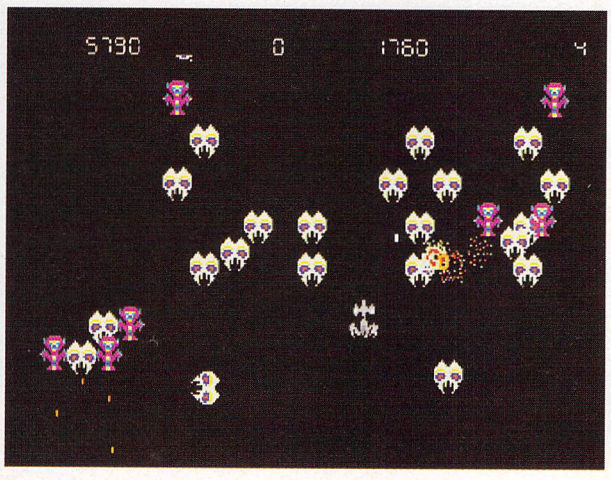
Many years ago, in the days which only the Editor can remember clearly, a computer giant rolled out the first simple but addictive arcade machine known as Pong. Followed by hundreds of others it spawned a whole new entertainment medium and today, there are games such as Afterburner flying around amusement arcades. The old ones are still the best ones however - how many of you don't sneak off for a quick game of Space Invaders when passing an inviting seaside arcade?

Bellum from Paul Bocij (charity Micro Care '90 disk) is best described as a cross between Space Invaders and Galaxians. You know the scenario, aliens cavorting hither and thither and you straining every sinew to kill them!

The main difference is in this version, you don't get three ships at the start. You're given one large ship, but as enemy bullets hit you the big ship will shrink until eventually, you're left with nothing more than a sweaty joystick and an empty poke.

Bellum is the most addictive shoot-'em-up for a long time including commercial offerings (where you'd expect to pay five times the price).





ABOVE: Looks fun eh?
BELOW: Why me?

news

pdl

• New from Paul Bocij (0332 367642) is Micro Care '90. Bocij claims the disk is the first charity licenceware product to be released, with at least 50 pence of the £2.99 asking price going to Child Concern, a Derby-based charity. Micro Care '90 is double-sided and contains useful utilities and games. Find out more about two of them in this month's column. Paul hopes to release more ST disks later in the year. Profits from each new product will be donated to a different charity.

pdl

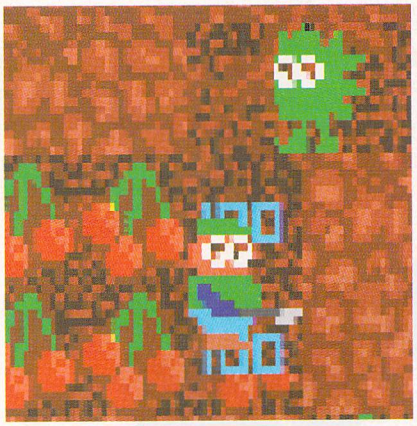
• STE demos are finally beginning to fill the disk boxes around the 'USER office. Many hail from Down Under but don't rush to turn the sound down - there's no din from Kylie or Jason.

The best demo I've seen in the last couple of weeks Fantasia, plays The Cure's In Between Days while rotating shapes such as the Atari logo around the screen. Press the spacebar and you can twist and turn them yourself - thrilling stuff.

pdl

• Rumours are surfacing regarding incompatibility problems with some new STs, following claims by a recent Discovery Pack buyer that the public domain game Spook won't run on his newly-acquired STFM. The problem's been reported previously with the STE, and the word is the machine may have a new version of TOS, making it the same as the STE (that would explain it). Only rumours at the moment however, but if Atari's messed up again we'll tell you about it on the news pages.

RETURN OF THE LITTLE GREEN MEN #2



Joystick still glowing, I couldn't resist telling you about another little gem I found on the Micro Care '90 disk. Claimed to be a clone of Mr Do, it's pretty good. You take on the persona of Mr Dig and dig your way around the screen collecting cherries, gems and letters to increase your score - that's the easy part.

The difficult part is doing this without getting eaten alive by one of several little green monsters intent on homing in on you. Gameplay is very simple and there's nothing out of the ordinary. What is rare though, is another PD game has had me glued to the ST through an entire lunch break.

Buy this game only if you're someone who has plenty of time aside for game playing, I can guarantee you'll need it.



'USER Health Warning: Mr Dig can seriously waste your life



KNOW EUROPE

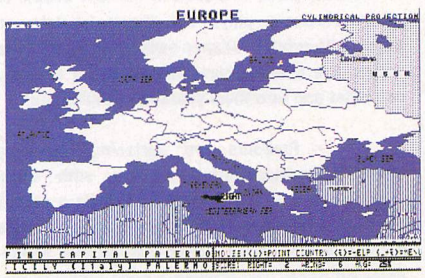
Much fuss is currently being made of that wonderful year 1992. It's when we're all supposed to give up our nationalities and become simply European.

For now though, we all live in our own countries with our own language, currency and capitals. But what do we know about the rest of Europe? Well I passed Geography 'O' level thinking that was enough to get me through life but now, I'm having second thoughts.

A mouse-controlled demo from the USA known rather austerely as Geography, puts your knowledge of Europe to the test. A map showing all its countries' borders is drawn on-screen and you're given the choice of two types of question to answer.

The first gives you the name of a country and you have to point to the country on the map, the other names a capital and you have to select its country. Both gave a tough ride and I certainly wouldn't brag about my results around the office. Geography is comprehensive but always seems to test you on the islands in the middle of nowhere with a population of less than 10, and the states of the Soviet Union which many Soviets probably haven't heard of!

Geography however, is fun and educational. Goodman Enterprises amongst others has the program on disk GD642.



Are you ready for 1992?



RIGHT WRITER

Atari's ST Writer is the word processor which sees most use around the 'USER office. With all the popular options you'll need in day-to-day word processing such as tabs, search and replace and mail merge and although not a new program, ST Writer simply can't be overlooked by any PD column, especially considering its latest incarnation, version 3.8.

ST Writer will run in low, medium or high resolutions. After booting, you'll be presented with a simple menu, from where you can save, load and print files, index disks and even swap screen colours. And although the program is command line driven, you can click a mouse front end to increase ease of use.

At the bottom of the screen there's a narrow strip which provides an indication of free memory, the position of the cursor in the document and where each tab is positioned. Unfortunately, ST Writer doesn't have word count facility. For journos and full-time writers, a word count is probably the most important part of a word processor. But the majority of home users only use their software for knocking out a weekly shopping list or writing hate mail to 'USER, so the lack of a word count won't be too much of a disaster. If you do need one there are various word counting utilities around which will count the words in a document.

```
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
                     QUIT

SELECT LETTER ■
```

Everything's labelled clearly in the main menu

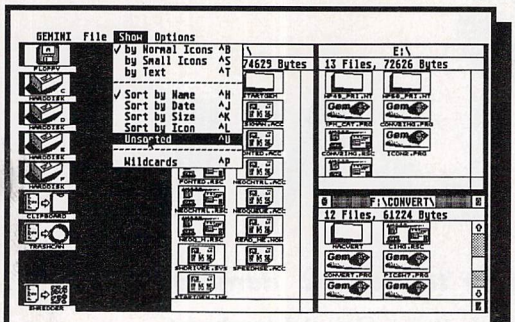
```
Right writer<
<
Atari's ST Writer is the word
processor most of us having chugging
away in the corner of the 'USER
office. It has all the common options
that you'll need in normal day-to-day
word processing such as tabs, search
and replace and mail merge and
although not a new program can't be
overlooked by any PD column.<
<
    Now in version 3.8 ST Writer will
run in either low, medium or high
resolutions. When loaded you'll be
presented with a simple menu, from
where you save and load files, index
....^....^....^....^....^....^....^....^....^
Free:    724007 Line:  16 Column:  7  I
Press ESC to return to menu.
```

Is there any reason why existing users should upgrade to version 3.8? It really depends which version you're using and on what machine. Certain earlier versions have problems with the search and replace function. This has been cured in 3.8 (and made up to 60 times faster - so it's claimed).

Like many commercial programs ST Writer now asks you to confirm a filename before overwriting a file of the same name. This is a nice touch but if you're a careful user anyway can become a little tedious. Changes include full compatibility with the TT and the superbly ST-compatible STE which until now, had some minor problems with screen colours.

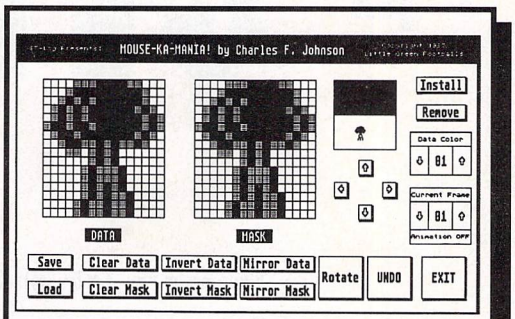
You'll find ST Writer in most PD libraries, mine came from Goodman Enterprises (GD17) and was one of the programs with a word counter on the disk.

The edit screen, where you type and edit work

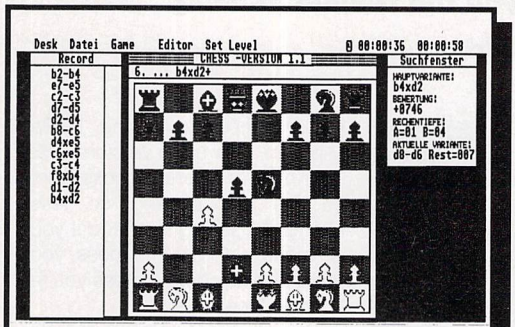


GEMINI – NeoDesk type replacement desktop – ACC87

Britains No.1 PD & Shareware Service



Mouse Pointer Editor – ACC69



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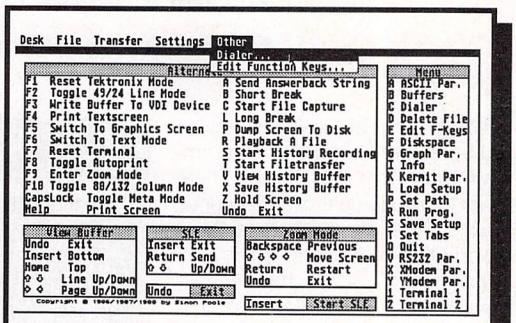
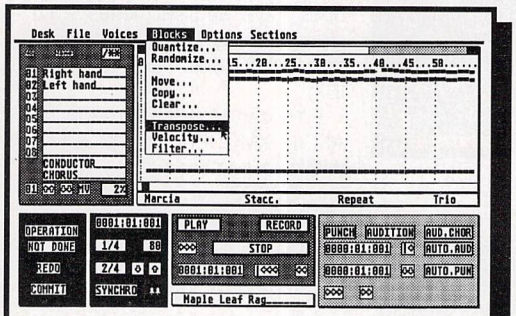
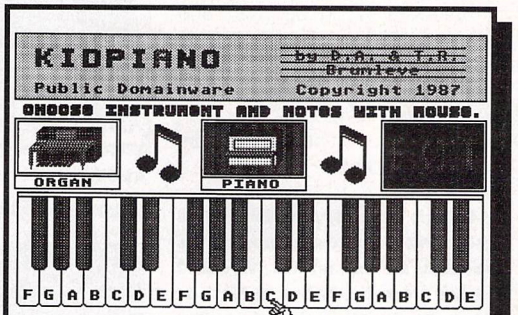


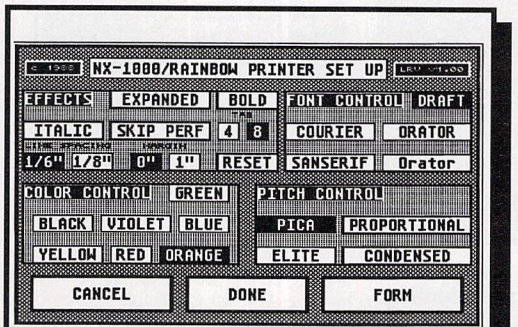
UNITERM comms package – COMS3



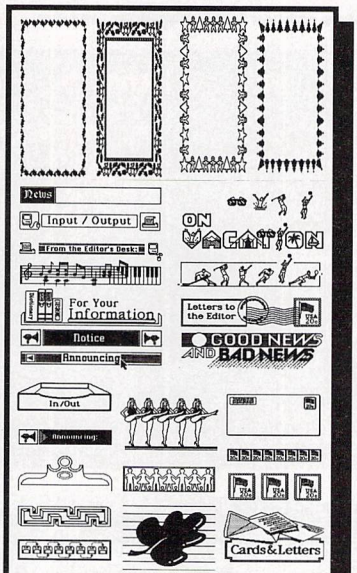
16 Voice Sequencer – MUS36



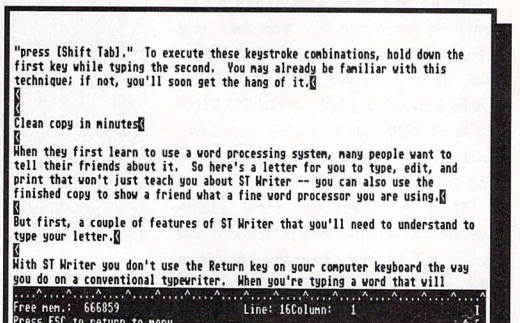
KIDGAMES for youngsters – GAME11



Star LC10 Colour setup – ACC64



ClipArt Pack – 5 disks – £12



STWRITER v3.8 word processor – WP12

Word Processor, Database, Spreadsheet, SpellChecker and Utilities.

BUSINESS PACK
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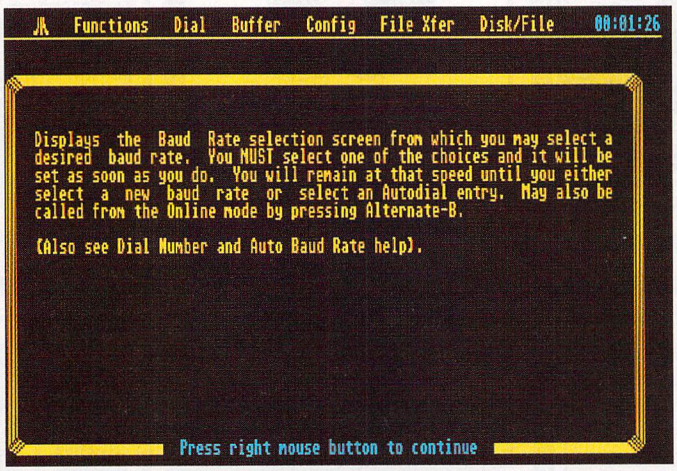
pd

GETTING ON LINE

There's a fair amount of comms programs in the public domain. Some should be avoided, but some are so good, they should be kept permanently beside the modem. This month I've bought shares in BT and doubled 'USER's phone bill. To save you the trouble of doing the same, here's the cream of the comms world.

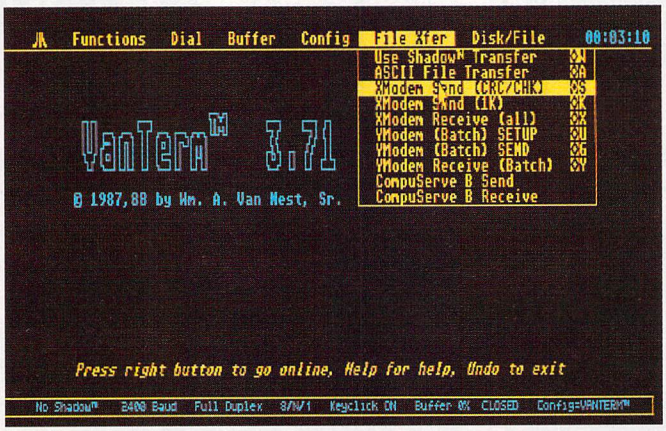
• At the top of the list is version 3.8 of the shareware program, Vanterm from the States. There are mouse-controlled menus which are easy to understand and GEM-based help which provides some of the best in-software help around. Click on help in a drop-down menu, then select the subject you wish to know more about and you'll get all the information.

Baud rates go up from 300 through 1200, 2400 and 9600 up to a maximum file transfer speed of 19200. As well as setting communications protocols you can also set the on-screen colours and time and date.



ABOVE: Vanterm's on-screen help is the best

BELOW: Everything's chosen from drop-down menus

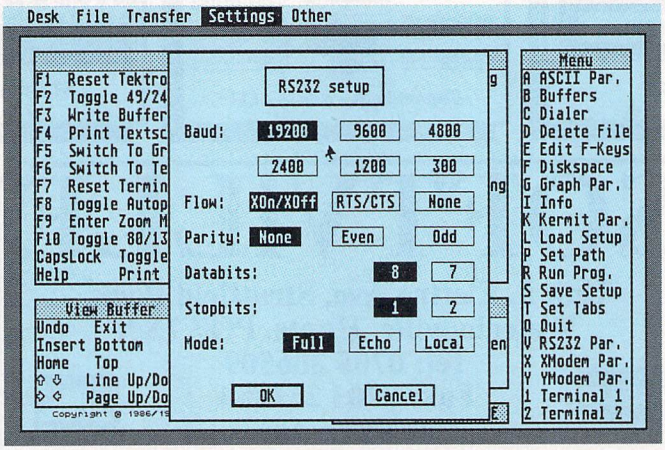


• Uniterm is widely considered to be the ultimate PD comms program. Its facilities are unparalleled. Version 2 of the program contains at least as many, if not more, options than many of the £50 commercial packages.

Like Vanterm, Uniterm's baud rates start at 300 and work their way in steps up to 19200. This speed would only be used for file transfers and these can be done by choosing from any of the popular file transfer formats including ASCII, KERMIT, XMODEM or YMODEM from the drop-down menus. Unfortunately, the only missing protocol is ZMODEM.

Tired of typing the same phone number, ID and passwords when going on-line? If so, you can make full use of the auto-dialler, phone book and keyboard macros set up on function keys. An on-screen manual isn't quite as well written as Vanterm's but even so, it's easy to understand and manages to guide the newcomer through the pitfalls of the software.

The main, and possibly only, drawback that I could find was that Uniterm doesn't include a Viewdata mode. Uniterm is certainly worth adding to your PD collection and can be had from most popular PD libraries on MT Software's disk C1.



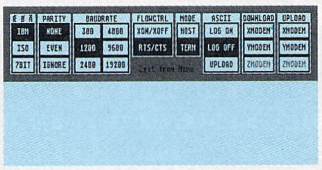
RIGHT: File transfers break the sound barrier at 19200

• For simplicity nothing beats Miniterm, now up to version 9.29. There's very little to choose from on the menus and so less chance of getting lost. And if you do manage to get in a mess, you won't find any help (unless you're fluent in Norwegian!).

The program originates in Oslo and unfortunately, accompanying documentation hasn't been translated, although the program does have English menus. One strange thing I noticed was to select 8-Bit you have to select IBM.

Files can be transferred using ASCII, XMODEM or YMODEM. With two additional files, RZ.TTP and SZ.TTP on the disk, you'll be able to have what everyone in town's taking about, ZMODEM.

Running the program as a desk accessory enables you to get files without leaving the program you're working in. Miniterm does a fine job for everyday connections across the airwaves.



New menu options lead to simple use

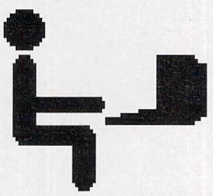
WHERE TO GET IT...

• Paul Bocij, 19 Moore Street, Normanton, Derby, DE3 6SN.

•Goodman Enterprises, 16 Conrad Close, Meir Hay Estate, Longton, Stoke-on-Trent, ST3 1SW.

•MT Software, Woodstock House, 14 Lanes End, Totland, Isle of Wight, PO39 0AL.South West Software Library, PO Box 562, Wimborne, Dorset, BH21 2YD.

Pdom PD Atari Public Domain & Shareware Software



Miscellaneous

L1 – 68000 Assembler, Xlisp, STlogo, Tiny basic.
L8 – Forth from Bradley Firmware. A fully functioning implementation of FORTH.
L9 – ST ICON v6.3, based on SNOBOL4. Complete manual.
L10 – Little Smalltalk. Incudes Smalltalk language, full manual, example progs. and editor.
L13 and L14 Modula–2 Development System v1.0 from ANA–systems.
L15 – Sozobon C Compiler. A complete implementation of the C language as defined by K&R. DSD.
M9 – Music Writer lets you create music on screen as good as Music Studio.
M15 – The Accompanist 16 Voice MIDI Sequencer. Fully working by Henry Cosh, does everthing!
M18 & M19 – Soundtracker player and SoundTracker modules converted by BOB from the Amiga.
M20 – Soundtracker player & modules from the Amiga. Also docs & source in 68000 and GFA basic on formats.



Games

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B39G88 – Onyx by Robin Edwards. An excellent shoot 'em up with many varied and excellent sprites! All in 68000 machine code.
B40G89 – Dizzy Lizzy by The Happening Boiz. An excellent game, across between Pacman and Boulderdash.
B41G90 – Exodus by Chris Jeffery. Awesome shoot 'em up with fantastic graphics! Mega arcade game.
B44G92 – Exterminate by Chris Skellern. If it moves KILL IT! A massive mega shoot 'em up game.

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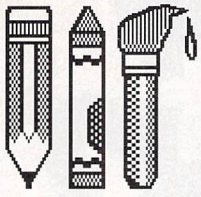
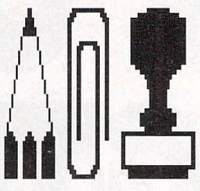


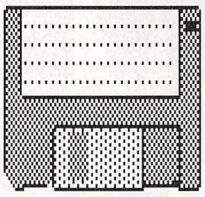
Graphics

GR3 – Master Painter is an excellent graphics program works in ALL resolutions fully featured.
GR6 – Degas disk – 155 fills, 10 brushes, 7 fonts, 24 printer drivers. Also a program to use Degas drivers to do a screen dumps.
GR7 & GR8 – AIM v2.31 of the Atari IMage processor DSD. 1MB.
GR14 – Public Painter v0.1 the great drawing program Now loads Degas fonts and pictures and also .IMG excellent! MMR.
GR17 – Picture convertors. To and from Print Master, Degas, NEO, Tiny, IFF, SPEC512, IMG, Postscript, GIF, Mac GIF stripper.
GR19 – FractaZoom V3.1 the most comprehensive fractal generation program available Upto 4 types of curve, zoom in on parts of the display, movie making, full screen or preview mode. Full documentation within the program. DSD.
GR20 – .IMG utilities. Convert any Degas, Tiny, NEO, MACPaint, Spectrum 512 to .IMG format. Also IMG viewers.
GR21 – ANI ST the amazing fully featured animation package.
GR22 – SPRITE MASTER by C Skellern A professional sprite editing package tailored to suit most programming languages. CSR.
GR24 – Pearle the 3–d ray tracing package. Amazing animations can be created using this excellent fully working ray tracing graphics package. CSR.



Application

A48 – Uniterm V2.0e. THE Comms package for the ST.
A96 – Sheet v2.0. powerful all features spreadsheet, .WKS compatible. 1280 rows by 280 columns. DSD.
A121 – POOLs– Expert Results Predictor v2.5 by Bay Computers. Excellent pools predictor.
W2 – STwriter Elite V3.6 full documentation and quick reference etc. on the disk, very good word processor.
W5 – Micro–Emacs v3.925 the text editor with disk manual and tutorial.
MP 21 – TEX the document processor and typesetting system. Includes its own programming language, handles graphics and equations with ease. 6 disk pack for £15.00. MMR. DSD.
A125 – Opus V2.10 of the spreadsheet and charting program: 255 columns by 999 rows, 80+ mathematical functions, excellent graphing, GDOS support etc.
A138 – Double Sentry V0.00 of the accounting program by Graham R Hutcheon. Does all aspects of accounts except VAT.
A166 – Personal/Business Address Book by Bay Computers excellent database system, lightning fast with label, mail merge and listing support excellent. Vanterm V3.71 excellent all features communications program does every thing except split baud rate. Relative Tree the geneology program on the ST includes printed output.



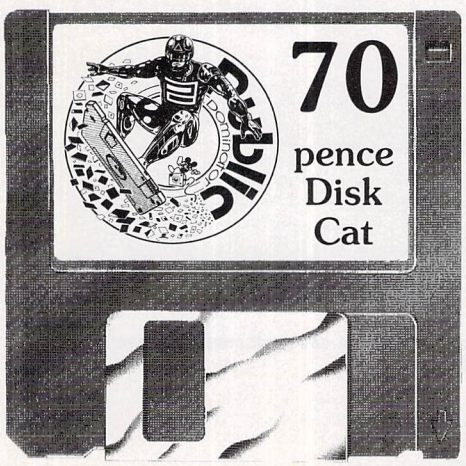
Utility

MP1: Starter pack for the new STer. STWriter, Datahandler and NEOchrome, loads of utilities.
A41 – Monochrome monitor emulator v5 NOTSTE.
A88 – DCFormat v3.03 THE ST disk formatter even MSDOS boot sector.
A91 – Virus Killer v2.01 excellent virus detector and killer.
STW 41 – FSelect v3/1989 by Martin Patzell the excellent alternative file selector.
A111 – Head Start v1.1 – auto–boot any type of program from your AUTO folder, including GEM programs.
A124 – ARChiver: ARC V5.21b, ARCShell V2.0 and V2.05 and a utility to switch back forth between LHARC and ARC.
A128 – Recover from disk lost data you specify sectors.
A134 – Boot Drive Select allows you to select a drive to boot from when you reset your ST.
A157 – Custom Format the best disk formattor available! Boot Sector Storage system store boot sectors from many disks as a file on 1 disk.
A163 – The Gemini desktop replacement. Smilar to NEODesk.
A167 – Big Colour Emulator for Monochrome screens. ARC v6.02 the latest version of the standard file archiver.
A168 – ARCGSH V2.1 a shell for any program, already setup for ARC, ZOO, SHAR. Disk Mechanic v1.0 disk analyser, copier, formattor, sector editor.



Demos

Colour Screen and Double Sided Disk Required. All Excellent Demos!
D162 – The Lord of The Disks 'Dragons Lair'.
D176 – The Care Bears 'So What Demo'.
BD3D177 – The Music of the ShapeShifters.
D178 – Paul Simones Spectrum 512 colour on screen slide show!
D183 – The Ultimate.
BD2D188 – Genesys Aenigmatica demo the 82 Track remix!
D189–SwedishNewYear2.
D191 – Mini Run by Radical Systemz AKA Police Chase from Amiga
D194 – Superior Demo by Dynamic Duo!
D197 – Space Ace–Don Bluth. Graphic animation demo of the game.
D207 – SNOWMAN demo the 1/2 MB RAM version. Better than the 1MB version!
D108 – Calamus product demo. Official demo from Signa. 1MB
D122 – The Union demo! This demo is brilliant and requires a joystick. NOTSTE.
D125 – The CareBears Cuddly demos. The best todate!
D128 – The Wattaheck demo. Great demos with excellent music.
D129 – The Swedish demo including SYNC and The CareBears.
D149 & D150 – Delerious Demo from The Alliance. 1MB. NOTSTE.
BD1 D157 – Mind Bomb the latest mega mega must have demo, by The Lost Boys. This demo is outstanding!
D158, D159, D160 – Batman The Movie.3 disk demo. NOTSTE.



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Abbreviations Used:
MMR–Mono Mononitor, CSR–Colour Screen. 1MB–1MB RAM, DSD–Double Sided Disk.

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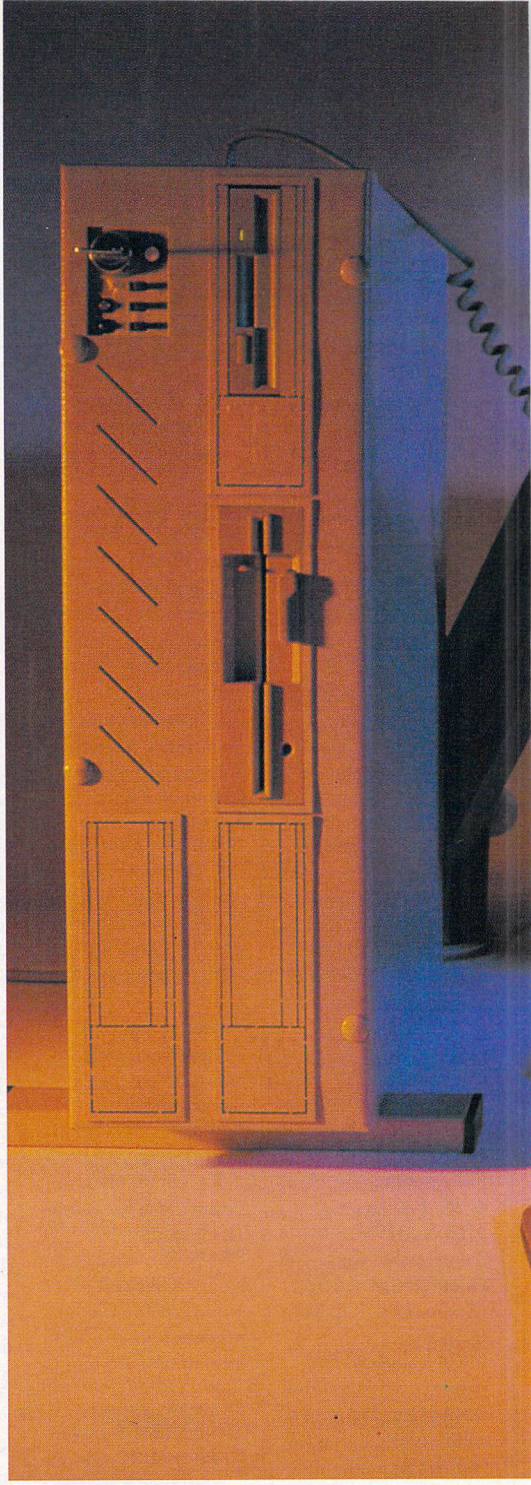
TOWER OF STRENGTH?

Mouse in a jam? Keyboard all of a clutter? You need Tower Power! John Butters puts his silicon where the sun don't shine...



Product: Tower Power
Supplier: Radio Service Co/Atari Workshop
Telephone: 071 708 5755
Price:£129.50 (Mega ST), £165 (STFM,STE), £199.50 (STM)
Configuration: All STs

Huge office? Forget it! The 'USER team works in a space about the same size as you'd expect to share on the average Med-bound charter plane. MFI desks piled high with monitors, computers, hard drives and the odd modem do not, a spacious working environment make!

Just imagine the difficulties we get into when we actually begin to write. And it's probably the same for you. Everything in an untidy heap, on a desk in the corner of your bedroom. Just one more piece of kit, and the whole caboodle looks like a hurricane-battered Jamaica.

So. What can be done? Lots as it turns out. The Germans have come up with a simple answer: Tower Power - the first dedicated Atari ST tower case. But what's a tower case? Back in the early days of small computing (you know, when that mangy old silicon dog the IBM PC reigned supreme), tower cases were the latest rage "Free up your desk-top and breath..." ran the ad. spiel. By putting the PC's innards into an upright metal case, large amounts of space become instantly available. Thousands of phallic metal cases rising from beneath desk-tops tops...

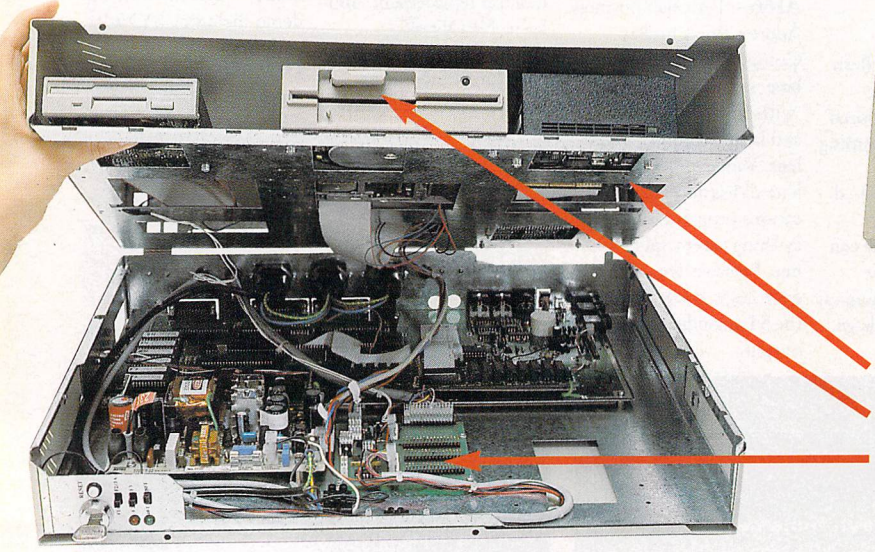
IN THE BOX

The DIY pack includes a metal case to house the electrical bits 'n' bobs of the ST, and a new plastic casing for the keyboard (unless you own a Mega ST in which case the original keyboard is used and the price reduced).

By packing your ST away in Tower Power you'll end up with little more than a Mega ST-style keyboard lying on your desk. The keyboard casing rises towards the back, putting the keys in an improved working position. Access to the mouse and joystick ports at the back of the keyboard is easy - the 10-minutes- to-fit-a-joystick ritual is now a thing of the past.

Everything except the keyboard goes into a metal case which is bigger by far than the original ST's. Base area is about 15.5inch by 6inch and if that's still too much, Tower Power can stand upright under your desk (as nature and its designers intended...). There's an extendible cable to connect the keyboard.

Up to three floppy drives (3.5 or 5.25 inch), can be included in your system, but Atari Workshop says that some of the old-style single-sided devices may not be compatible.



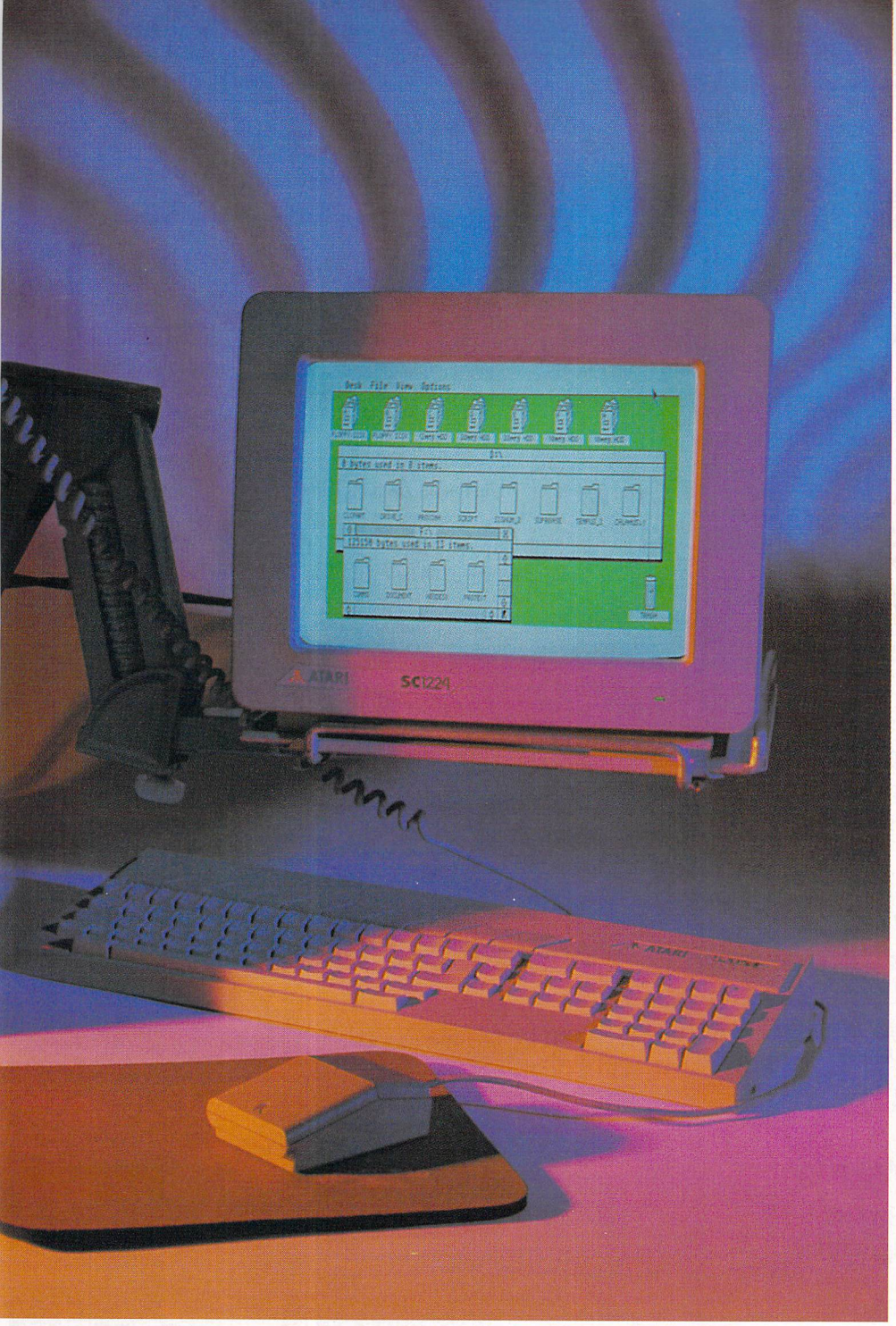


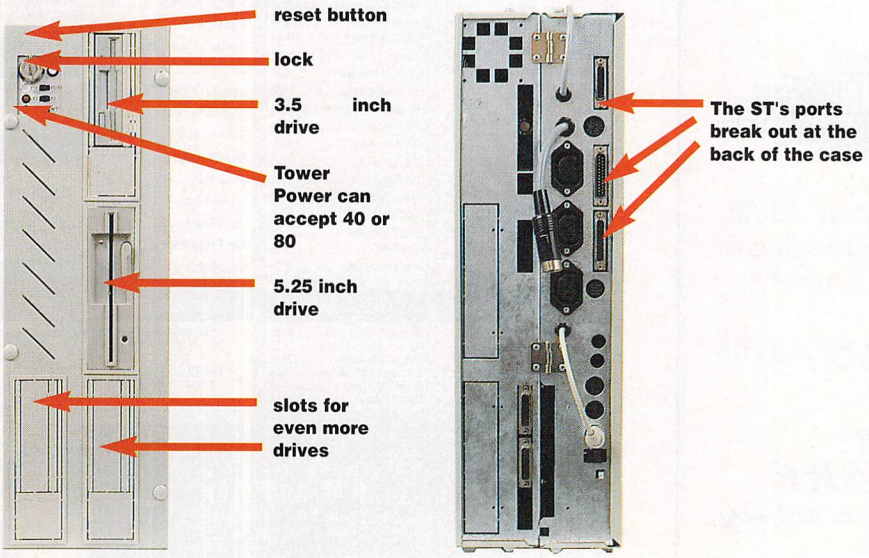
the keyboard fits into a smaller case, placing the keys into a better working position

hard drive

drives fit easily

safe haven for the ST's motherboard





PC drives can also be used, and a switch on the front of the case changes the number of disk tracks between 40 and the now more common 80.

Also to be found on the front of the case are a reset button and ignition keys. Lock the machine when you're not going to be using it for a while, and no-one else will be using it either (useful for those of you with sensitive data !).

All hard drive users long for a silent drive. The noise of the fans and disk clicking around is enough to send the most sane techno-tinkerer round the twist, once again, Tower Power displays its value. With the hard drive stuck in the Tower Power it can barely be heard.

If you know what you're doing, the solder-free kit should assemble trouble-free in between 4 and 6 hours. At the moment the three-page A4 manual is extremely vague but a new one planned for about the time this magazine makes a satisfying thud on your welcome mat, promises to make life a little easier.

And if you're not too confident about ripping the ST to bits, why not have Atari Workshop put Tower Power together? At 75 clams for a basic set-up and £95 for the ST plus hard drive it isn't cheap but is worth the mazuma for peace of mind (but hurry, once the manual's finished, prices will rise around £10).

Atari Workshop is also marketing an unusual type of monitor stand which it's called Monitor Mover. A nice addition to Tower Power, Monitor Mover enables your monitor to rest on a platform supported by an adjustable arm which clamps to the back of a desk. It fits easily and leaves room for books and other junk below. A tray connects to the platform giving you somewhere to put your coffee or Mickey Mouse mascot.

When not in use, and providing you have room at the side of your work area, the arm can be swivelled around so that the monitor isn't hovering above your desk. As well as leaving you with more room on your desk, having the monitor at eye-level makes computer work much easier. Monitor Mover is being upgraded at the moment and the new version should cost between £85 and £90.

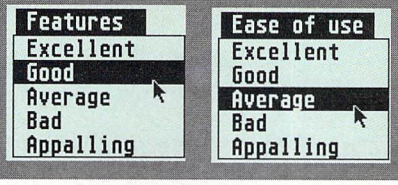
Tower Power must be the most useful and certainly the most unusual product so far this year And the only problem is that with more room available, extra junk finds its way on to your desk and you may end up with a bigger mess than before.

It's expensive too, and you might find a trip to MFI for a new desk cheaper! But for those with space problems, Tower's the choice. ●

THE BOTTOM LINE

Features: Improved keyboard and attractive casing fits easily under the desk saving valuable desk space.

Easy of Use: Difficult for the inexperienced to put together. Fine once it's built though.





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MANUAL CREATIVITY

Fumble over fonts and faces and dither over designs? You need a good old reference manual. Roland Waddilove reviews a brace of the best...

Desktop publishing is riding high on the crest of a massive wave of interest among ST owners. The ST is the cheapest usable DTP system you can buy in its 1040ST, Timeworks and dot matrix printer guise, yet it's also one of the most powerful if you couple a Mega 4 with Calamus and a laser printer. The ST can rival the Mac in speed, power and facilities.

DTP is full of jargon and traditional names of long-forgotten hot metal processes that have little meaning in today's hectic electronic publishing world. If you're a complete novice, you may find the weighty tomes supplied with most DTP software packages heavy going. Perhaps what you need is a simple down-to-earth approach to traditional publishing, before you launch full flight into the electronic world of page make-up....

Book: Desktop Publishing Source-Book
Price: £14.95
Publisher: Headline Book Publishing
(ISBN: 0-7472-0155-2)

Once you've decided to jump on the bandwagon and take the DTP plunge you can start making up all manner of pages with different type-styles, jaunty banners and big headlines. After the novelty of having a dozen different fonts at your fingertips has worn off, step back and take a close critical look at your pages.

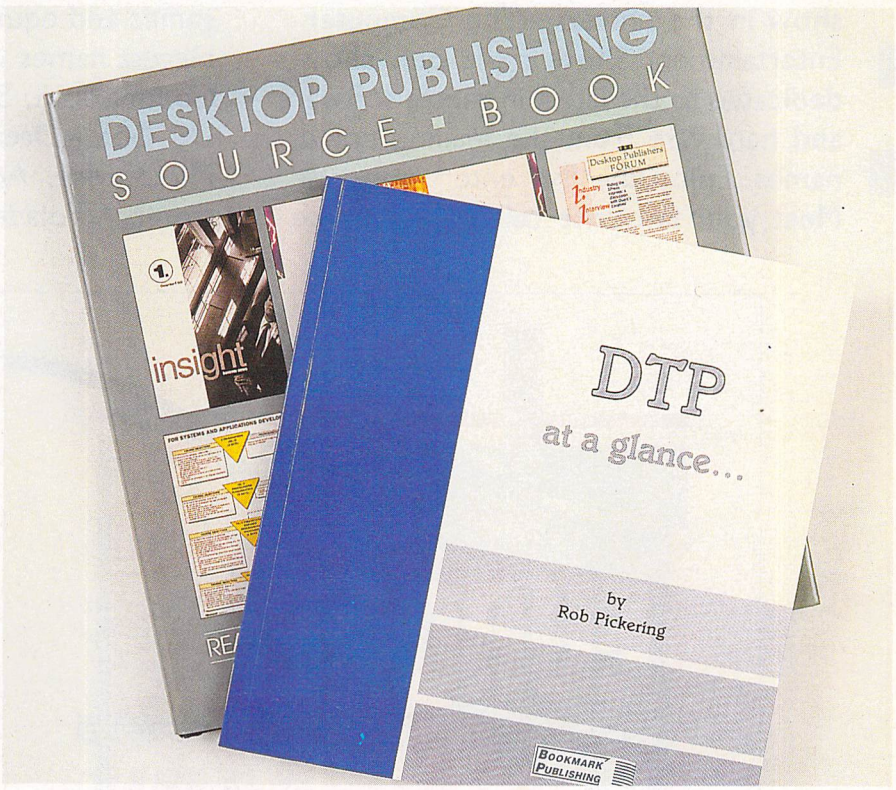
Designing attractive layouts isn't as easy as it might at first appear. Unless you're a born designer who can create superb original layouts off the top of your head, then the best solution is to copy traditional layouts which are known to work.

At first you should play safe and copy other people's designs but then once you've mastered the basic techniques, try a few designs of your own.

The Desktop Publishing Source-Book by David Collier and Kay Floyd is packed from cover to cover with ready-to-use layouts and ideas for DTP users. If you're stuck for a design idea then this is the place to look for inspiration.

The book begins with a chat about desktop publishing in general then moves on to talk about different fonts and type-styles. Nothing out of the ordinary here, just plain facts about some of the common type-faces such as serifs with little 'arms' and 'feet' on the ends of the letters, and the plain sans serif often used for headlines.

Type-faces depend on a little personal taste and lot on following fashion. For instance, the authors reveal that in the 1940s Bodini was commonly used for the main body copy and in the 1970s nearly every magazine headline was printed in Bookman bold italic. In the '90s, Times Roman, Helvetica, Bodini and Century Schoolbook are in fashion so stay with these for a safe design.



After fonts, there's a brief discussion of design techniques, which simply means where you place the headline, body text and graphics.

The book discusses advantages and disadvantages of two, three and four columns of body text and symmetrical and asymmetrical layouts.

This introductory text is really quite short, just a few pages, and the rest of the book contains page after page of different layouts. Not just any old layouts however, but grouped into logical sections. The first shows several different ways of designing a company letterhead for notepaper, and business cards for employees.

The following sections cover gatefold and concertina fold sales materials and price lists. Catalogues and presentations are redesigned and there's good advice on trendy advertisements. There are also some unusual and attractive invitations.

Newsletters and magazines are probably of most interest to ST users and these subjects are given quite large and detailed sections. From one column to five column and even mixed column designs are shown.

Most of the text on the pages appears to be in Latin and this presumably, is so that you don't read the text, but simply study the page designs. ●

Book: DTP at a glance...
Price: £9.95
Publisher: HiSoft (ISBN 1-85550-002-7)

DTP at a glance... is aimed at the complete novice with little or no knowledge of publishing. The book isn't machine specific, in fact it doesn't even mention computers. Instead, 'At a glance explains all the common terms and techniques used in publishing, in an easy-to-follow manner.

The first section deals with typography and explains, with the aid of examples, the difference between font families and faces, sizes such as EMs and ENs, points and picas. The effect of too little or too much leading on readability is demonstrated with a few paragraphs of prose, then the various types of justification and letter spacing is covered.

Page layout and design is dealt with in very simple terms, with examples showing how to position large headlines to balance the page, the size of margins and gutters you'll need, the added complication of double-sided pages and so on. The book rounds off with a helpful and interesting discussion of production methods and types of binding such as side or saddle stitching, wire binding, ring and perfect binding.

All these methods can be commonly seen on the newsagents' stands, if you're unsure about their meaning then this is the book for you. It's brief and to the point. Recommended for those new to DTP.

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MASTERCLASS

BETWEEN THE SENTENCE AND THE DTP

The latest quality broadsheet it isn't, but with 1st Word Plus and a little application you can produce startling DTP documents with the best of 'em. Miles Monroe manipulates...



Everyone uses a word processor from time to time and usually, it's simply to type out a few notes or a short letter. Boot up the program, hack in some text, click on Print and your Christmas thank-you note is winging its merry way to Aunty Madge. But how many times have you sat down and thoroughly explored the capabilities of the program that you use almost every day? Never right?

There are probably occasions when the word processing software you use isn't quite up to the work you want to do. Turning out letters by the dozen is easy, but have you ever needed to make up a club newsletter, parish news-sheet or a notice for a board at work? Maybe even an eye-catching advert for a local shop window? You might look wistfully at top-notch desktop publishing packages such as Fleet Street Publisher or Calamus, but with prices of two and four hundred pounds, it's a dream that isn't likely to come true for many ST users. Even if you had the cash, it wouldn't be worth the expense for a one-off or once a month news-sheet.

mph

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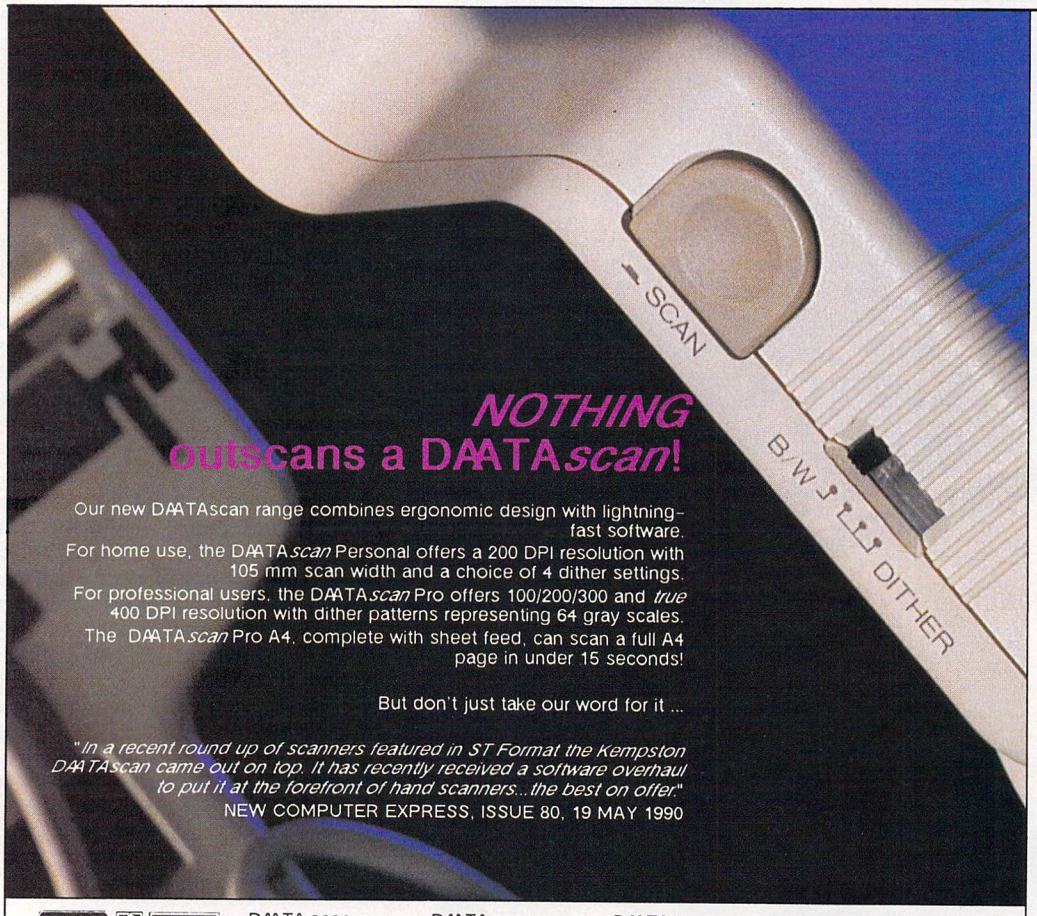

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NEW COMPUTER EXPRESS, ISSUE 80, 19 MAY 1990

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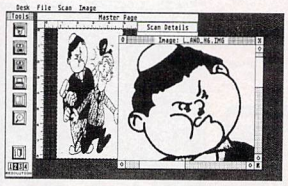

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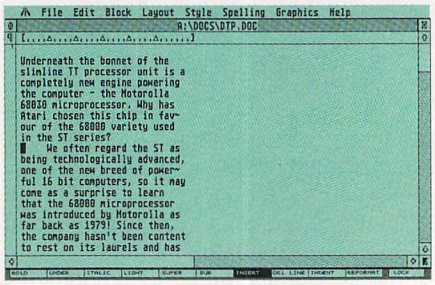
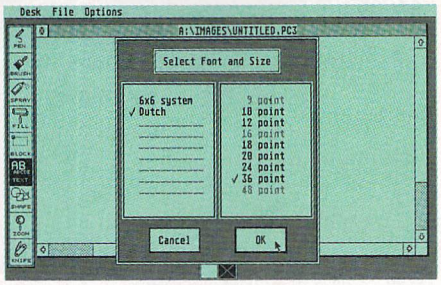


Make sure the header and footer margins are zero then type the text into 1st Word Plus using a narrow ruler



Choose the largest font size available for the headline - it should be big and bold



Type the headline in various styles to see which looks the best

So, back to the familiar word processor - but you won't catch many eyes with an advert consisting of typed text.1st Word Plus is probably the last package to spring to mind when you need to do a bit of desktop publishing. But you can make up some quite interesting and attractive pages using this most basic of word processors. The program is inexpensive and almost everyone has a copy lurking on a floppy somewhere in their disk box. Dig it out, boot it up and expand your horizons with this wolf word processor in sheep's clothing.

IN THE GALLEY

Let's assume that you need to produce and an eye-catching advert or single page newsletter and the only software you have is a simple word processor - 1st Word Plus - and an art package, HyperPaint. How can it be done?

Firstly, enter the text that will appear on the page using 1st Word Plus. If it's a letter then you'd probably accept the default ruler (line length), headers, footers and so on, but for a DTP'ed page, these will have to be altered.

A large chunk of text on an A4 page can be awkward to read, and unattractive. If you pause for a moment to take a look at the way in which magazines design their pages, you'll see that almost without exception, a multi-column layout is used. Text runs in narrow strips and there are two, three or four to a page. DTP packages are designed with multi-column layouts in mind, but the facility is rare in word processors.

1st Word Plus won't automatically produce multi-column layouts, but with a bit of lateral thinking and little application, it can be done! Pull down the Layout menu and click on the Add Ruler option. You need to set a ruler length of about 35 to 40 characters so that two columns fit easily across the page (whether you have justification on or a ragged right edge is up to you).

Now go back to the Layout menu and this time click on the Page Layout option. Make sure that all the header and footer text entries are empty then set all four margins to zero. Headers and footers aren't required so you don't need to leave room for them.

Once the various page layout parameters have been set, you can start typing. Enter all the text in one long narrow column and save it to disk. Don't worry about how to make it two-column as that will come later.

HEAD AND STRAP LINES

The next task after completing the body text is to create the headline, and perhaps a strapline (depending upon the type of page being created, but often there are a few sentences introducing and enticing you to read the main body of text). For this it's best to ditch 1st Word Plus, because like most word processing software, it's limited to one small character size and headlines should be big and bold.

The best software to create headlines is something like HyperPaint but other packages such as Easy Draw, GFA Draft or even Fast BASIC would probably do. Whatever software you choose, it should be capable of displaying large characters on the screen and provide access to desk accessories. The reason is, there's a handy snapshot desk accessory on the 1st Word Plus disk and any graphic images snapped with this can be imported into a 1st Word Plus document.

Boot up HyperPaint, click on the text icon to select it then double click on it to bring up the text menu. Choose the largest point size available (probably 36 point), type in your headline then paste it on the screen. It's worth trying a couple of different styles so type it in normal, then in bold to see which looks best.

If the largest type size still isn't big enough, you could select the block function and cut out the headline as a block. Choose the re-scale function from the block menu and stretch the headline until it's the right size.

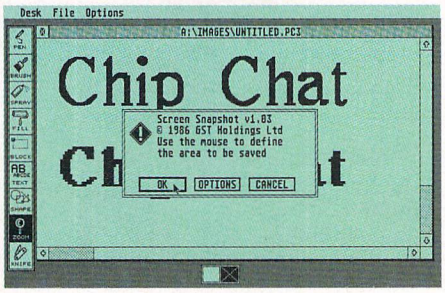
It's very likely that the largest font size (particularly if it's been stretched), has curves and diagonals that look like staircases. Look at the Cs, Ss, Gs and so on - they probably look awful. The curves and diagonals must be smoothed out to give the finished product a 'professional' look so select the magnify function, zoom in and smooth out those stairs by hand. It's a bit of a hassle, but unless you're willing to spend a couple of hundred pounds on a full blown DTP package there's no alternative.

Drop down the accessory menu when you've finished and click on Snapshot. Select the option to save the image in GEM .IMG format and draw a rubber-banded box around the headline. It can then be saved to disk.

While you've got HyperPaint on screen, you could create the strapline and snapshot any pictures you want on the page. The strap should be a few sentences to 'pull' the reader into the rest of the text and should encourage the reader to continue (have a look at the head and strap lines accompanying this Masterclass). Type size should be larger than the main body text, but smaller than the headline. Choose a 16 or 18 point size.

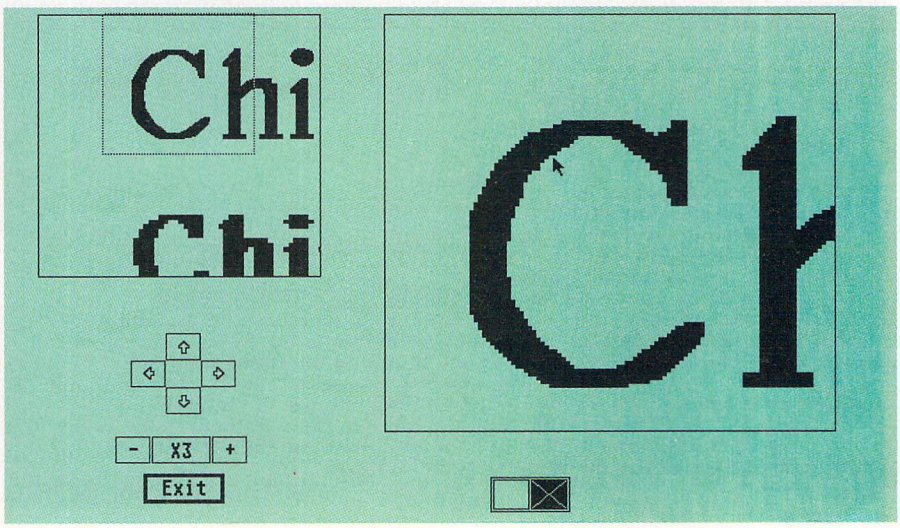
Pictures can be loaded into HyperPaint or

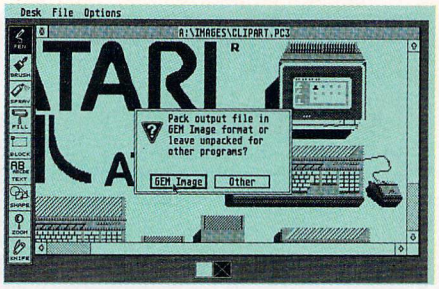




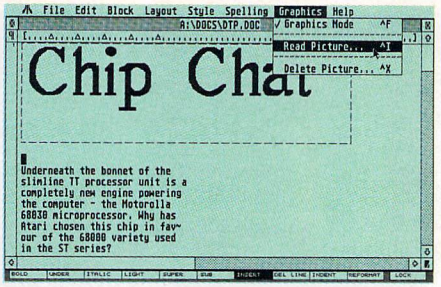
Save the headline using the Snapshot accessory supplied with 1st Word Plus

Use the magnifying glass to zoom in on the letters and smooth out those jagged edges

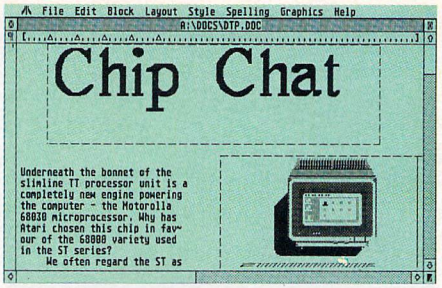




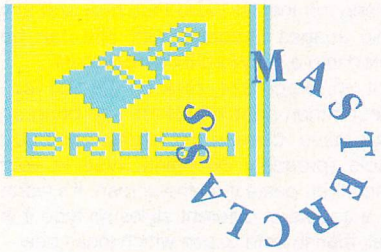
Load a picture or draw one yourself if you're a good artist then use Snapshot to save it to disk in .IMG format



Create a few blank lines at the top of the page in 1st Word Plus then read in the headline



Now read in the picture and move it to the right place in the text



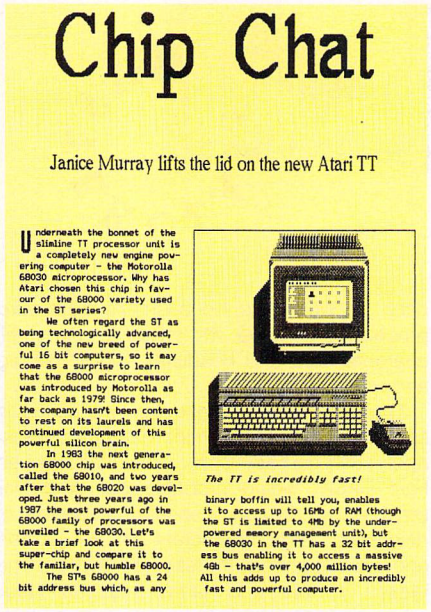
drawn if you're a good artist, then small sections snapshot and saved to disk in .IMG format. Don't make the images too large or they'll take up too much room. If the picture's too big, then select the block function, cut it out and re-size it to make it smaller before snapping it and saving it to disk.

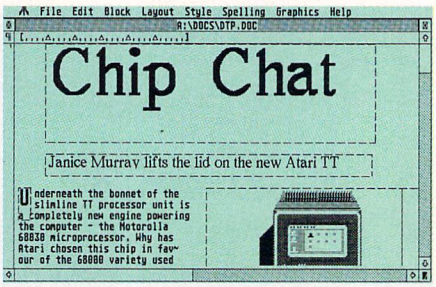
ADDING IMAGES

Now that you've created the text, headline, strapline and pictures, it's time to combine them to make up the page. Boot 1st Word Plus and load the text file. Create some space at the start of the document by hitting return several times, then move the cursor to the top of the page (make sure the headers, footers and margins are all zero as before).

Pull down the Graphics menu and click on Graphics Mode. Pull it down again and this time click on Read Picture. Up pops a GEM file selector which can be used to select the .IMG snapshot of the headline. It will load and be displayed at the top of the page. Now move the cursor down to just below the headline and click on Read Picture on the Graphics menu again. Load the strapline this time. Finally, repeat the process with any pictures you snapped with HyperPaint.

The headline, strap and pictures can be moved by pointing at them with the mouse and holding down the left-hand mouse button. A hand will grab the image and can be slid about the page.





Load the strapline next and position it underneath the headline

There are as many ways to design a page as there are pages in a magazine, but some are a little ambitious with simple software such as 1st Word Plus so here's a simple layout. Move the headline into the centre of the page and position the strap beneath it. Text will run down the left-hand column and a picture can be placed at the top of the right-hand column.

If the text is long enough (and you don't need very much...) then it will run down past the bottom of the picture. This provides an opportunity to produce a nice two column layout. What you do is move some of the lines from the bottom of the left-hand column and paste them onto the end of the lines higher up (underneath the picture) to create two columns of text.

Suppose that 20 lines run past the bottom of the picture you've pasted into the right hand column. The bottom 10 of these can be pasted into the right-hand column. Extend the ruler to about 75 to 80 columns and make sure you're in overwrite mode.

If we call the first line past the bottom of the picture line one then move to the start of line 11, press Control+S, move to the end and press Control+E. Line 11 is now a block and will be displayed in inverse. Move to the end of line one, add a few spaces then press Control+M to move line 11. Go to line 12, mark it as a block as before then move to line two and paste it onto the end. Go to to line 13 and paste it onto the end of line three and so on. You now have two columns of text.

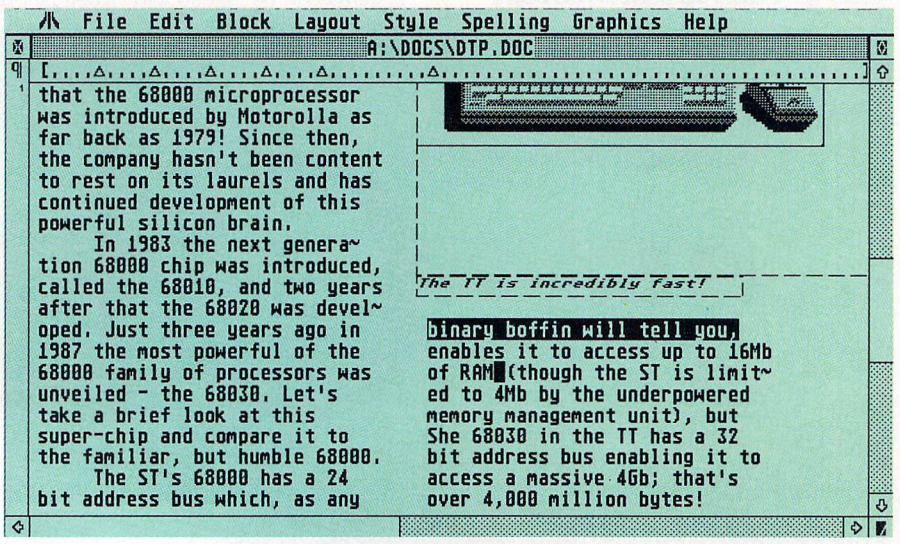
One problem that you should watch for is that 1st Word Plus isn't quite a true WYSIWYG word processor (graphic images imported into a document aren't displayed at their true size, they're smaller) - if you're not careful your pictures and headlines will run into the text.

You can easily tell how much space the headline or picture will take up by looking at the large box drawn in dotted lines around each image. The box shows the true size and the small image you see on-screen inside it will completely fill it on paper. You can run the text right up to the box, but don't be tempted to cross the dotted line however small the graphic image looks on-screen.

All that remains now is to save the document and print it out in the same way that you'd print a normal text file.

Once the page make-up technique using 1st Word Plus has been mastered it opens up a whole new world of desktop publishing. You may even become so bitten by the bug that you want to try your hand at the real thing - even Robert Maxwell had to begin somewhere. Start saving your money now! ●

To create two columns of text you have to cut lines from the bottom of the first column and paste them onto the end of the lines further up to make a new column



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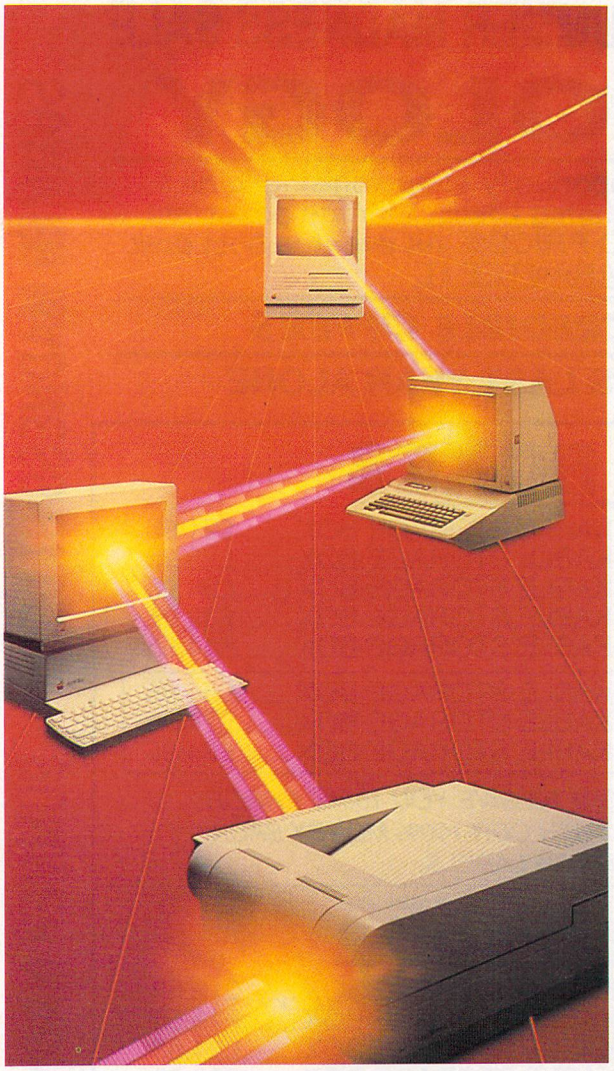

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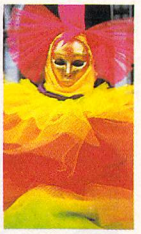

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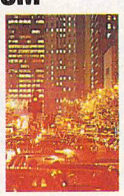

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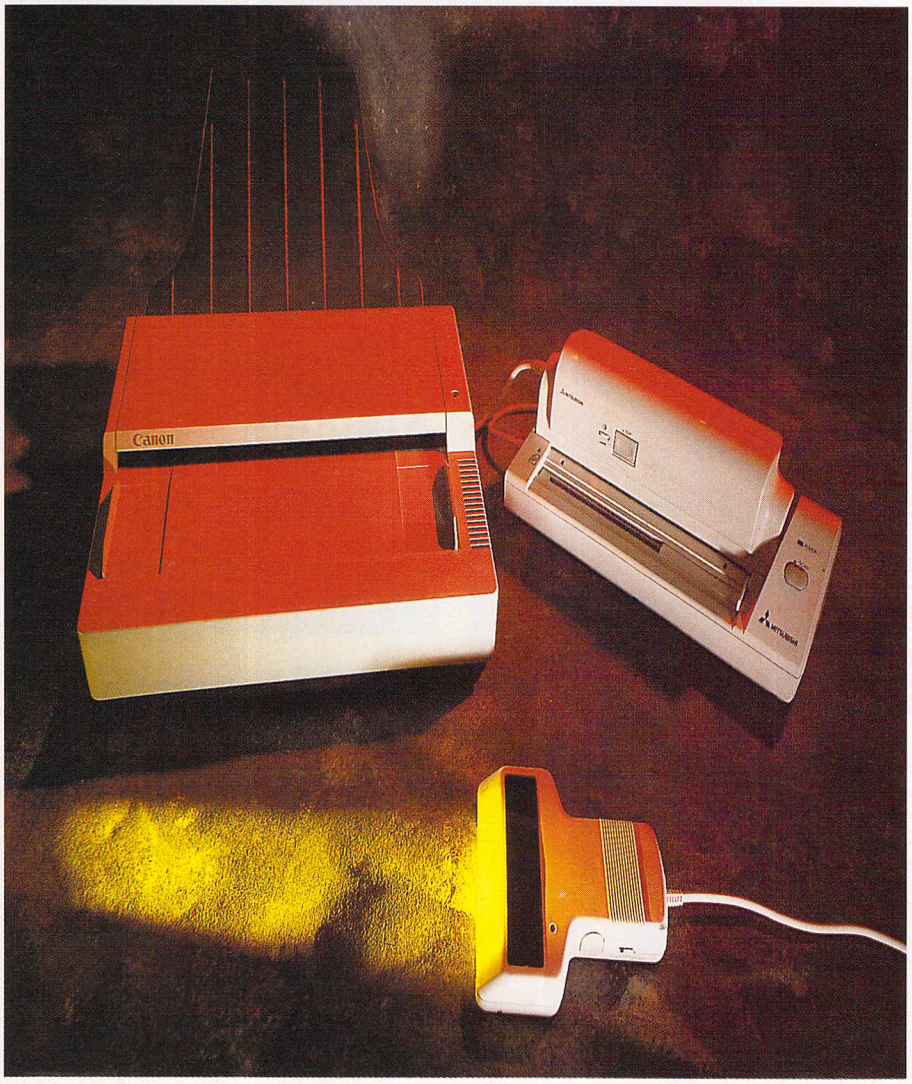
SCAN-TILY CLAD...

Previously the size of a small motor car, the A4 scanner is at last becoming manageable. John Butters (a man who understands 'diminuitive') compares the latest offerings...



Have you ever sat staring at a newly-written letter just knowing it needed 'something else' in order to liven it up? Fine if it's a letter to your bank manager - any missive to that fiend should look like a notification of fatal injury, but jolly notes to friends and so on should be just that, jolly! Reams of black and white text do not a jolly missive make. And where would that DTP-produced fanzine be without the absolutely necessary illustrations to liven up its pages. Sure, you can use existing clip art from public domain libraries, but have you seen the average clip art library?

The answer is simple, you need a scanner! With a scanner, printed matter can be taken from the pages of magazines, newspapers and the like and reproduced on the ST's screen very easily. You can scan photographs, line art, cartoons, your desk or the dog's tongue - anything in fact, that can be got under the scanning window of the scanner. And once you've captured a picture, surface detail and so on, the way is clear to port it into a paint package, stretch, change its colour, anything.

For ST owners, there two types of scanner, the flat-bed device which looks very much like a small fax machine and the hand-held scanner. The flat-bed scanner is the more

sophisticated of the two (and consequently produces better scans) but costs much more than the hand-held variety. Hand scanners should not be disregarded though, for most non-professional users they'll do the job.

The hand-held scanner is - not surprisingly - used in the hand and the image is grabbed by the computer by running the scanner over the image to be scanned. The main restriction with such a model is that the width of the scan is restricted to the width of the scanner (typically around 10cm).

The desktop-based flat-bed models have images inserted into them. The scanner carries a page automatically so you end up with a neater image.

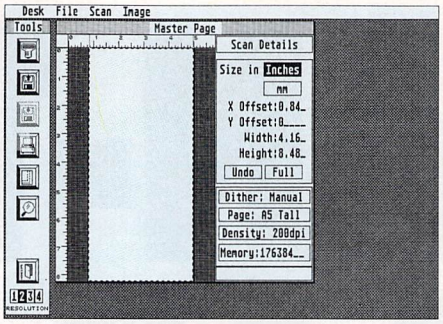
The scanner's resolution (ie the depth of detail it can reproduce) is measured in dots per inch - dpi and the scanners in this review offer a dpi value of up to 400.

Three new scanners have just emerged from Pandaal Marketing, (Kempston Data as most people know it). There's a flat-bed model, a hand-held and one which is a combination of the two. Until the end of September Pandaal is offering the scanners at a discounted mail order price, usually at the VAT exclusive price. Pandaal is also selling Electric Distribution's Timeworks DTP package for £30 when it's bought with one of the scanners.

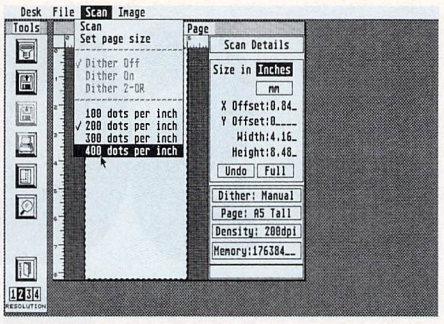
Product: DAATAscan Professional - Mitsubushi hand-held
Supplier: Pandaal Marketing
Telephone: 0234 855666
Price: £249.95
Configuration: All STs

This is probably the scanner most 'USER readers will be interested in. The device offers a resolution of between 100 and 400dpi and scans to a width of 105mm. The package includes the hand-held scanner, an interface to connect it to your ST, software, manual and power supply unit.

The interface is in the form of a cartridge which plugs into the cartridge port on the left-hand side of the micro (do this only when the machine is switched off, otherwise you're likely to be making a trip to your local repair shop with both your ST and cartridge.) There are two sockets on the cartridge; one for the scanner the other for a power supply.



The boot-up screen. The software is easy to use, everything being done from menus



Selecting the resolution from drop-down menus before taking a scan

Black and white pages look better if they're scanned using the black and white option. Colour images should be scanned using one of the dither modes. This will transform colours on the original page into different shades of grey. The DAATAscan Professional software can be used in either high or medium resolutions but using high resolution provides best results. The program's controlled entirely with the mouse, helping to make its use easy, although shortcuts are available using key combinations.

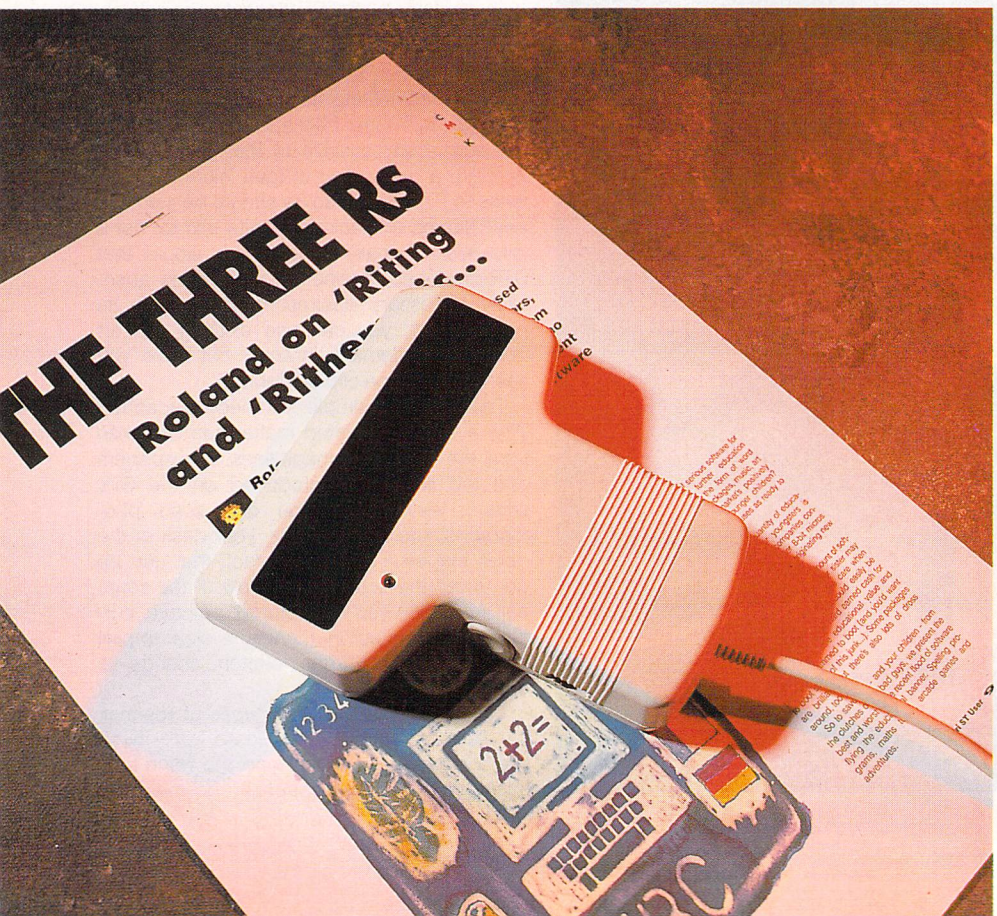
The Pro. software is also straightforward. The accompanying manual is manageable (the preview copy runs to 24 pages of A5) and is easily assimilated for the novice. You don't need to study the manual before using the software however. A black and white page was scanned successfully before having to resort to its helpful pages.

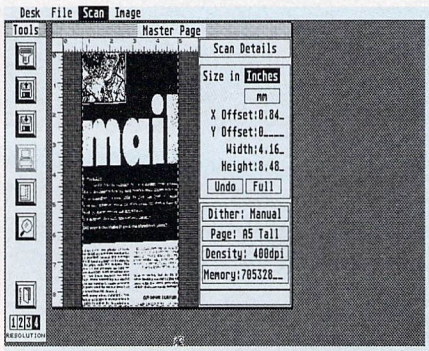
From the menu bar, an image can be saved at any time using the popular formats .IMG and P13. Before a file is saved, you can check the amount of space remaining on a disk to see if the file will fit. This is especially useful if you're using floppies because you don't get many files to the pound. A nice touch is that if there isn't enough room you can delete unwanted files without leaving the program.

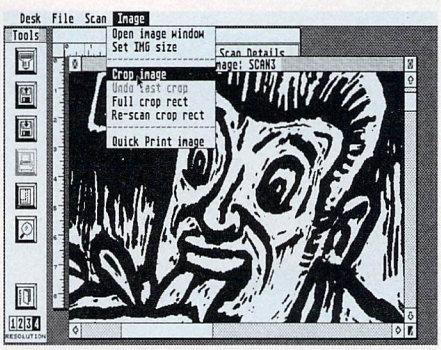
As well as saving files you can reload existing scans for cropping and editing. The new picture can be re-saved and used in a DTP or paint package as normal. You don't have to know which format the picture had originally been saved in because the software will work it out.

An option under File is 'Print IMG file'. Using this, you can print the file in several ways. Best Fit will adjust the image to fill the page (or as much of it as possible), retaining the shape of the picture. If you don't want the image to be printed full-size, then you can scale it down by entering a scale factor. By Pixel prints the image pixel for pixel as it appears in the original.

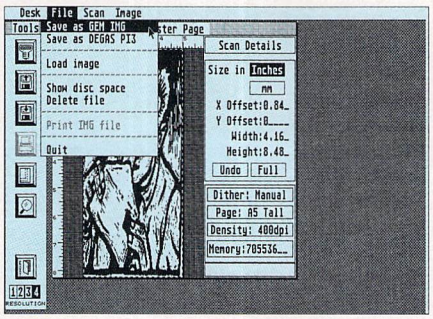
Before scanning you should select the size







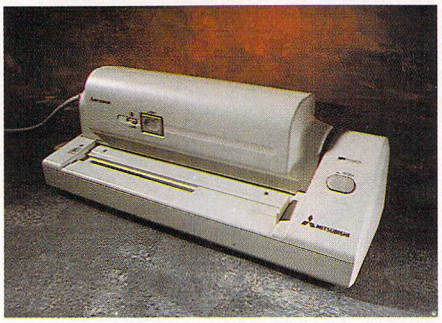
TOP: A complete page is imported into the computer
BELOW: Editing is easily done using the mouse



End result: Once finished the page can be saved ready for putting into DTP



The Mitsubishi A4 scanner in its basic form as a hand-scannr



A cheap sheet feeder easily connects to the scanner to give a flatbed model

of the page you want to scan. This is done on a panel at the right-hand side of the screen. The panel also displays how much memory will be used, the current resolution and various other things you need to know at a glance.

Best results come from the higher resolution modes but this doesn't mean that the lower resolutions are redundant, the higher resolutions require lots of memory and occasionally, you may find yourself limited to 100dpi. After a resolution has been selected you're reminded to change the setting on the scanner to match it.

To capture an image then, you simple select scan from the drop down and the scanner will be ready to roll across a picture, budgie or whatever, and the software is waiting to receive the image. Hold the scanner, press the scan button and roll the scanner down the image slowly and carefully. An image will appear on the ST's monitor from the top as you roll the device. The software realises when the image has been been completely scanned and reverts back to the normal display.

The image of the budgie is now inside the computer and by choosing Image from the menu, enables you to edit the picture. Pixels can be changed, images cropped and if you make a mistake, all the changes 'unchanged'.

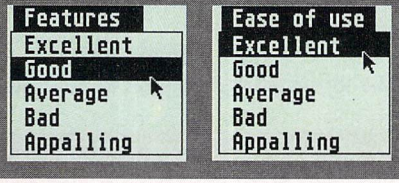
As well as the menu at the top of the screen there's a series of icons down the left-hand side which Pandaal has called the Tool Bar. Much of it has already appeared in the drop-down menus but items can be selected a little quicker. A useful addition here is the magnifying glass which can be used when editing pictures. The glass will magnify an image up to 32 times.

The results from the scanner were average but the price was definitely below average. Put it down on your shopping list if you want to get into illustrating your desk top published documents on a limited budget. ●

THE BOTTOM LINE

Features: 105mm width scan, resolutions between 100 and 400dpi. Everything you need to get started is supplied.

Ease of use: Good feel in the hand, all buttons in reasonable places. Software can be used without any problems.



Product: DAATAscan Professional - Mitsubishi A4
Supplier: Pandaal Marketing
Telephone: 0234 855666
Price: £458.85 (scanner), £113.85 (sheet feeder)
Configuration: All STs

Unfortunately, the software and interface for the Mitsubishi A4 weren't completed at the time of writing, but if the device provides everything it promises, then it should definitely be up there with the best of 'em.

Price-wise it lies comfortably between the hand-held scanner and Canon A4 flat-bed device. In basic form (as a hand-held), the Mitsubishi costs £458.85 - expensive for a hand-held scanner, although it does give full A4-width scans.

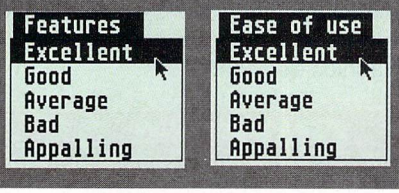
A feature which draws added attention to the Mitsubishi is that for a very modest £113.85 you can buy an add-on sheet feeder. This is simple to fit and will effectively turn the hand scanner into a flat-bed scanner - impressive stuff! For a total cost of £572.70 you have a hand and flat-bed scanner in one go. Software will be almost identical to that accompanying the Mitsubishi hand-held and the device provides a series of resolutions up to 400dpi.

The cream-coloured casing is littered with buttons. On the hand-held unit there are buttons for scanning and brightness. The unit is slightly larger than the dedicated hand-held scanner and doesn't fit the hand quite as well. However this doesn't prove to be a problem and in practice the scanner is easily-manageable, producing excellent copies There's also a movable paper feed which will accept pages up to A4 size, a scan button and light to show when the power's on. A plastic paper rest attaches to the back of the unit to catch the original document as it passes through the machine. If you want flexibility this scanner's a must.

THE BOTTOM LINE

Features: Can be used as hand or flat-bed scanner, full A4 scan width, small casing, resolutions up to 400dpi. Cheap and flexible.

Ease of use: Easy to use software takes little getting used to, even for the newcomer.

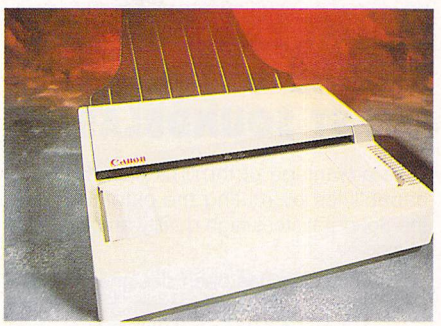


Product: DAATAscan Professional - Canon A4
Supplier: Pandaal Marketing
Telephone: 0234 855666
Price: £803
Configuration: All STs

This device is by far the most expensive of the three retailing at £803, and has resolutions ranging from 75, 150 and 200 to 300dpi. The case lies flat on your desk and takes up roughly the same amount of space as a dot-matrix printer. The Canon has an interface which is similar to the other models, but power is fed straight into the scanner rather than the cartridge. Again the accompanying software is very similar to the hand-held's.

Paper is fed into the scanner from the front and there's a movable paper guide which handles sizes between A5 and A4. The paper will feed its way automatically though the device and will pop out of the back onto a plastic paper rest.

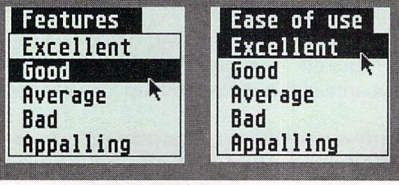
The Canon A4 was originally built for use with IBM-compatible PCs and that's the reason which is given by Pandaal why it's so expensive. Although this has the advantage that if you use a PC at work and an ST at home, you'll be able to buy a PC interface later for around £200.



THE BOTTOM LINE

Features: Resolutions from 75dpi up to 300dpi, paper rest at back of scanner, can also be used with IBM-compatible machines,

Ease of use: Paper feeds its way through automatically, excellent software.



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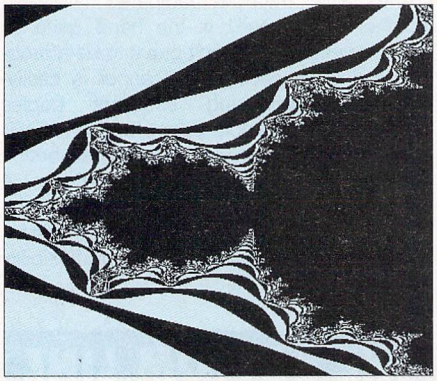

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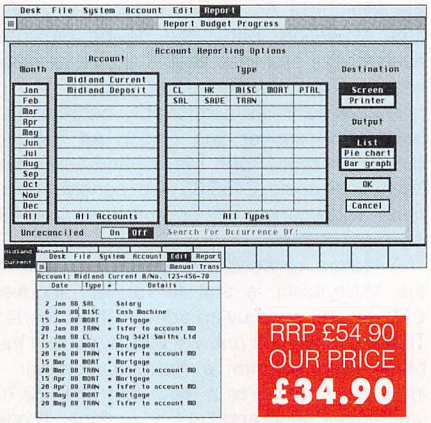

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2. What would be the best source of software?
3. What are the main differences between public domain and shareware and are they both readily available?
4. Could you recommend a good disk label printer for the trade name?

I hope you can help with the above and put me on the right road by answering the questions and setting up the library.

P Caswell, Gwent.

A Many computer owners dream of starting a public domain service, or a bulletin board, but few consider the hard work necessary to ensure the success of the scheme - there's an awful lot of work (and enormous responsibility) in handling the work and accepting money from the great un-washed. Let it slide for just a couple of days, and you'll end up trapped in a quagmire of your own making seemingly impossible to escape.

Right, that's the horrid warnings out of the way, now for the up-side. Running a public domain library, bulletin board and the like can bring immense pleasure to millions - well, not quite, but you get my drift? And so on to your questions.

1. Probably the most over-riding legal requirement is that you do not break copyright by making money from public domain software. Although the author has relinquished the right to sell his/her program, s/he still retains copyright and if you sell a PD program and the author discovers your misdemeanour, there could be serious legal repercussions. You can of course, make a small profit on the disk carrying the PD programs, charge for duplication costs, your time and so on, but set these too high and no-one will bother to acquire your wares! The current trend is definitely to give good value for money which makes a pleasant change, right?

2. There are several. Friends and acquaintances, bulletin boards and of course, other public domain libraries (although this latter is frowned upon by the established libraries. They do all the sorting and classifying work, you just help yourself - not quite balanced). Once established, and with regular advertising in the popular computer press, authors will contact you directly.

3. Public domain software is that which the author has said can be copied and distributed freely, providing no-one attempts to make a charge for this distribution. The software must be left un-modified and any accompanying information files must be passed on with the program.

Shareware evolved from public domain in that the recipients of all these free goodies began to make spontaneous contributions to authors of PD ("Hi, my name is Joe Esposito and I'd just like to tell ya that the file sorting program Blot-Sort, has really helped me. Accept ten bucks..."). Authors began to realise that they could use the public domain 'networks' to obtain free distribution for their programs. The idea caught on and today (especially in the States) the shareware concept is here to stay. In Britain unfortunately, users are far less likely to hand over the clams, although there are signs that this is beginning to change.

You can no more make money selling shareware than you can selling public domain.

4. I believe the popular business software house Digita International market a decent label printer. Called Mailshot, the program costs £24.95 and can be obtained be calling Digita on 0395 270273. And of course, you can always look in the public domain!

SWITCHED OFF!

Q Yet another colour/mono query. I read about the switching on the monochrome detect pin in the 'USER 54 so I decided to have a go. The best place for the switch in my case, was in the monitor itself (nice little toggle on the side, lovely!), so I switched pin 4 and horror of horrors, it didn't work! Is the location of the switch important ie the monitor socket has some sort of mechanical connection on pin 4 which operates when pulled, or am I just a complete wazzock? I have a 1040STFM and an SM124 monitor (with a nice shiny useless switch in the side).

Martin Wilkinson, Yarm, Cleveland.

A Hmm, a case of bad soldering or wrong pin selection I think. Pin 4 is definitely the

Computer cracking up? Disks doing back flips? Printer out of puff? 'USER's very own silicon service supremo is at your disposal. All points bulletins to Interactive Rescue, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP

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monochrome signal detect pin (have a look in your manual for the correct orientation) so unless you've inadvertently connected the wrong pin, or performed some particularly nasty soldering, all should be well. Have a look, huh?

BLUE PRINTS?

Q I read with some interest the problems Mark Cantrell is having with his power supply and there must be many Atari users out there with similar hardware problems, a lack of funds and no way of getting any help, so how about publishing the technical and schematic drawings of the different modules each month so that a library could be built up and any readers with problems can refer to them when seeking help from the more technically minded readers.

Jim McGilton, Kilcooley, Bangor.

A Nice try Jim, but it just won't work. And why? Have you ever tried to locate detailed schematic diagrams of the innards of the ST, its disk drives, monitor and other peripherals? And remember, even if we could locate the required drawings and find space to publish them (they'd need to be large to be useful), probably 98 per cent of our readers wouldn't know a schematic from an automatic. Nothing wrong with that, but think of all the space which could be devoted to your Silicon Service Supremo holding forth - in easy to understand terms - on a variety of topics...

KICKED INTO TOUCH

Q I currently own a six month old Atari 520ST. It is not particularly over-used and is occupied 90 per cent of the time with my Kick Off disks.

Unfortunately, in the 10 or 12 times I have played with my friends in the league competition, the program has crashed before all the games can be played.

I returned the computer to the department store I bought it from but after extensive tests they could find no fault. I have bought new disks (Kick Off Extra Time) but the problem still occurs - is this common? Have other readers had this problem? If not, could you advise me of my next move since I am not a computer buff, I just enjoy games.

Tony Raffermati, Camberly, Surrey.

A OK, Kick Off fans, what's happening here? If anyone else has suffered the same problems and has managed to solve them, write to me and I'll pass on the guff...

HI FIDELITY...

Q I'm an owner of a 1040ST computer and I bought it about two years ago. I would like to know if this computer has a stereophonic ability and if not, what does it take to make it have such abilities?

Eli Geller, Israel.

A Unfortunately, the standard ST does not have stereo capabilities. For built-in stereo, you must buy the latest STE machine. However, there are a number of suppliers currently advertising in Atari ST User who market upgrades and add-ons to enable your ST to produce stereo and these devices are not especially expensive (although importing them into Israel may prove prohibitive).

POWER DOWN

Q My Atari 520STFM has had a faulty power pack for six months and is being repaired by a non-computer specialist electronics engineer. The problem is that the faulty component has been chipped in the blowing of the fuse, so now I have no indication of its serial number, I tried borrowing my friend's computer, but found to my horror that Atari had changed the power pack. I had almost given up all hope of repair when I noticed that the computer used in your DIY Freeze Frame project ('USER 54) had the same power pack as my own. Could you tell me what the serial number of the component located and identified as Q1 on the power supply board is?

Raymond Donnelly, Co Down, Northern Ireland.

A The serial number is NUMBER HERE. And if you've found a repair engineer willing to get the Atari power pack back on its feet (at a reasonable price), write in with a name and share the good news...

BIG FLOPPY!

Q I am at present looking into the possibility of purchasing a 5.25 inch external floppy drive for use with my Atari 1040STFM. In your Interactive Rescue column ('USER 54) you say that hard and floppy drives designed for use with the IBM PCs can be used on Atari STs (presumably with modification).

Could you please tell me if it is possible to use a 1.2Mb 5.25 inch floppy drive with my ST, for example, the ones available for IBM ATs, IBM PS/2s or Amstrad 2286/2386 computers, as all of these retail for under £100.

Keep up the good work!

N Martin, Braintree, Essex.

A Although there is probably isn't a physical reason why the 1.2Mb high density 5.25 inch device can't be connected to the ST, in practise I'm afraid it isn't possible (for a start, the ST will only format disks to 800K). Stick to ordinary 5.25 inch floppies and you'll have no problems. Oh, and by the way, no modifications are required before being able to use a standard PC 5.25 inch floppy with the ST (apart from a change in stepping rates effected with software utilities).

CENTRE OF EXCELLENCE!

Q I was interested to read your reply to the letter from Darren Chandler in 'USER 54 in which you state that no training centres exist for the Atari ST.

As a member of the lecturing staff of Longlands College of Further Education in Middlesborough, I can inform you that the college's open access learning support centre has a fully staffed and equipped ST laboratory for use by members of the local community.

We are prepared to offer training on any aspect of the ST and welcome all enquiries The centre is undergoing continual development and can offer the very best in the way of resources.

Any enquiries about the centre may be sent to me at the following address.

R A Henry, Learning Support Centre, Longlands College of Further Education, Douglas Street, Middlesborough, Cleveland TS4 2JW.

A It always the same isn't it? Say, in print, that something or someone doesn't exist and you'll have queues of readers a mile long stating the reverse is true. So. Here goes. The Silicon Service Supremo does not have a rich, recently deceased relative who has left him millions. Any takers?

STRAIGHT ANIMATION

I have been using GFA Raytrace for a short time and have come up with an effective way of creating an animation which doesn't have to travel in a straight line. Normally, you can only define a start and finish point and an object travels in a straight line from A to B (and back again if you want). But I have found that you can fool the program by joining two half animations together. This means that animations for example a Newton's Cradle, can be achieved. The procedure for doing this is as follows:

1. Two separate disks are needed

2. Create the first animation on disk one with a name eg test.wal

3. Create second animation on disk two also called test.wal (these two files must have the same name)

4. Assume animation is six frames in length (it can be up to 10)

5. Raytrace the first three frames using Do Anim, save it to disk and when prompted, call the file test.sal

6. Abort the raytracing

7. Replace test.wal on disk one with test.wal from disk two

8. Load test.wal from disk two and raytrace the first three frames and save them to disk two (also as test.sal)

9. While frame fouris being traced, replace disk two with disk one. Frames four, five and six will be saved onto the first three frames on disk one.

10. Run your animation from either Anim or Anin prog. and you'll have two animations spliced together. The three frames produced at step eight can now be deleted.

You end up with frames one, two and three from animation one, and frames four, five and six from animation two. It is rather long winded, but does open up more possible animations. I hope this proves of interest.

C Jubb, Edinburgh

TWO BYTE TRICKSTER!

Q I have just upgraded my computer system from a 1040ST to a brand new 520STE with two megabytes of memory. As soon as I brought it home, I connected it to my Megafile 60 hard drive and started working on an assignment. It was then that I noticed a slight problem.

Leaving First Word Plus, I looked at the subdirectory where my document should have been. Unfortunately, the directory had been scrambled. Oh well I thought, these things happen. So I started on something else only to find the same thing happened again. This is where the panic set in.

After some further investigation, it turned out that my new STE would sometimes forget to write two bytes to the hard disk. So for example, the string 'hello there' would turn into heo there. As you can guess, this is not very helpful, especially when it occurs when writing a directory entry.

No, it isn't a virus but a hardware error of indeterminate origin. Atari's service section said they knew how to fix it. However, after getting my computer back from Atari after two weeks of being 'fixed', I can tell you that they don't - the problem continued to occur.

R Kirk, Floreat Park, Australia.

A **Anyone got a fix for this annoying problem? Send it in and I'll pass it on.**

TEXT TRANSFER

Q I own an Atari STFM and there are a few questions I would like to ask. Firstly, as I am a school pupil (16 years old), I would like to know if it is at all possible to transfer text files from my ST to the school's computers. My word processor is Protext version 4.2 and the school computers are RM Nimbus machines. These Nimbuses are PCs and they have an IBM emulator.

I have also persuaded the Information Technology teacher to purchase a copy of Protext for the Nimbus so would this be of any help? I am sure this information would be valuable to a lot of students as the RM Nimbus is replacing BBCs in a lot of schools.

Secondly, I wish to enquire about ST hard disks. Is it possible to build your own? If so, what do you need and how much will it cost?

My third point is on the subject of RAM upgrades. Is it possible to buy separate RAM chips and just solder them into the computer? I noticed the 16 spare slots in the computer when I installed Freeze Frame as shown in 'USER 53. If it is possible to do this, where would I get the chips from and how much would they cost?

Finally, for about a year now it has been my ambition to start a PD library. I now feel that I have enough disks to accomplish this. If anyone is interested, the PD will be free, with a small charge of say 35p to cover postage and packing.

T Moody, Longhoughton, Alnwick .

A **Text files can easily be exchanged between the ST and PC and here's how to do it. After writing your text (and any word processor will do, you don't need to use a word processor also available for the PC), save the text as an ASCII file that is, without formatting information and control codes. Put the file on a PC-formatted disk (if you initialise the disk using your ST, the PC won't be able to read it), bung it in the Nimbus disk drive and copy it, load it into your favourite PC word processor or do what you will - simple, right?**

As for building your own hard drive, yes, it's perfectly possible. You'll need a host adaptor to enable you to connect a standard PC-type hard drive to your ST such as the one from GE-Soft (£69, 081 365 1151). You'll also need a power supply, case, some leads, a fan and of course, the hard drive itself. The whole caboodle should cost around £250 (if you're extremely careful and shop around), but building your own is immensely satisfying, fairly simple but surprisingly, isn't much cheaper than buying the cheapest of the commercially available devices.

It is possible to buy RAM chips and solder them directly to your ST, before the solder-less RAM upgrade came along, a lot of ST owners did just that. For a suitable source, have a look through one of the current Maplin catalogues. Maplin is a respected electronic component mail-order supplier with branches around the country. The catalogue costs a couple of quid, is available from all branches of W H Smiths and is simply stuffed with electronic bits 'n' bobs.

PC QUANDARY

Q I purchased a 520STE last Christmas for the kids (which I let them use occasionally) and have been experiencing problems with PC compatibility. The Atari handbook says that disks formatted with the STE are fully MSDOS compatible and sure enough, I had no problems initially getting a PC to read my STE files.

All went well for six months but then, nothing! My STE (OK, the kids' STE) is no longer on the same wavelength as any PC I've tried it with. Listing files on a PC shows up as a disk being totally blank even though there are no files there. I've also tried formatting disks on PCs to save my STE files but with no luck (even though this works with an STFM. PD formatting utilities have also been tried but to no avail.

A friend with a 1040STE is also experiencing identical problems to me, so I'm wondering if you or any readers have come across the problem and better still, can offer a solution. I bought the computer from Silica Shop and they suggested a drive alignment problem, but a local dealer (One Step Beyond, Norwich) kindly changed the drive for me but still no difference.

I now find STE files are no longer recognised by PCs. I could return the machine to Silica Shop for repair/replacement, but there seems little point as they've told me they don't know the answer to the problem anyway.

Phil Barber, Dereham, Norfolk.

A **And neither I'm afraid, do I. Sounds as though some weak component 'goes' after a period of use stopping the STE from recognising PC disks and vice versa (particularly when your friend's 1040STFM can still read the disks from the PC).**

Anyone else suffered STE/PC incompatibility? If so write in I'll also pass your letter over to Gunter Minnerup our emulation expert.

PROTECTION RACKET

Q I have had my 1040STF (TOS 1.00 November '85) for just over three years now. with no major problems. However recently while trying to use the disk back up program provided on the Carrier Command disk, I discovered that the drive would not recognise any of my disks as write protected! On all the articles concerning disks and disk drives I have not found anything which explains how the write protect mechanism works. Could you please explain how the system works and what might go wrong with it?

Sin Chong Lau, Blackpool, Lancs.

A **Actually, there's a couple of little matchsticks and a rubber band which poke through the open window of the protect shutter to determine whether the disk can be written or not...and if you'll believe that, you'll believe anything. In fact, the mechanism is a whole lot more sophisticated and involves shining a light through the hole (or not shining as the case may be) in the disk write protect window. It may be that the detect mechanism is giving a false 'reading' and fooling the ST into believing that all disks can be written. Have the device checked by a competent service technician.**

EMULATION PAINS

Q I have bought most of the magazines specifically for the ST and consider yours the best. I like your magazine's style and I think that you have a particularly technical coverage..

I have tried to run some public domain mono emulators, but all of them bomb out. Does anyone know of one which will work with a 520STE, or am I missing something important?

Graeme Dobie, Edinburgh.

A **Neither of the PD emulators will work with the STE. The reason is that the emulator works by copying some code out of the ST's operating system ROMs into RAM, where is modifies it and removes the bit that checks for a monochrome monitor. The ST then never checks that one is actually physically attached and simply assumes that it is.**

The emulator then copies the mono screen and displays it on the colour monitor.

Every time Atari changes the version of TOS the mono emulators become very confused and can't find the ROM code they must copy into RAM, or they copy the wrong bit because all the addresses of ther ROM routines have changed.

THE 1990 ATARI ST PRODUCT GUIDE

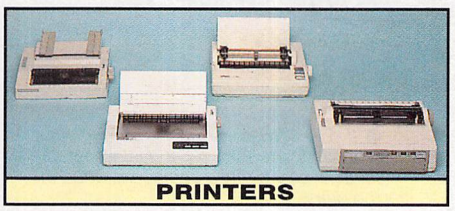
PERIPHERALS & ACCESSORIES


FLOPPY DISK DRIVES


MONITORS


JOYSTICKS


SCANNERS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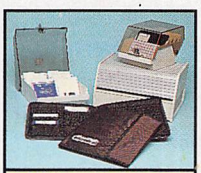
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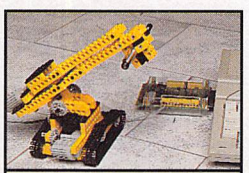
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Sound Digitisers	Sound Samplers	Video Enhancers

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Cables	Cleaning Kits	Disks
Disk Boxes	Dust Covers	Joysticks
Monitor Access	Mouse Access	Power Supplies
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ST Dedicated	68000 Processor	General Computing

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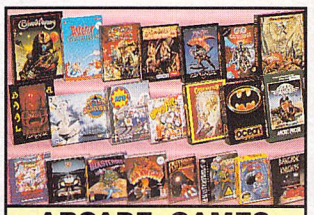
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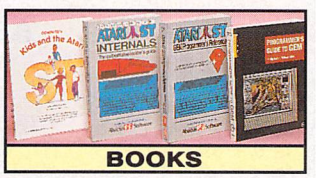
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Which computer(s), do you own? .....

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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 Discovery Pack	£299
Atari 520STFM Explorer Pack	£299
Atari 520STE Super Pack	£399
Atari 1040STE Super Pack	£499
Atari 1040STE Professional Pack	£499
Atari Mega ST1	£589
Atari Mega ST2	£899
Atari Mega ST4	£1,199
Word Processing Laser Pack	£1,799

MONITORS

Atari SC1224 monitor	£299
Atari SM124 monitor	£149
Philips CM8833	£267

FLOPPY DRIVES

Actionsoft 1Mb 5.25in	£134.95
Atari SF354 single sided	£99
Atari SF314 double sided	£149
Cumana 1Mb 3.5in	£109

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	£1,299
Atari Mouse	£24.95
Casio MT240 MIDI keyboard	£129.95
Epson LX800 printer	£269
EuroLink Modem	£259.95
Linnet Modem	£142
Linnet 1200 Modem	£239
Star LC10 mono printer	£263.35
Star LC10 colour printer	£297.85

BEST BUYS

This month the editorial team selects the best five buys in CAD packages:

DynaCADD, Expressworks.....£650
Aimed at the professional

Draft Plus, GFA.....£149.95
Powerful CAD package

Easy Draw 2, Elect. Dist. £49.95
Technical drawing program

Master CAD, Microdeal.....£29.95
A cheap entry into the world of CAD

PC Board Designer, Adamsoft.....£195.95
For printed circuit board design

DIARY DATES

UK EVENTS

13 to 16 September 1990
European Computer Entertainment Exhibition
Organiser: EMAP (071-404 4844)
Venue: Earl's Court, London

6 to 9 December 1990
Computer Shopper Show
Organiser: Blenheim Database
(0625 879970)
Venue: Wembley Exhibition Centre, London

OVERSEAS EVENTS

24 to 26 August 1990
Atari Messe
Organiser: Atari Germany
(010 49 61 42 2090)
Venue: Dusseldorf, FRG.

4 to 8 October 1990
Comdex Europe SICOB
Organiser: Media Plus
(081-977 3474)
Venue: Paris, France

12 to 16 November 1990
Comdex Fall
Organiser: Media Plus
(081-977 3474)
Venue: Las Vegas, Nevada, USA

● *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.*

ADDRESS BOOK

Atari UK
Atari House, Railway Terrace,
Slough, Berkshire SL2 5B2.
Tel: 0753 33344
Fax: 0753 822914

CIX
Suite 2, The Sanctuary,
Oakhill Grove, Surbition,
Surrey KT6 6DU.
Tel: 081-390 8446

Datel Electronics,
Govan Road,
Fenton Industrial Estate,
Fenton,
Stoke-on-Trent, ST4 2RS.
Tel: 0782 744324

Evesham Micros,
Unit 9, St Richard's Road,
Evesham, WR11 6XJ.
Tel: 0386 765500

Frontier Software
PO Box 113,
Harrogate, N.Yorks,
HG2 0BE
Tel: 0423 567140

Gasteiner Technologies,
Unit 12A, Millmead Business Centre,
Millmead Road, London N17.
Tel: 081-365 1151
Fax: 081-884 2418

Goodman Enterprises,
16 Conrad Close,
Meir Hay Estate, Longton,
Stoke-on-Trent, ST3 1SW.

Interactive Publishing
Europa House, Adlington Park,
Adlington,Macclesfield,
Cheshire SK104NP
Tel: 0625 878888
Fax: 0625 879966

HiSoft
The Old School,
Greenfield, Bedford MK45 5DE
Tel: 0525 718181
Fax: 0525 713716

Kuma Computers,
12 Horseshoe Park,
Pangbourne,
Berkshire,RG8 7JW.
Tel: 0734 844335

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

Rainbird Software
Unit 1, Hampton Road Industrial
Estate, Tetbury,
Gloucestershire GL8 8DA
Tel: 0665 5504326

Third Coast Technologies,
Unit 8 Bradley Hall Ind Est,
Standish, WN6 OXQ.
Tel: 0257 472444

US Gold
Units 2/3 Holford Way,
Holford, Birmingham
B6 7AX
Tel: 021 625 3388

REPAIRS

Ampower Computer Repairs
15a Alcester Road, Studley, Warwickshire
B80 7AG.
Tel: 0527 85 3374

Avon Micro Centre
Unit 4, Western Road Industrial Estate,
Stratford-upon-Avon,
Warwickshire CV37 0AH.
Tel: 0789 292269

Ladbroke Computing
33 Ormskirk Road, Preston, Lancashire,
PR1 2QP.
Tel: 0772 203166

Evesham Micros
Unit 9, St Richard's Road,
Evesham, Worcestershire WR11 6XJ.
Tel: 0386 446441

SDL
Unit 10, Ruxley Corner Industrial Estate,
Sidcup Bypass, Sidcup, Kent DA14 5SS.
Tel: 081-300 3399

W.T.S. Electronics
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Bedfordshire LU4 8EZ.
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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.

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AVAILABLE: JUNE 90

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I/O	• Parallel port built-in (25-pin Centronics) • Serial port built-in (9-pin RS-232) • Mouse controller port built-in (9-pin serial)
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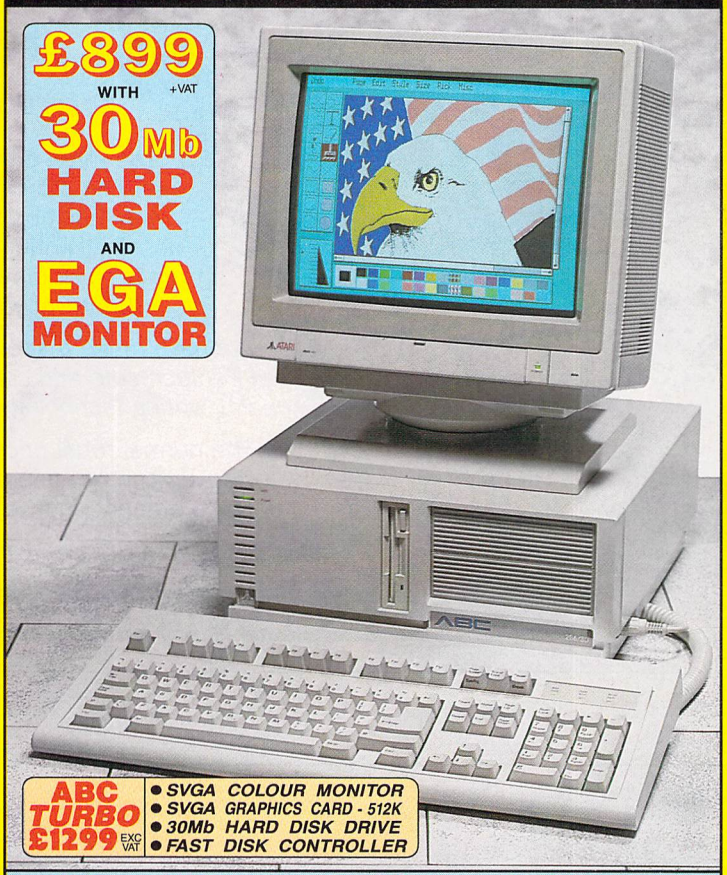

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ATARI ST USER reader offers

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"With results like that, Pro-Punter deserves the praise lavished upon it by other press reviews and satisfied customers. . ."

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Grab graphics like never before

. . . with the Vidi ST Digitiser



Rombo's Vidi-ST is a fully featured digitiser consisting of a plug-in cartridge, sophisticated picture manipulating software and a comprehensive manual.

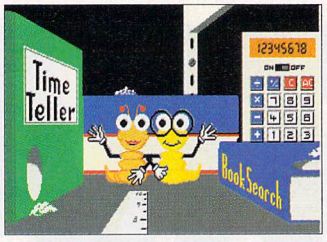
As will as grabbing single images from TV or Video for use with art programs or DTP packages, the Vidi can actually capture pictures and display them in real time – at up to 25 frames a second!

This is the essential package for anyone who wishes to make use of the full graphics potential of their ST. With a saving of £15 off the retail price this is an offer you should not miss.

SAVE £15! RRP £99.99 Our Price **£84.99**

Fun number crunching

. . . with Things to Do with Numbers



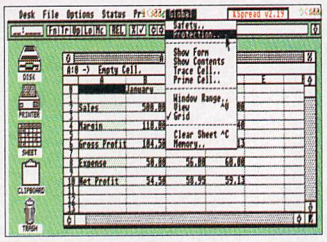
Softstuff is one of the top software houses producing high-quality educational software for the ST. And Things to Do with Numbers is one of their best creations.

On the disc there are three games designed to combine learning with fun in such a way that the child using it will automatically pick up various useful elements of mathematics – without even realising it.

With its clearly designed grahics and well thought out structure, Things to Do with Numbers is a value packed educational tool which, with a saving of £10 is even better value for money

SAVE £10! RRP £19.95 Our Price **£9.95**

K-Spread 2



K-Spread 2 is an immensely powerful and fully featured spreadsheet with which you can make financial forecasts and calculations, predict future profits and losses and examine the effects of various parameters, like the cost of producing a product.

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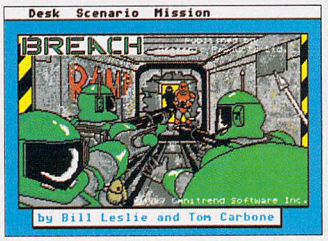
Once more . . . unto the Breach



Breach is a game which demands nerves of steel and sound tactical judgement for you to win.

You can select from a number of scenarios. For example with Breeder your task is to wipe out an alien installation and rescue Federated World citizens who are being used as fodder for man-eating monsters.

Breach is one of those games you just can't put down. With its addictive gameplay, tactical combat and facility for extra scenarios, its guaranteed to kep you coming back for more.

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Back in the bad old days, when computers had precious few bytes of RAM, dreary displays and sloooww motion disk drives, command line interfaces were all the rage. Up and down the country, unfortunate computer operators punched obscure control sequences into their IBM PCs and lookalikes. Want to copy a file from one 'folder' to another? Try this:

```
copy a:\apps\wordpro\letters\bank.ltr
b:\backup\finance\letter
```

Enter that little lot and you might just end up with a letter to your bank manager transferred from its folder on floppy drive a: to safe back-up storage on floppy drive b:. Moving from folder to folder was a nightmare as you constantly became lost halfway. Files regularly disappeared without trace. Verdict? A complete wash-out. Command lines took months to learn properly and years to master. But while the command line users suffered, deep in silicon valley in California, be-lab coated technicians worked late into the night to perfect the first graphical environment program which would revolutionise the small computer industry. And the result? Apple's Macintosh.

The first 'user friendly' computer ever made, the Mac required no knowledge on the part of the user. Switch on, a series of little pictures appeared on-screen representing disks, folders, programs, files and the like and all you had to do to access any of them, was to move an on-screen pointer and press a button.

Known as the WIMP (Windows, Icons, Mouse and Pointers) environment, the method of control quickly became a success. And at the heart of this success? That silicon sub-species known as the mouse. A square of plastic slightly larger than a couple of matchboxes, with a button or two on top and a ball underneath. The mouse became the computer icon of the late '80s.

But why a mouse? After all, there's been plenty of other input devices over the years. Graphics tablets and pens, light pens, wands...the list goes on - what makes the mouse so special?

As with anything that achieves popular acclaim, the mouse is just so intuitive. Within minutes of using a mouse it becomes an extension of your own hands and fingers. No longer are you tied to simple typing, you've developed a whole new method of communication. Roll it here, roll it there, point, select, click - the mouse becomes you.

ENTER ATARI

And so the Mac became a success, mice were universally accepted as the latest - and best - silicon input organism, and the people flourished - or did they?

Well no, as it turns out. Apple's financially remote machine remained in the hands of a tiny minority (those who could afford it) and although the Mac did 'catch on' in the States (where it was much cheaper), the machine didn't achieve the mass popularity or sales expected in the UK. Mac had however, opened a little crack in the silicon dyke through which a flood of cheaper 'imitations' would soon pour.

ON ITS BACK

A neat little lump of inoffensive plastic to roll around on your desk-top negating the need for obscure command strings - hunky dory, right? Wrong! There are many occasions when you simply can't use a mouse (take a look at some of the entries to our Dicky Desktops for examples) because there isn't enough space on your desk. What then?

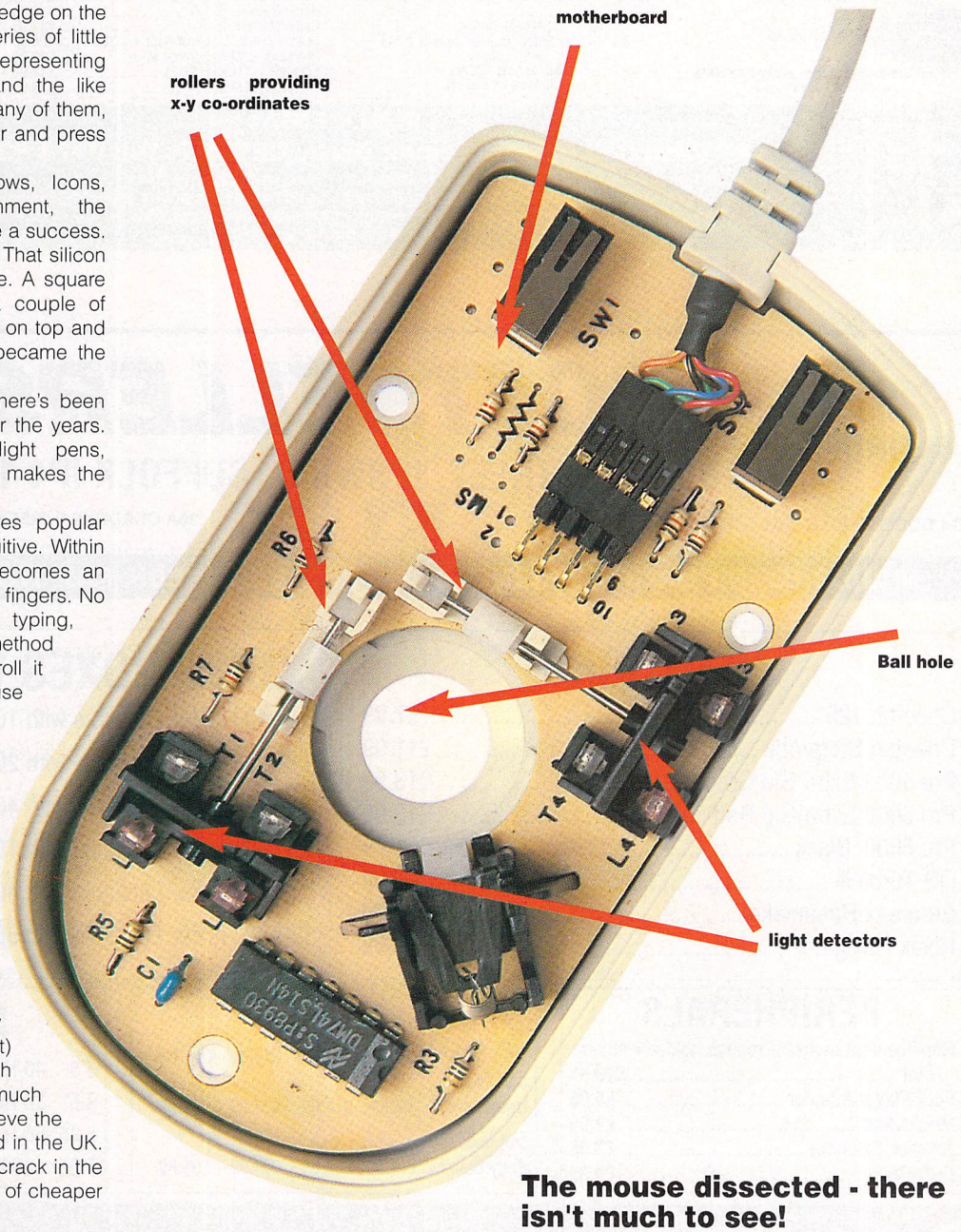
As luck would have it (or the need to generate even more profit by developing new gadgets...), there is an alternative. The trackball looks like a larger version of the mouse turned upside-down. Instead of rolling the case - and consequently the ball - around, the case remains still and you roll the ball with your fingers. The ball is much larger than that of the mouse (typically, the size of a snooker ball) and protrudes from a recess providing easy access.

Use of the trackball is surprisingly simple and closely resembles the mouse except in one important aspect, dragging. If you want to move windows or files around on-screen with a mouse, you move the pointer to a the object to be moved, click once and while holding down the mouse, 'drag' the item across the screen. But try performing this action with a trackball and you'll run into finger-foolin' fun. You're already using fingers to move the ball, how're ya gonna press the buttons?

The answer's simple (but rarely used): Position the buttons below - rather than the usual above - the ball. Using this layout, it's just about possible to click the buttons with the thumb while moving the ball with your fingers.

Trackballs are on the receiving end of a lot of renewed interest at the moment having been incorporated into the designs of several portable computers and consequently, manufacturers are bringing improved models to the market with strategically placed operating hardware. If your silicon rodent is a pain, check out the trackball supertest in ST World.

MEANWHILE, UNDER THE SCALPEL...



The mouse dissected - there isn't much to see!

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Atari made and sold games machines to a world eager for space invaders, pong and frogger machines they didn't have to feed with florins. The company sold a million as the expression goes, but the market for unsophisticated games consoles and 8-bit computers was dying on its feet - there just had to be a way out. There was, and it was called the Atari ST.

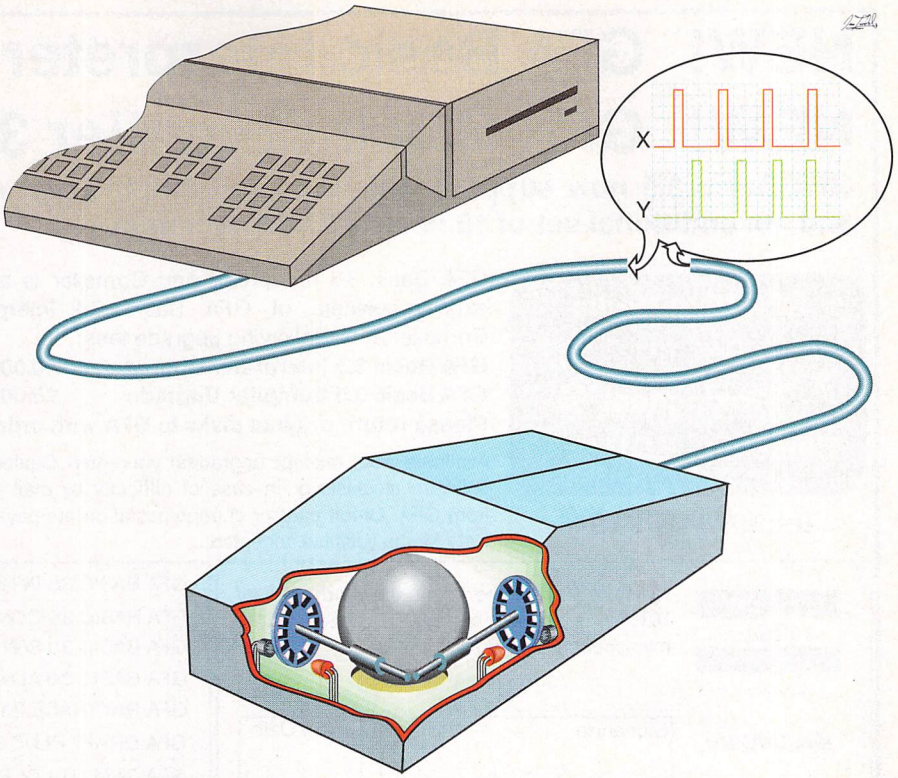
Closely modelled on Apple's Mac (although Atari may dispute the claim), the ST really did live up to its 'Power without the Price' advertising slogan. Big memory, the 'new' 3.5 inch big capacity floppies, a quality monitor and wacking great screen displays to match and a mouse-controlled WIMP environment that had almost everything Mac had.

UNDER THE SKIN

And the people really did live happily ever after. Everyone who was anyone got a mouse and pointed and clicked with the best 'em. So. You've mastered it's operation (and let's face it, the process isn't difficult, right?), what's really going on in the little grey plastic box?

You've probably already pulled open the ball cover on the underside (if not, why not - are you dead?). Get it in your hand, turn it over, locate the little hinged contraption with two down-pointing arrows and pull back. Soon, you'll have an empty mouse case, a detached hinged lid and a ball (golly, this is heady stuff!). Peer inside, what do you see? Not much, right? Bit of green circuit board, roller or two and that's about it. To really get in amongst it, you'll have to undo the two screws at the the top of the case. Do that, and the mouse falls into halves. Unfortunately, the result is a bit of an anti-climax because you still won't see much. Here's what's happening...

As you've previously seen, there's a rubber ball pressing against two rollers on the underside of the mouse, with just enough of the ball protruding from the case to enable it to make contact with the surface of your desk. The two rollers are attached to variable resistors deep within that bit of circuit board you caught a glimpse of after freeing up the ball.



In this breath-takingly pretty cut-away diagram (reminiscent of all those wonderful Odham's Children's Encyclopaedias don't you think?), the ball and light detectors can be clearly seen. Each light detector consists of a slotted wheel and an x-y co-ordinate is determined by 'counting' how many slots have passed the light detector

Now two rollers and two resistors are all that's need to give an accurate representation of just where the mouse is on your desk. It doesn't matter however, where the mouse is (you can roll it around on the seat of your pants if you like...), so why not use that potential for monitoring the whereabouts of an item, controlling an on-screen pointer of some description for example? And that's just what's happening. There's a pointer on your screen and every movement of the mouse ball produces an x-y co-ordinate which moves the pointer. Push the mouse forward, the pointer moves forward, back and the pointer moves back.

With a fully-controllable pointer, you've got the means to control the entire computer - no more typing in obscure command strings, simply point and shoot!

ON THE DOWNSIDE...

Versatile and intuitive, the mouse is probably the most usable input device ever devised but there are disadvantages.

To move the pointer you have to move the mouse around on your desk. But what's the average desk like? Right! Cluttered, coffee cups, Coke cans, chewed gum and a huge assortment of dispossessed items make finding space to push a mouse around exceedingly difficult.

As a solution several manufacturers have devised high resolution mice. With the standard Atari mouse there seems to be an almost 1:1 correlation between its movement and that of the on-screen pointer. This makes getting used to controlling the pointer easy, but you need lots of space. A high resolution device doubles the amount of pointer movement to mouse movement, so that you need only move the mouse by a small amount in order to send it whizzing across the screen.

High resolution mice cost a little more but do provide a large increase in efficient use of space. If you can't afford the price of a new mouse, or don't want to replace a perfectly healthy Atari mouse, there is another solution.

Several clever programmers have devised little software patches which greatly increase the resolution - and therefore the speed - of the Atari mouse. Most of these speed utilities are free and in the public domain. If you want to replace your dreary old Atari mouse then don't! At least not until you've read the complete road test in our sister publication ST World. Comprehensive buying details of all mice on the market along with full pricing and availability details ●

THE EXTRAS

Cast a glance at any popular computer magazine and you'll discover a veritable Pandora's Box of junk merchandising riding on the back of necessary hardware and for the mouse, there's no exception. Remember, you don't actually need any of this junk, although some of it certainly smooths the path of computing.

The main mouse killer is dirt. Rolling that ball around on your desk-top hour after fluff-laden hour certainly clogs the innards of any mouse. Soon, the ball will be so covered with fluff, dirt, grease and the like, it won't move properly and will provide an inaccurate representation of its position. To cure the problem of gunge, you can buy a dinky little pad known as a mouse mat. These babies take the form of a little oblong of sponge covered with a nice 'draggy' rough surface (but not so rough that it will damage your mouse balls). The mouse stops dirt from your desk-top finding its way into the delicate innards of the mouse.

For those of you whose desk-tops really are a filthy conglomeration of the ephemera of everyday computing (scruffy desk and nowhere to stick your mouse...) there's the mouse house. A hollow rectangle of plastic with a sticky pad or two on the underside which connects to the side of your monitor. Then whenever your desk-top is cluttered and you want to make space by moving the mouse, insert into the mouse house.

Many users swear by the mouse house, others find them a cheap gimmick intended to relieve you of even more hard-earned (and guess which camp I fall into...), but there you are, you pays your money and takes...etc.

And lastly, mention should be made of the furry mouse cover - an accessory not to be forgotten (however hard you try!). If stroking your hand over warm, synthetic fur rather than dull grey plastic appeals, why not buy a furry mouse cover? These (sic) little gems are an almost lifelike representation of a real mouse (since when did the last rodent you saw have bright orange fur, eyes the size of florins and a tail made of plastic? It did? Pass the meths...), cover completely your lifeless grey device and...well very little else actually. They're what's described as an ahem, 'novelty item'.

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APL 68000

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(ST World May 1987)

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MICRO APL

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Product: 520 to 1040ST solder-less RAM upgrade
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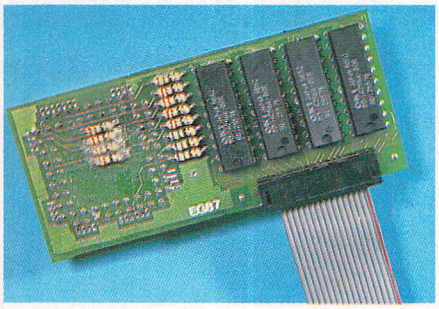
Telephone: 0257 472444
Price: £99.99
Configuration: 520ST

A half meg of fast RAM seems enormous, right? But somehow it never seems to be enough. Perhaps you can play 99 per cent of all arcade games on a 520ST, but try to do something remotely serious, and the software complains that there's not enough memory. Admittedly, there are a few applications such as simple word processors and trivial art packages that can run on a 520ST, but the vast majority of top-flight databases, DTP and MIDI software demand that you have 1Mb of RAM or more.



If you have an STE then your problems are easily solved by plugging in SIMM RAM cards. It's not so simple if you have one of the older 520STs. They weren't intended to have their memories upgraded. At one time you had to be an expert DIY-er and a dab hand with a soldering iron to increase the memory capacity of your 520ST, but manufacturers have devised ever simpler ways of adding RAM.

Now Third Coast Technologies has brought out what must be the simplest upgrade so far. A tiny PCB containing four RAM chips and socket and a ribbon cable leading to another socket. It fits inside your computer and increases the 520ST's memory capacity to a full megabyte.

You have to be confident about taking the computer apart because that's your first task. Unplug everything and flip the ST over so you can see its belly. Undo all the screws then flip it right-side up and lift off the case. Unplug and remove the disk drive, unscrew the metal shielding and take it off.

Find the memory management unit (MMU) (a large black square chip). It may be plugged into a socket, but could be soldered straight onto the circuit board (surface mounted). Before buying the RAM board, you should take a peek inside the ST to check whether the MMU is socketed or surface mounted because there are two versions. Make sure you buy the right one.

The PCB plugs into the MMU or clips onto it leaving the ribbon cable dangling free. Now expose the shifter chip in the large metal case. Prise the chip out of its socket. The new plug on the end of the ribbon cable is pushed in its place and the shifter is then plugged into this new socket.

In a small number of machines the shifter is surface mounted and you'll either have to de-solder it and solder in the new socket, or solder the ribbon cable wires onto the correct shifter pins.

THE BOTTOM LINE

Features: Adds 512k of RAM to a 520ST to increase the memory to 1Mb.

Ease of use: Instructions could be better, but it's quite simple to install.

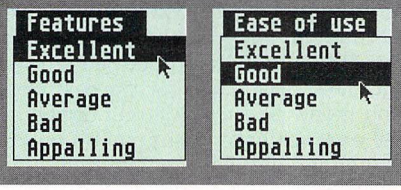


CHART ATTACK!

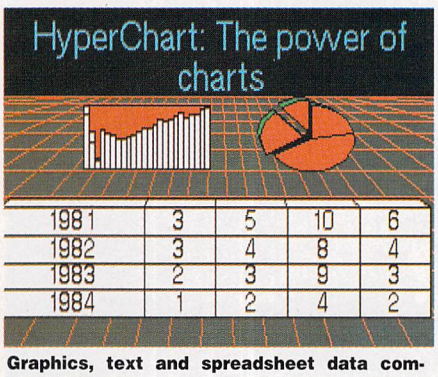
Roland Waddilove takes the boredom out of board meetings with Atari's lively presentation graphics package...

Product: HyperChart
Supplier: Atari UK
Telephone: 0753 33344
Price: £129.95
Configuration: All STs, colour and mono

HyperChart is unique among ST software - it's a presentation graphics package. In simple terms, the program creates slide shows out of a series of pictures rather like the Degas and Neochrome slide utilities which proliferate in the public domain.

HyperChart however, is a brilliant piece of software with a list of features as long as your arm, placing it a world apart from primitive PD packages.

The program enables you to take a series of text, graphic and spreadsheet files and manipulate them in a variety of exciting ways. Chunk of text here, graphic block there, combining different parts using simple cut and paste facilities to create a finished screen.



Graphics, text and spreadsheet data combined into one picture

This can be inserted into a series to create an auto-rolling or interactive sequence.

Each screen has a foreground and a background. The background is simply a picture created using HyperDraw or HyperPaint, but the foreground can be a combination of several different blocks of text and graphics.

You create a block (rubber banded box) on screen, then load a text file and highlight a section to display in the block. HyperChart chooses an appropriate font size so that the text fits inside, but you can stretch the block horizontally and vertically to make the text any size you like. HyperChart will read in from spreadsheets, grab the data and enable you to select which rows and columns of the spreadsheet you want to display.

Data can be displayed in many different ways including pie chart and bar charts, tabular form, line graph and 2D or 3D. Graphs are automatically scaled and you can spin them around the X, Y and Z axes in 3D. The size of the graphs, charts and tables is infinitely variable because they're displayed in rubber banded boxes that can be stretched to the size you require.

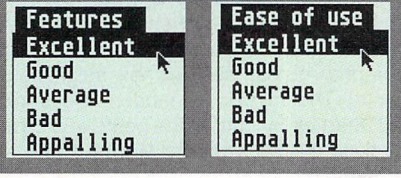
HyperChart bombed when loading a library picture for a background but apart from this hiccough, the package performed impeccably.

HyperChart is outstanding for presentations and lectures, training material and DTP pages, it's simple to learn, πeasy to use and is highly recommended.

THE BOTTOM LINE

Features: Takes graphic, text and spreadsheet files and combines them into a sequence. Bristling with useful tools.

Ease of use: A well written tutorial guides you by the hand through the entire program - it couldn't be simper!



Parts list: **One BC109 transistor QB33L, One 100K resistor, One MEL12 Opto-transistor HQ61R, One DIL 5volt relay FX89W, One 9-way IDC socket, Battery clips, Tiny scrap of veroboard, Strong desire to burn your fingers**

PROJECT

THE CHEQUERED FLAG

Fed up with getting your Scalextric all set up only to find no-one wants to play? It's no fun playing with yourself so this month, John Kennedy has devised an all-seeing electronic opponent...

If there's one thing I really hate, it's putting my Scalextric set together and having no one to race against. Half an hour to think of a good track, clip all the pieces together, get thousands of crash barriers and plastic hay-bales in place, then blow me, everyone's nipped out to the shops.

What do I do, take it all apart and put it back in the box? Not on your life, matey! I'm clever, see? I have an ST. And what's special about my ST? Well, it's probably the only ST in the world that can play Scalextric. OK, so some might say it's cheating a bit because it doesn't drive a car around the track itself, but it's still a darn good opponent. Plus it never complains when it has to get up and put the cars back on the track! I can just feel you're bursting with excitement to ask me how it works, and being the kind of guy I am, I'm willing to let you into my little secret.

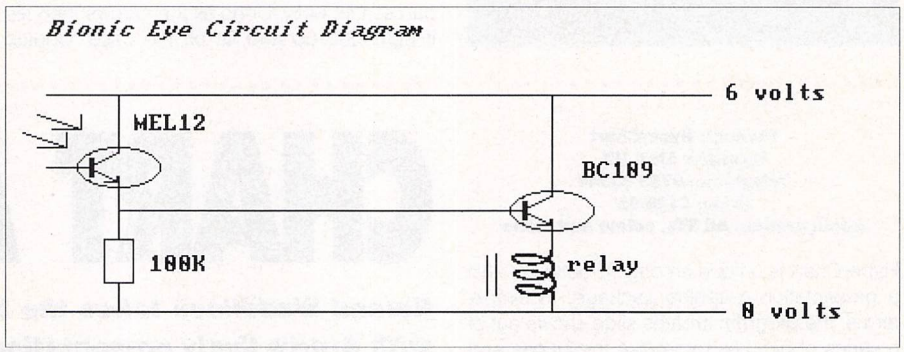
Instead of an opponent, I race against myself. The ST keeps count of the number of laps, the average time per lap, even the scaled-down speed! And all I have to do is set myself a time to beat, or an average speed to improve upon.

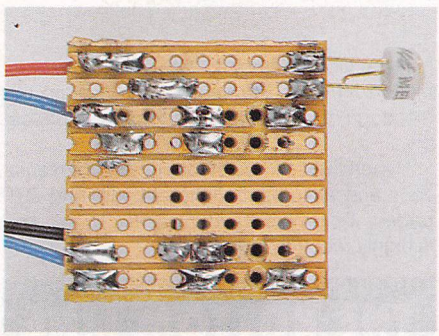
To work all this out, all we have to do is give the humble 'puter the power of sight. Video cameras and frame-grabbing digitisers with incredible artificial intelligence neural network algorithms? Not quite, but the next closest thing, a tiny DIY circuit with four components and a six volt battery. Isn't real life so much more disappointing than imagination?

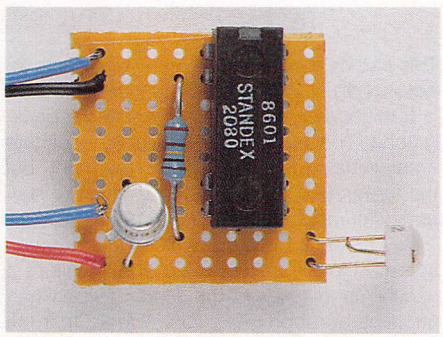
DOWN AMONG THE DIODES

The circuit consists of a tiny photo-transistor that gets really excited when it can 'see' light. A current will only pass through when a bright light shines on the circuit. This current is used to control a transistor. Now transistors are actually quite simple things at times. In this instance we're using it as nothing more than a switch, it's turned on by providing a high current, and off with a low current.

When the transistor is on, a relay is activated (the relay is a tiny electro-mechanical switch). This switch is connected to the joystick port of the ST and does nothing more than emulate the fire button. Simple, yet brilliant (well, I think so anyway).





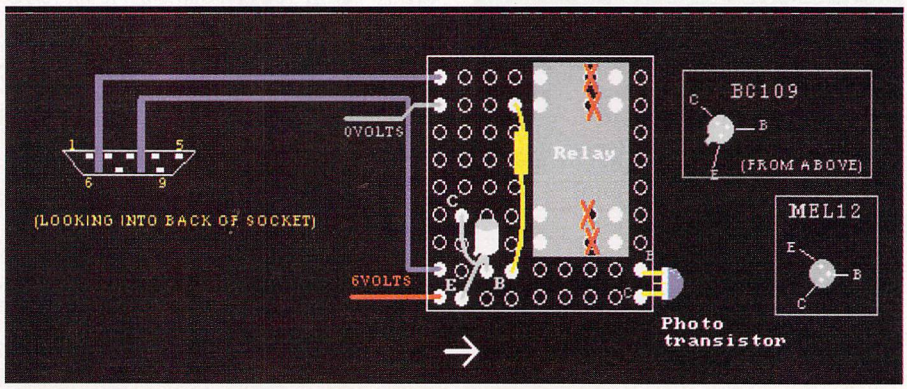


ABOVE: The schematic diagram, included for techies everywhere

FAR LEFT: The under-side of the circuit board, Notice the positions of the vitally important holes

LEFT: The upper side. The middle leg of the photo-transistor is not connected should not be allowed to touch anything

BELOW: How the components are laid out on the veroboard, plus the connections to the joystick socket



JOIN THE DOTS

Once again we'll need a tiny scrap of Veroboard to build the project on. From the photographs you can see just how small the circuit is. The miracle of modern electronics, eh? Start off by cutting the board to size and breaking the tracks in the places marked by Xs on the diagram.



Solder the teensy-weensy DIL (dual in-line) relay in place. Doing this step first will help locate the rest of the components. Notice the notch towards one end of the DIL package and make sure you have it facing the right way. If this is your first soldering experience, it might be worthwhile practising on another scrap of board before starting. It would also be a good idea to get a socket to plug the relay into, instead of soldering it in directly.

The resistor is next. Resistors are nice little items and don't mind which way round they go. Transistors on the other hand, are quite choosy. You must get the three legs in the right places, so check the diagram carefully. A small tag on the bottom of the metal can is the clue. The photo-transistor can now be soldered in place, followed by all the connection wires.

A word of advice: Try to keep the cable between the relay and the joystick port as short as possible. If the cable is more than about 50cm long, you may start to have problems with the capacitance of the wires. It's possible that with a really long cable, the ST may be damaged by a build-up of charge, so keep it short.

If you want to increase the distance between the circuit and the ST, attach the photo-transistor to a length of wire. For simplicity's sake, in our circuit it's connected directly to the circuit board.

TESTING, TESTING

When connecting the six volt battery, you should be able to hear the relay click on and off as you block off the light from the photo-transistor. This means the project is working. If it doesn't work, have a nice restorative (or a cup of tea). Then try it again, shining a torch on the photo-transistor to make sure it's getting the point about the light. Check to see if the battery is flat. Check all the wiring. Have another cup of tea.

How you interface the circuit to the Scalextric depends on your ingenuity. It seems to work perfectly well just by siting the light sensitive component at the edge of the track, close enough for a passing car's tire to block out the light. For a more permanent interface, you may want to make a small hole in the 'starting grid' piece of track and glue the photo-transistor in place. Every time the car drives past, it triggers the circuit. This technique is necessary if you want to use two photo-transistors - one for each lane.

The circuit connects directly to the joystick port and consequently, programming is not a problem. Basic is the ideal language because it's easy to understand and to add all sorts of extensions. All the program needs to be capable of is checking the state of the fire button and counting very fast. Once the car has zipped past, it can check to see how long before it last zipped past, and therefore calculate speeds.

AND FINALLY JOHN?

And finally, 'USER, it doesn't take a genius to realise that this simple circuit can be put to all sorts of weird and wonderful uses. The simplest extension is to add another eye, allowing the ST to be used as an electronic lap counter for you and a friend.

Avoiding Scalextric for a moment, the same electronic eye would make a perfect burglar alarm. As soon as the intruder breaks an invisible beam of light stretching across a corridor, the ST sounds the alarm. If could even 'phone the police and bleep at them if you had a modem attached. In other words, once the ST has acquired the gift of sight, a whole host of possibilities swim into view. Keep your eyes open, huh? ●

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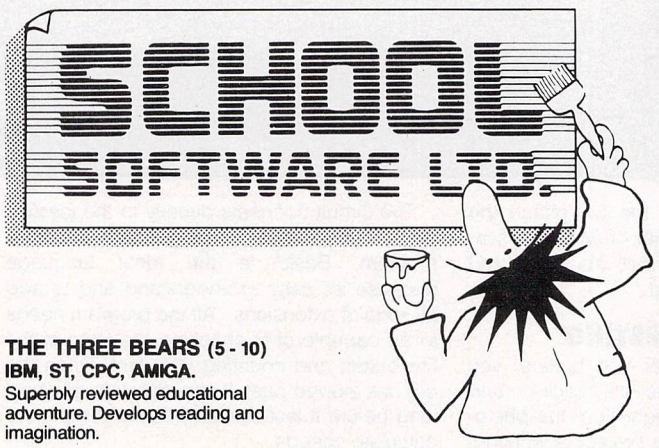

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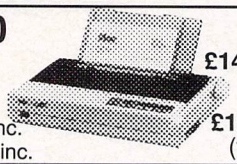

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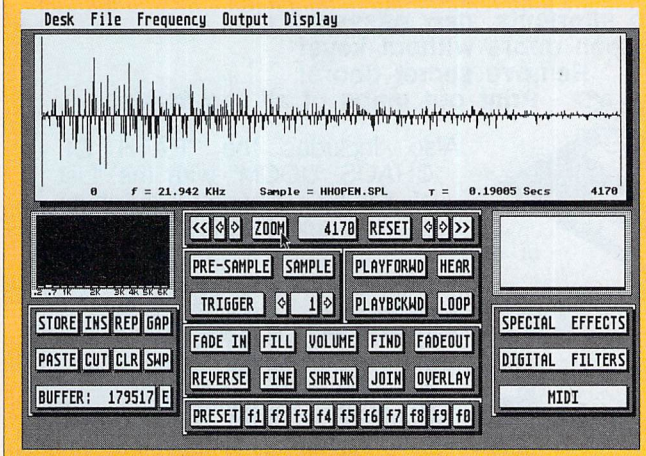

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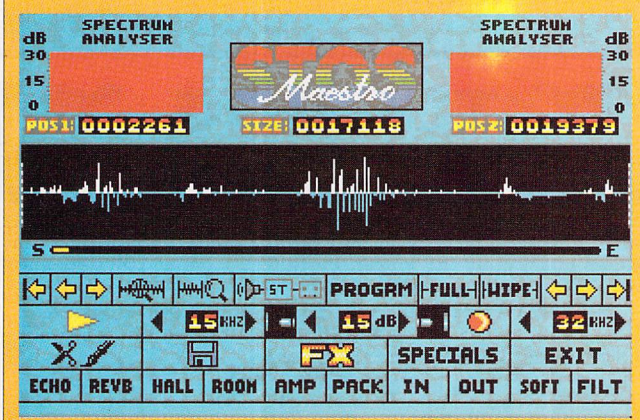
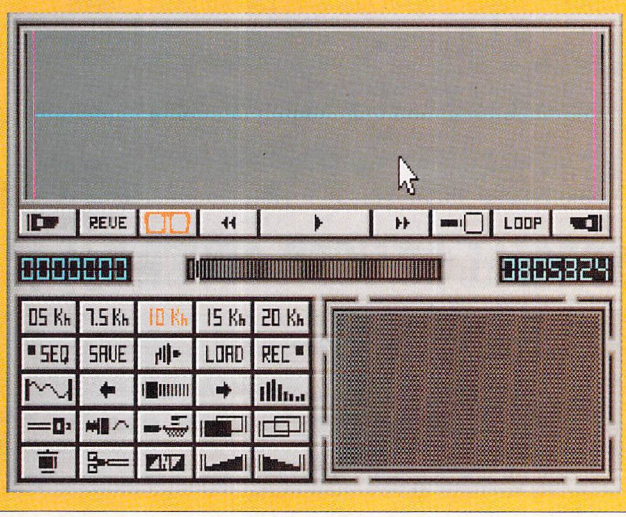


STOS Maestro is reasonably priced, easy-to-use and has many tools for editing and modifying the sample data

Master Sound's claim to fame is that it's the cheapest sampler on the market



Voice conversion and STE incompatibility, Maestro Waugh takes the floor once again...

Daton Music Services which produces music on disk in Midi format has changed its name to Hands On Midi Software (Tel: 0705 452628) and has added several new titles to its range.

Audio Visual Research (Tel: 0582 457348), developer of ST Replay, has announced a new mega sampler for the ST. Bearing the snappy name of the AVR Pro-Series 12, the device features 12-bit sampling and the ability to read ADAP 16-bit sampler files. The package includes Drumbeat, a MIDI-compatible sampling drum machine program. There's also MIDIPlay, which lets you play up to 128 samples (memory permitting!) from your MIDI keyboard with up to four-note polyphony.

Hybrid Arts UK, the UK distributors of Hybrid Arts music software (which originates in America) is to cease trading. A new distributor is being sought.

If you're one of the fortunate musicians with a new Yamaha SY77 synth and have a pile of DX7 voices lying around gathering dust, you could be interested in a DX7-to-SY77 voice conversion program from German company Geerdes. It costs £39 and is being distributed in the UK by Newtronic (Tel: 081 659 0744). It includes 1000 DX sounds.

Also from Newtronic and by Geerdes, is a new budget-priced sequencer. 1st Track is simple to use, has 24 tracks and comes complete with song files on disk.

Music DTP, the desktop music publishing program from Take Control (Tel: 021 706 6085), is being updated to support MIDI. The new version features real time MIDI input, play-back of scores and can import MIDI files. The program also supports graphic files in bit image (.IMG) and metafile (.GEM) format.

BUDGET SAMPLERS

Craig Hodges of Leigh-on-Sea wants to know about low-cost samplers. The cheapest sampler is free - that's right! It's a demo copy of ST Replay 4 in the public domain. The program's available from Softville on disk MUS34. Check out disks MUS18 and MUS38 which contain lots of sampled sounds and MUS19 which contains sampled pieces of music.

While the software will enable you to load, manipulate and play the samples, to make your own, you'll need some hardware. Each of the following samplers come with their own hardware and software.

Cheapest is Master Sound (£29.95), followed by STOS Maestro Plus (£59.95). Then there's Replay (£69.95) and Replay Professional (£114.95) - remember you get what you pay for.

If you want to incorporate samples in STOS programs, then STOS Maestro is the one to look for. Otherwise buy what your budget will stretch to. If you get hooked, Softville disk MUS47 contains a converter program to convert samples between the various formats.

Most sampler software will read in any file from disk and display it in digital form. Programs and text files probably look - and sound - like garbage, but try a few anyway.

Look at the files on games disks and see if you can spot any samples. You should be able to load those into sampler software and play them back too.

Softville is at Unit 5, Stratfield Park, Elettra Avenue, Waterlooville, Hants, PO7 7XN. Tel: 0705 266509. Cheapest disk can be had for a couple of clams depending upon the number bought. Contact Softville for details and a PD catalogue.

STE BLUES

L. Cowieson of Dunoon is thinking about buying an STE for music, but is a little worried about incompatibility problems. However, most of these are associated with games. Sometimes programmers are tempted to take a few short-cuts or adopt 'illegal' or 'dirty' programming methods in order to get more performance out of a machine. This is fine until Atari changes the hardware or software as with the STE, then the programs won't work.

Most of the major music software programs run on an STE with perhaps only the odd hiccough or two. Programs updated regularly - the major ones - should have had any problems with compatibility sorted out in the latest release.

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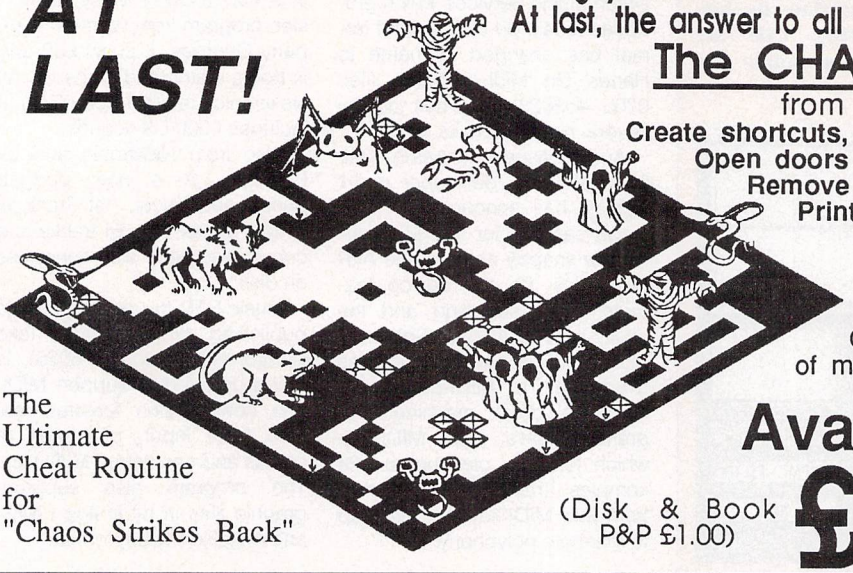

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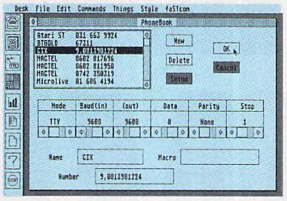


Atari's very own Comms package FastCom, is set to return to the market at a price of £49.95

One of the better commercial comms packages available for the ST is Atari's FastCoM (an extensively GEMmed program of very distant Macintosh origin). Despite its good points the package has been forgotten until recently when Atari decided the product was worth taking out of the warehouse, dusting off and re-packaging to give it a new lease of life.

The program is full of goodies including a viewdata mode for those who are still using such arcane systems. The new FastCom may include extra features and when it's available, we'll be able to tell you more.

Teletext may only be one-way comms, but it's still damn good...

Comms isn't just about modem-to-modem communication with bulletin board systems, it's a varied subject including packet radio, laptop links, terminal emulation and commercial mail. Also if you've been wondering exactly what Teletext is - well it too is a form of comms.

Teletext transmits pre-prepared 'frames' of information along side ordinary television transmissions. Information is captured by a TV receiver which then hands the signals over to a Teletext decoder - responsible for the conversion of these signals, giving the display circuitry the text and control code information to put on the screen.

Teletext data is captured by the Microtext Teletext module (which is a TV receiver and decoder). A cable plugged into the ST's parallel port takes the Teletext information into a piece of software which acts as a front-end, taking requests to view certain pages, grabbing them from the airwaves and displaying the result on screen in any one of the ST's three graphics modes.

Unfortunately, this is only a one-way process with Teletext computers spooling out in a never ending stream, so the decoder has to wait for the required page before it can be grabbed for display. There are however, a huge range of diverse subjects covered over the four Teletext services - news, sport, and TV guides are particularly up-to-date. In fact, few publicly accessible news sources are as current as Teletext's, so there's no excuse for not knowing what's going on in the world!

The Microtext adapter costs £148.95 and it's available from Microtext (the company) on 0705 595 694.



Channel 4's Oracle service carries most music and leisure sections on the Teletext airwaves



Graphics are crude, but it's just about good enough to convey the information

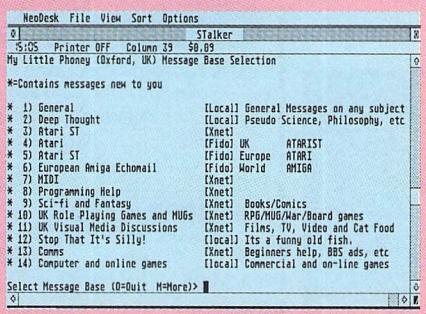
SYSOP SOAPBOX

SysOp's, Steven Green, takes the stage to point out that bulletin boards would be more useful to many people if only more was known about what goes on behind the scenes and how various BBS's talk to each other...

Most modem owners call Bulletin Board Systems just to download files without exploring the system any further, meaning they are missing out on other useful and important activities. The reason bulletin boards came into being in the first place was for communicating with other people via the use of message bases.

Having problems with a printer, up a stump with a piece of ST software, or just want to chat about your favourite Science Fiction authors? Generate response by leaving a message in the appropriate area on a BBS48. Nearly all BBS in existence have message areas (many are part of national and international networks) for distributing messages around a group of BBS, expanding participation in discussions and allowing local call access to a wider audience.

For ST owners there are two main networks in use, FoReM Network (FNET) and FidoNet. Most FoReM (or ///Turbo) boards belong to the FoReM network of several hundred boards (25 in Great Britain and the rest in Europe, USA and Canada - most are Atari ST based). FNET uses a system called Crossnet allowing message bases to be shared between boards. There are conferences covering most areas of interest including technical matters, entertainment and leisure.



International BBS messaging is commonplace these days

FidoNet is a much larger system with about eight thousand nodes around the world. It uses a system called EchoMail for sharing message bases, the size of FidoNet means there are hundreds of different message areas covering just about any subject you can think of (and quite a few you probably couldn't!)

Another network worth dipping into is UseNet, which runs on Unix-based machines. It's a vast network with thousands of nodes and newsgroups, but is not normally accessible through free amateur bulletin boards (the only one I am aware of is Tharr). It can however be accessed via some commercial systems such as CIX.

So there's a whole lot more going on within the average BBS than just download mania - message bases on public systems can now spread their wings far and wide, so hop on and have a chat.

* My Little Phoney, 0865 773277, 2400 baud, Fnet #1004, Fido 2:252/25. This is my own system and is connected to both FNET and FidoNet (thought we'd let you plug that one - comms ed).

* Invicta Conferencing system, 0622 890888, 2400 baud, Fido 2:254/63. This has a large number of FidoNet Echomail areas.

* STun User Network, 061 429 9803, 2400 baud, Fnet #1008. All of the Crossnet message bases can be found on here since the SysOp co-ordinates the European FNET and Crossnet areas.

* Tharr, 0342 261804, 2400 baud / Trailblazer. A Unix-based system providing free access to UseNet.

* Penthouse, 071 930 3903, 2400 baud, FNET #1014. A London based ///Turbo system providing access to several Crossnet areas.

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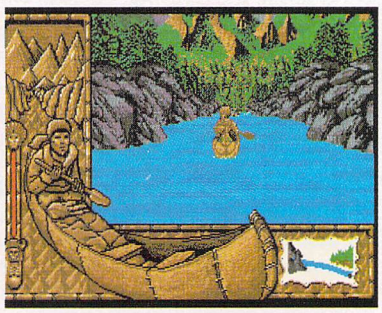

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TRANSFER MARKET

New SuperCharger enhancements, file transfers between operating systems, and queries from the Aegean in this months episode of...

It's getting increasingly difficult to keep up with the latest developments in the DOS emulation wars between competing vendors of software and hardware, to turn your ST into an IBM clone.

I have received a preview copy of SuperCharger Version 1.4 from British distributors Condor Computer, and what an upgrade it is! SuperCharger has always differed in its basic design from PC-Speed and PC-Ditto II. Whereas these two sit on top of the ST's Motorola 68000 processor inside your grey plastic box using the host computer's memory, SuperCharger remains outside plugged into the DMA port providing its own RAM chips.

In my opinion the new version is the first to take proper advantage of this design, offering revolutionary new ways of integrating DOS with TOS/GEM - something other emulators are unable to do.

MULTI-TASKING

You can launch MS-DOS not only from the desktop, but from whatever GEM application you're in . You'll then be able to perform multi-tasking by having DOS and TOS programs run concurrently, with a "hot key" to switch effortlessly between them (this now works with latest versions of the ICD hard disk driver too). It's even possible to launch DOS applications direct from a GEM window as if they were native ST applications.

To complete the integration the SuperCharger's own RAM can be accessed as a RAM disk under TOS (and vice versa), the ST's main memory accessed as a DOS RAM disk - so none of the combined kilobytes of power go to waste whichever operating systems you're using.

I'm really impressed so far - and probably will be more once I've got instructions enabling me to understand the programmer's toolbox supplied with Version 1.4 (said to enable you to write your own background tasks, use SuperCharger's V30 chip and the optional maths co-processor in ST applications).

Since I only have one SuperCharger available to me, I was unable to check out MSDOS multi-tasking using several SuperChargers chained together...

Using either DOS or Mac emulators should enhance the qualities of the ST in TOS/GEM mode - not distract the user from them. The ST equipped with Spectre GCR and any of several PC emulators comes very close indeed to my ideal machine - allowing equal and easy access to all three worlds.

However, one problem still remains - very few formats are truly universal. Plain ASCII text comes closest as long as applications such as foreign letters, graphics, italics and footnotes are avoided.

Graphics in particular cause problems as most ST programs now read and write Degas and .IMG bit-image files, but (with the exception of some PC applications running under GEM) these are unknown in the outside world.

When using vector graphics even some major ST drawing programs (for example Outline Art and MegaPaint Professional) refuse to recognise the GEM metafile standard. So what does it take to transfer your artwork smoothly between ST, PC and Mac? Or use famous programs such as Adobe Illustrator, Digital Darkroom, Coral Draw and PC Paintbrush to enhance your ST-oriented DTP work (or vice versa?)

Fortunately, an increasing number of ST programs are able to read and write alien file formats.

PUBLIC DOMAIN

One old public domain standby is PICSW7 (Picswitch Version 0.7) which handles the MacPaint format - it would be interesting to know if there have been further upgrades, perhaps to handle the larger MacPaint2, TIFF (Tagged Image File Format) or PCX (PC Paintbrush) formats.

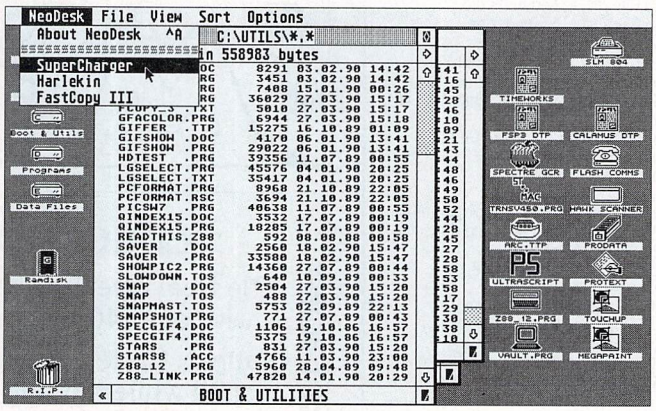
The latter two are widespread standards for bit-image illustrations especially scanned images, both are catered for by the excellent TouchUp (although only in monochrome).

As to resolution-independent vector graphics, I have not yet found an ST program capable of handling the widespread PICT format as used by MacDraw. There are rumours of one such program in the US, however at the moment PostScript (especially the encapsulated (EPSF) variety) remains the best solution.

With a little effort, all these translation problems can be solved. The following (unlikely) example shows what can be done - scan picture in IMG format, use TouchUp to convert to uncompressed TIFF, edit using Digital Darkroom and reconvert the polished image to IMG.

Design some elements of your page in Calamus and print them to a disk file, to be read by Image! (available from Third Coast) and converted to a standard IMG file. Design other elements in say, Fleet Street Publisher and import both your scanned picture and the Calamus stuff onto the FSP page.

Produce an EPSF illustration on the Mac (Adobe Illustrator) or PC (Coral Draw) and place it on the same page. Print the whole lot out with UltraScript, write PostScript to disk for sending off to a typesetting bureau, or re-export the page as EPSF for further refinement to Aldus PageMaker or Quark XPress on the Mac.



LEFT: SuperCharger as a desk accessory

Greek Problems...

Harry Mamangakis from Crete - claiming to be the first SuperCharger owner in Greece - is unhappy that his emulator doesn't produce sound. You should count yourself lucky living in such a beautiful place and having a quiet PC. I've never missed the limited PC beeps in my work, when the ST has so much more to offer in terms of sound in its native mode (the opinion I gave Condor when recently asked my views on the addition of sound support). Maybe you out there disagree - ever feel the need to write MS-DOS beep symphonies?

Another problem raised by Harry Mamangakis concerns Turbo Pascal. Using an SC1224 colour monitor, the same disk that happily boots up in colour under pc-ditto will only appear in boring monochrome with SuperCharger, except when a colour game has been run first. Something to do with the bright Mediterranean sun, perhaps? I have only ever used Turbo Pascal in green under CP/M. Can anyone come up with a solution to this particular riddle?

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BS. 22 Digitised NASA Slideshow.
BU. 58 File Selector, Desk Manager, Disk copier, Virus Killer . . .

BU. 59 ZX81 Emulator; including 38 program files! Uses the original keyword entry system! Great Fun!

SO. 02 Composer; enter notes from computer or Midi keyboards!
SO. 03 16 Voice synthesiser with multi voice recording!

BC. 13 Clip Art – Foodstuffs etc.
BC. 16 Clip Art – VIZ magazine.
BC. 17 Clip Art – Garfield pics.
BC. 18 Clip Art – Beano pictures.

BD. 33 STE demo; See what your STE is capable of and be amazed . . .
BD. 34 What the Butler Saw; Demo.

TOP 10 – PD Favourites

BG. 01 Monopoly, Chess, Backgammon
BG. 20 Dungeon Master – Help disk.
BG. 27 Strip Breakout!
BE. 02 Kids Music, Kids Piano . . .
BE. 03 Kids ABC, Kid Story . . .
BE. 05 On Screen Colouring book!
MD. 15 Snowman – Digitised demo.
BU. 01 Neochrome – Art Package.
BU. 07 ST Writer Elite – Word Pro.
BU. 57 ANI-ST (was Animator)

BUDGIE Licenseware:

BUG. 31 Inferno; Boulderdash copy.
BUG. 32 Runaway + Rotatus – Arcade.
BUG. 33 Crystal Caverns; Platform game + Happy Puzzler; Tile puzzle.
BUG. 34 Safe as Houses; Monopoly version with British names!
BUG. 35 Hostile Reception; Arcade game with Xenon II style graphics!
BUG. 37 Mr Dig and Tank Battle
PRO. 01 Electronic Bank statement.
PRO. 02 Programmers 68000 Library.
PRO. 03 Sprite Master; Sprite construction + demo and game.

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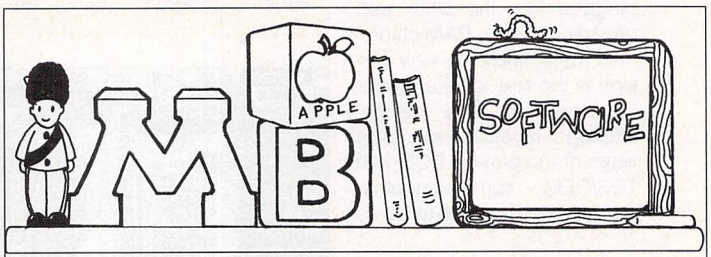

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LEARNING IN DISGUISE



Astate – nice graphics shame about the gameplay...

RPGs like you've never played before, future releases and gallons of tips.

A couple of French programs dropped on my desk this month, both claiming to be role-playing games, however that's where any resemblance ends...

Astate, from New Deal Productions, is a mouse controlled archaeological dig, concerning the quest for five pieces of the long-missing Statue of Theomorphe. You take on the role of a pair of walking shoes and roam around numerous screens metamorphosing into such delights as a pickaxe and a dustbin However BEWARE ! - the grisly transformation of your footwear into a pair of bony feet signals failure . The graphics are good and the tunes are catchy, but the gameplay is bewildering. This is certainly one to be missed.

The second RPG selection is B.A.T. which is programmed by the three-man team Computer's Dream, and published by Ubisoft. B.A.T. is a game that I definately recommend. The graphics static and animated, are staggering and are accompanied by a strong plot and good gameplay. Split screen displays, RPG and adventure elements, arcade sequences and other sub-games such as a flight simulator and a spot of computer programming, ensure you'll immediately become absorbed in this 22nd Century sci-fi thriller. Control is via menus, cursors and icons, and the whole package is really impressive.

Also, slipping quietly onto the adventure scene is the re-issue of Dungeons, Amethysts, Alchemists 'n' Everythin' for 16 bit computers. This game is definately for beginners, but it's programmed using STAC and is great value - you'll pick one up for less than a fiver.

ADVENTURE ADVICE

Due to the reshuffle and relaunch at 'USER, an embarrassing number of solutions have disappeared. On top of that, reader response has been overwhelming this month, so how about helping me out by sending hints, tips, solutions, maps, letters and banknotes to Interactive Mansions here in Macclesfield.

Mrs V Holmes from Devon is stuck playing Legend of the Sword, how do you get past the mud monsters in the swamp? Also, is the bottle in the stream by the bridge of any use, and if so, how do you obtain it? Can the boat be stolen and finally, is it possible to enter the woodman's shack?

Tony Sturgess from Oxford, is having difficulty completing Murders in Venice. Can anyone help?

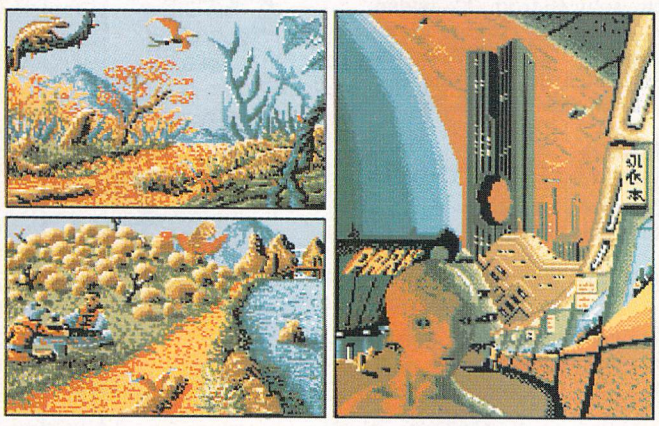
Stephen King from Herefordshire offers this advice for Ultima V. The Rel Xen Bet spell (ingredients - spider silk, ash, nightshade and mandrake), is best thrown at daemons, use it on a dragon and you won't get its treasure. To increase your character's strengths and abilities meditate at the shrines. Useful Skull keys may be found in a tree at Minoc. Stephen would like to know how to negotiate the maze in Bloodwych.

Also causing problems are the prisoners in Turquin's Manor from Level 9's Lancelot. The secret is to command one of your companions to wait, turn the winch, wait nine, turn winch. Next, enter the cage which will subsequently be lowered then order each knight to enter the cage individually (using "Ector, follow me"). Alternatively free a knight and command him to rescue his fellow prisoners, operating the winch yourself.

Finally, thanks to Liverpool's C.H. Seymour for his solution to Castle Master, snippets from which will appear in the fullness of time.



B.A.T. – If you've a strong stomach this game could be fun



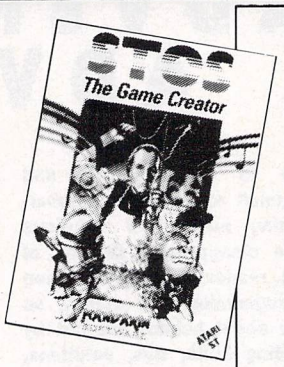
22nd century scenery from B.A.T. – impressive stuff eh?

AND FINALLY NEW RELEASES...

US Gold are muscling in on the adventure market in a big way. Apart from the forthcoming releases Gold of the Aztecs and Murder, ST conversions for the AD&D series should be appearing between now and Christmas. These include Champions of Krynn, Curse of the Azure Bonds, and Pool of Radiance.

A wargame from SSI Storm Across Europe (a nightime WW2 scenario), will be available soon and will be accompanied by two new games Swords of Aragon and Secrets of the Silver Blades. These are Lucasfilm games and having acquired the license for New World Computing (whose titles include Might & Magic II, Nuclear War, and King's Bounty), US Gold is displaying reassuring support for all things adventurous. Great news for us, bad news for bank managers.

Design the game of your dreams



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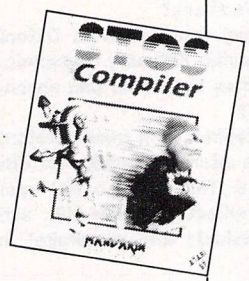

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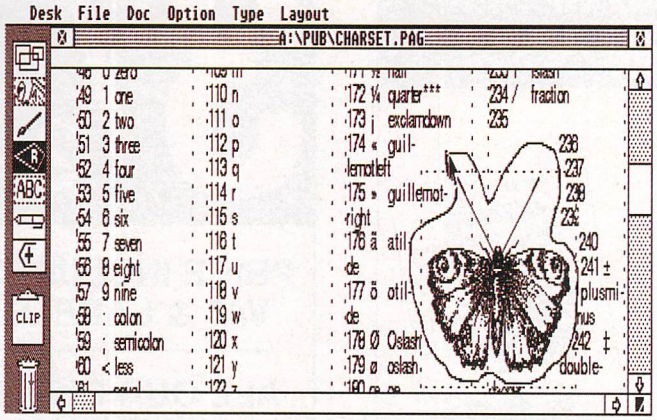
The third of a first in a monthly mini masterclass detailing DTP

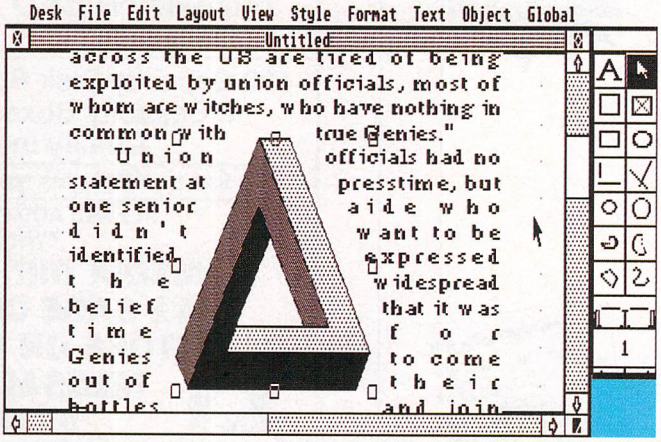
I'm devoting most of the column this month to running text around images. When preparing advertising material it's often necessary to incorporate a graphic within a section of text, or have one butting into it. Virtually all DTPs can run text around a graphic frame however, when it comes to running text around the enclosed image there's enormous variation in facility .

Timeworks DTP offers no facility for text runaround, there is a way round this but it's long-winded. Create a frame the same height as a single line of the text you want to wrap. Copy this frame to the clipboard and paste it down several times.

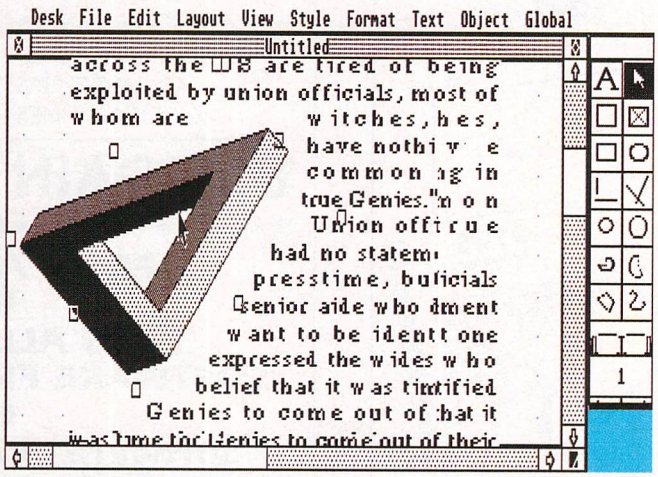
Next position the frames around the graphic itself and flow the text story into each frame in order. The text is repelled to the edge of the underlying graphics frame, however this repulsion can be turned off, the text will then sit around the graphic.



Fleet Street Publisher 3.0 can flow too, but with less flexibility



ABOVE: PageStream is the most versatile package, and will automatically reflow...
BELOW: ...when you move, resize or rotate a graphic



THE RUNAROUND...

PageStream is geared well to most special effects - it's always been the bugs rather than the lack of features which have held this package back. To run text around a graphic in PageStream select the graphic, select Text Runaround from the Object menu and click on the icon representing the direction of flow.

The program supports no flow, flow to the right, flow to the left, flow only top and bottom and flow round both sides. The same dialogue provides entries for horizontal and vertical standoffs, the gap between the edge of a graphic and the flowed text can be specified. Once you've flowed text around a graphic PageStream will cope with resizing and rotating the image. It automatically reflows around the graphic, even if the text is part of several linked frames.

Fleet Street Publisher 3.0 can also handle text runaround. In FSP you define a line manually around the graphic, using the Shape dialogue which is called from the Draw Block dialogue of the Layout menu. There are 15 options in this window, including two containing a small 'R'.

The first option enables text flow around a rectangular block, while the second deals with irregular shape. Clicking on the second icon returns you to the main page display where an outline round the graphic can be defined. When the outline is completed a click of the right mouse button completes the process and text is repelled from the outline.

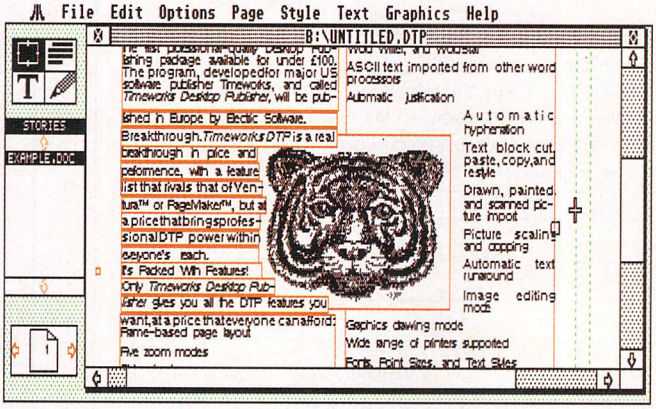
You may have to re-order the layering of text and graphic frames, to put the text frame further back than the graphic. Unlike PageStream if you move the graphic, the text doesn't automatically reflow.

This leaves Calamus at the top of the range capable of anything the others can do. However when it comes to text runarounds the Timeworks technique is your best bet. You can either mess about with multiple text frames, or use tabs and hard returns to force line breaks. This needn't be too onerous, but it does mean you've got to be certain about the positioning of the graphic. If you need to move it, you'll have to undo all your original punctuation before re-running the text by hand. Signa doesn't yet know whether the new version of Calamus will handle text runaround.

A PLEA FROM THE 'ART

I'd like to put together details of clip-art sources to include in this column. I'm compiling a list and want to use samples from as wide a range as possible on future pages. Therefore if your company produces ST clip-art let me know about it, so your work can be included.

Both bit-mapped and vector images are of interest and I intend to include specs of public-domain and commercial packages. Send details and samples of clips to: Charles Michael, DTP Column, Atari ST User, Europa House, Adlington Park, Macclesfield. SK10 4NP. Thanks.



Multiple frames in Timeworks DTP are not that easy to handle - but it's less awkward than using tabs and returns to move or resize the graphic

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Just one of the many laundry lists passed off as Mail we get every month on 'USER - and you wondered why we use the shredder?

A READER GROVELS

I feel that I must write to express my great appreciation to you for producing and absolutely brilliant and readable magazine. It is a refreshing change from the usual run of the mill computer magazine most of which are becoming totally games-oriented. Please don't go the way of these!

I like the idea of your programming magazine on a disk also, it's like getting two quality journals for the price of one - keep up the good work, it's very nice to see innovative computer journalism at last.

A Downes, West Bromwich, West Midlands.

AND THEY KEEP ON COMIN'

I like the new-look Atari ST User. The games don't interest me, but so long as the magazine is balanced, I'm happy. I must say, I did prefer ST World to be monthly, but I await the full quarterly edition with interest.

I also await with interest more on the TT. Your review was a good start (ta, Rev. - Ed). You talk about value for money and compare the machine with an equivalent Mega set-up. Is Atari committed to maintain its power without the price lead? How does the TT compare to a 386 IBM machine or clone with similar memory and hard disk running Microsoft Windows 3 into a VGA colour monitor?

A thorough review comparing like with like across formats could be very interesting. How about it?

The Reverend Brian Elliot BA CF, Dover.

Thanks for the cheering comments and I'm glad you enjoyed the TT review. Comparing 'like with like across formats'? I'm afraid feature reviews of that type must remain the domain of multi-format magazines such as Computer Shopper and NCE, in order that every issue of 'USER is positively stuffed with ST goodies.

DODDERING OLD FOOL?

One of the many pleasures I get from my Atari ST User magazine comes from the reading the reader's letters in Mail. There is a lot of useful information to be gleaned there. So why must you go and spoil it for me by your choice of printing styles? Why must the replies be printed so boldly, leaping out at me from the Mail pages and hit me smack in the eyes? I want to read the letters first, but I find it very tiring trying to make out the light print.

Can't you reach a compromise and arrange it so that it's as easy for me to read the letter as it is to read the reply? I was going to mention that I am a pensioner, but I was too afraid you would consider me a doddering old fool with failing eyesight and without hesitation, shoot this letter into the shredder! My, my, how you do love that shredding machine!

Cliff McLean, Lancaster.

Katie replies:
I'm awarding you ten shillings for my 'Moan of the Month'. For those with failing faculties, everyday tasks such as reading, breathing and so on can be very difficult, and you've shed light on a problem suffered in silence by millions of readers.

But take heart, for there's a simple solution to your problem and it won't cost you a penny. Simply open the magazine at the Mail pages, place them in a sunny position on a south-facing windowsill - and that's it! Approximately three months later, the pages will be suitably faded and you'll be able to read the letters with the best of 'em (as I believe the expression runs).

FREEZE FRAME FROZEN!

I am amazed and somewhat surprised that the mods shown in your Freeze Frame DIY project can transform an STE into an STFM. Perhaps your readers should be advised of this risk. I look forward to the mark two mods that will achieve the transpose operation.

Hope to see a more in depth review of the TT including an assessment of software compatibility an IBM emulation. Nice mag, keep it up!

D J Bates, Exeter, Devon.

Apparently, for the purposes of showing an ST being stripped down, the STE and STFM are identical and that's why, although the device won't work with the STE, that machine was used in the photo-sequence.

In depth TT review? Absolutely, as soon as Atari has settled on a configuration which will actually make it to the safety of the high-street shops. Supposedly on sale this month, the machine's high-street launch has been put off for another few months until a clock speed mod is finished. With all these 'minor' changes, there's not much point providing anything but a cursory review of the hardware.

NODDING AGREEMENT

I would like to agree with the Doddering Old Fool who's letter was printed above. Like him, I find it very difficult to read the letters and would like you to do something about the situation.

Lettice Pither, Redbridge, Surrey.

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HARSH WORDS?

Having read with dismay of the demise of ST World, I awaited with interest to see the result of the merger with the down-market Atari ST User. I eagerly purchased the first combined issue but was instantly disappointed - pages of games reviews, glossy adverts, confusing layout, lack of continuity, dismal letters page, few news items and a worthless free disk. Tacked on to the end of this, a throwaway waste of rain-forest calling itself ST World Quarterly...(edited here to spare the weak of heart - Ed).

James S H Layman, Belgium.

Er, yes, fine and a jolly nice day to you too!

VIBRO SCENE?

It seems to be common knowledge nowadays that the most vibrant ST scene is to be found in Germany. Most UK PD libraries carry some German software, but try as I might I have been unable to locate the name and address of any PD library in Germany itself. I wonder if you could help?

I am currently trying to break into the ST shareware market (oh,there is one, then? -Ed) with a Hypertext package. If I'm permitted a free plug then (no, you're not - Ed) is its name and I'd like to distribute a German language version directly into this market, rather than hope the English one just diffuses across there sometimes.

Kevin Woolley, Perthshire, Scotland.

Free mention, indeed! Anyone know a good German PD library? Pass it on. OK, OK! Kev's package is called Hype! sounds jolly good and is available from most PD libraries or by sending £3 directly to WoolleySoft, Humblesknowe Cottage, Ramoyle, Dunblane, Perthshire FK15 0BA for version 1.0.

SORRY SOFTWARE

I write to complain about the standard of some software that I bought at the recent 16-bit show in London. I realise that the disks were cheaper than those that are advertised in your great magazine, but one would expect them to work!

I refer firstly to Ghostbusters II package that I was sold. Disk a was completely blank and the other three disks would not work without it. Unfortunately, I didn't ask for a receipt and therefore don't know where I obtained the package from (though if I had a plan of the show I might be able to identify the stand. The organisers had no programs left!)

Secondly, another disk, Toobin, became blank after 2 uses by my daughter (any reason?), and she didn't trash the disk. I realise that I now have two useless packages due to my own fault (ie not checking that I had the receipts), but I would expect the disk to work in the first place. Perhaps this might be a warning to other users to check where their games are coming from.

K A Creaser, Bracknell, Berks.

I smell a little silicon rat. Both packages were either blank or became blank after buying them from the show? Sounds to me as though there is something wrong with your system not the disks. Software houses and others selling disks at shows don't have a great pile duplicated on the cheap in order to rip off punters, most of the games and programs you buy at a show are cheap because there's no distributor's cut and most of the stuff knocked out is old and therefore taking up valuable space at the warehouse - better it should be sold off in one fell swoop.

Is the rest of your software OK? If it is, and you still suspect the disks of being faulty try calling NAME and NAME, the houses responsible for the packages. If you're nice - and have genuine problems (and I'm sure both clauses are true) - then the disks will be replaced.

YET MORE GROVELLING

I bought a copy of the new-look Atari ST User at the recent Atari '90 show. I felt that I must send you a brief note to say that I think you've cracked it at last! The new look is a thousand times better than the old one, in fact I'm so impressed that I've actually placed a regular order with my newsagent.

But (and there's always a but...), the only reason I used to buy the old 'User was for the adventure section, which other mags ignored - it seems that you are going the same way! Please try and find space to expand this section of the mag, then you'll be a perfect ST mag as far as I'm concerned.

Melvy Sach, Essex.

Ignoring the adventurers? Never! Take a look at The Faun's (real name Phil Armstrong) fantastic section in 'Aspects' every month. It's full of the latest news and gossip to keep adventuring boys and girls happy for the entire month (and check this month for solutions to some of the forgotten problems...)

NO TT

The July issue of Atari ST User I bought at the Atari '90 show is excellent - a blend of what was the best magazine and the best disk with a free magazine attached, producing a result to beat all other ST format publications. I hope this first issue has set the standard and Atari ST User will not be watered down in the months to come by too much emphasis on entertainment software and I look forward to receiving the first copy of the quarterly ST World.

The photographs of you all are very revealing - how young you all look. No wonder Hugh Gollner's Mother answers the telephone at the Chichester offices.

For Inside Trader's information, my copy of MS Write has run without crashing from floppy, RAM and hard disks and with a selection of accessory programs installed on my Mega 4. However, I have been unable to install GDOS onto my 4Mb STE, the three STEs I have had from my supplier have all bombed out when attempting to read the assign.sys file at boot up, even though the same file boots perfectly from the Mega. A call to Atari's Bob Katz resolved nothing, he admitted (at the time) he knew very little about the ST!

The Atari show was great value for money but surely it's time for Atari to decide whether it's concentrating on PCs, the ST family or whatever and to split the business and entertainment aspects of its products to allow each to develop independently. I had gone to the show to see, and if possible purchase an Atari TT. The ones on the Atari stand (and other major ST product suppliers) all seemed to have labels on saying such things as 'damaged keyboard' or 'faulty monitor' and not even Silica Shop could tell me when I will be able to purchase a TT. Unless Atari gets its act together, I shall be forced to purchase power and forget the price by choosing a PC (yawn) or a Mac (£-ouch!).

Good luck with the new magazine!

Mark Tennent, Hove, Sussex.

I attended the press conference hosted by Bob Gleadow who stated quite categorically that TTs would be on sale 'in June'.However when a wag from the audience pointed out that this was June he fumbled a little then came back with 'later in June'. I think you can draw your own conclusions from that comment Now if you can just find a decent Mac supplier...

BITTERLY DISAPPOINTED!

I have just received my copy of Atari ST User for which I have been a patron for approximately 4 years, way back to the 8-bit Atari User magazine.

I have never in that time had cause to moan and complain (you had your eyes closed, right? - Ed), but today I am bitterly disappointed on several points. In May and June my copy of the mag arrived on the 1st and 2nd of each month, but now it arrives on the 14th. Looking through the post can be very unhappy when you are expecting something which never seems to come. Is there a publishing date? If not, I think a date should be given each month saying when the ensuing magazine will arrive.

I was very down today after waiting six weeks between issues for what is to me some important information from Pendragon - completing some adventures including Fish, but alas nothing. Where is he? Has he disappeared like his predecessor Brillig. Gone without a trace. Did he die? I miss him....(edited here to protect the weak of patience...)

G P Blake, Bitterne, Southampton.

Look, I know the mag's good, but it's not that good! 'Bitterly disappointed', 'very down', 'very unhappy' - slight exaggeration? If receiving 'USER is the only highlight of your month then you have my pity.

The mag was late because it had been re-worked, re-vamped and re-launched in order to provide even more coverage of what's good and bad on the ST scene. Stay with us, you'll discover that we care about you and want to provide you with the best read around.

Pendragon? Passed on to pastures (and pseudonyms) new I'm afraid. But worry not, for the adventure column will flourish under the new and enthusiastic guidance of Geordie adventurer The Faun (whose real name I'm sure you're all aware of).

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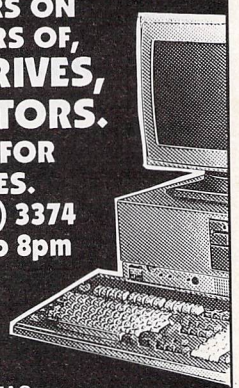

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DOUBLE-SIDED DILEMMA!

I own an Atari 1040STFM with a double-sided disk drive and I frequently like to play games, but I get awfully frustrated when I am asked to change disks.

Why can't the software companies think of a logical way to sell their games and cut down on disk swapping for people with double-sided drives and also still be compatible with single sided drives?

I have an idea that might be useful to the producers and would not cost them any more than the way they are making them now. Most games come with two single-sided floppy disks totalling to a double-sided disk and all the files added together shouldn't exceed 1Mb of memory.

On the the disk there should be a file placed and run first every time the game is loaded. This file should check the user's system so it knows whether it has a double-sided or single-sided drive and the amount of memory available. Take Rainbow Islands for example. The game consists of two single-sided disks. Why not copy disk B onto the other side of disk A so that owners with a double-sided drive can access both sides, therefore not needing to swap, and single-sided drive owners can access side one of disk A then swap disks when prompted (your cover disk is a great example!)

The program can also check to see how much memory the computer has so if it has say 1Mb of memory, all the files can be loaded in one go therefore cutting out the multi-loading stages.

I hope you find this a good idea as it can be useful for people like myself with a double-sided drive and it also does not cost the software houses any more money.

E Thai, Ramsgate, Kent.

Within minutes of your name hitting the newsstands, interested software houses up and down the country will be queueing up eager to empty the contents of their bulging wallets in your direction.

WHAT A VERY NICE MAN...

I am writing to say that you have a jolly nice editor at 'USER - gosh am I really saying this?! However I feel that a little more humour is needed in the magazine if it is to reach its full potential (see what you can do).

Edmund Blake, Bath.

Oh, golly...um....gosh what can I say? You've made me blush...I love it though... please carry on ya?

MIFFED OF NEW ZEALAND

As a STE user and an Atari ST User magazine reader for the past eighteen months I find it disappointing that people outside the UK cannot take part in any of your special offers. Particularly I am miffed about your January Magazine offering KEYWORD with a subscription but only to UK readers. So I turn to page 127 and think OK I'll buy KEYWORD only to find that offer expired January 30 1989. Great disappointment.

Now I always bought ST USER through a regular order from a local newsagents shop, yet here it is April when your January issue arrives. Cannot ther be a little leeway in time limits, for overseas potential purchasers. Apart from these minor difficulties my son and I enjoy your magazine but especially miss the now discontinued cover disc magazine which wenlooked forward to each month. We hope you will give some thought to replacing it .

We always love to hear from our overseas readers especially when they are as happy with the magazine as you obviously are. But what can we say about distribution...apart from it ain't our problem mate! Seriously though there's nothing we can do about the post - maybe you could fetch up at our offices once a month.

MUSIC OFFER?

I thank you for our new-look Atari ST User magazine. As a budding songwriter, I am very pleased to see the inclusion of more music-oriented articles, reviews and the addition of music software on the cover disk.

However, I have a small suggestion to put to you. Is it possible for you to include a special music offer within the existing readers offers section?

Say for instance, a compilation of Editor tested/received public domain software, or perhaps a music package with a £30 - £35 price range?

I feel sure that like myself, offers like this would thrill your readers and sell like hotcakes. How about it, Ed?

N S Walker, Hemel Hempstead.

PS Any old music software you don't want anymore can be dumped through my letterbox, OK?

Yes, right, thankyou...

PPS I only ask because I'm currently doing an Employment Training Computer course and I am on a very low income.

Yeah, I've got the message, and a bit of music software will shortly make a welcome thud on your doormat.

As for the reader offers idea, it's a very good one and will probably be taken up soon.

GOODIE-GOODIE SOFTWARE SWOTS!

Atari ST User is to be congratulated on the new look July 1990 issue and the new format cover disk. I was particularly impressed by the excellence of the art work and the diversity of articles. Now if you can only reduce the games content a little and provide more articles with technical depth...

In reply to Rodney Kirk ('Duped Down Under', 'USER 53), you invited readers to advise you of any software companies who fail to provide goods after a reasonable time. My experiences with the UK software companies have been generally good. In particular, Prospero Software has been simply outstanding in terms of prompt product delivery (Payment of bribes? - Ed) and user support.

Regrettably, I'm less satisfied with the response that I have received from ST World magazine in obtaining back copies.

Gary Kendrick, Weetangera, Australia.

Ta for the compliments, glad to hear you haven't experienced any problems when dealing with UK mail order companies and your back issues of ST World are currently being dealt with.

DODGY DISTRIBUTION

As I write this it is three days since I phoned your distributors to find out if issue 54 was in the shops. On that day, I was assured that the August edition was indeed on sale. But three days later and there's still no sign of it. I understand that there may well be a delay when it comes to delivering all the way up here in the dark and misty highlands but honestly, this happens every month.

Could you please have a word with your distributors about their highland delivery?

J A Bain, Hilton, Inverness.

I had several in fact. What's that? The words? GET YOUR ASS INTO GEAR!

MEN ONLY?

Glancing through 'USER in which my husband's nose is perpetually buried I noted that many of the letters praised the excellence of the contents. I also noticed that most of the subscribers were male.

Have those responsible for this magazine ever considered the side effects of this so-called excellence - to wit, the effect on the wives of the poor besotted 'USER addicts?

When my husband bought this infernal machine home some years ago a strange metamorphosis took place.

What used to be a typically normal man - you know the sort of thing - seen around the house regularly, chatting, grumbling, joking, complaining and so on - turned into a semi-recluse, closeted in with his ST and tortured thoughts until the small hours and looking haggard and thoughtful in the mornings.

There was a ray of hope about six months later when one morning he declared "This little ST is no use. It's just a toy,really".

Celebration all around. He has kicked the habit. He is back with us in the real world of domestic normality.

Alas it did not last. One fateful day he picked up this magazine ST USER. The addiction returned, with sinister variations.

Only half his spare time is now spent with the perfidious contraption. The other half is spent boring everyone with mumbo-jumbo about assemblers, recursio and some space age deity called Waddy Love.

There seems to be no cure for this malaise. The only consolation is that it could be worse (drink, women, gambling, fishing or Elvis Presley). And at least it keeps him home, sort of.

However, the addiction might be tempered if the publishers of this magazine would tone it down and make it a bit more boring.

I feel somehow that this appeal will fall on computerised male chauvanistic ears, but it should at least give them a conscience. And let the other computer widows know that they are not alone.

Mrs H. Horgan, Didcot,. Oxon.

Well to tell you the truth I really don't see a problem here. If it really is that bad package him up and send him to ST USER at the usual address.

Write to: Close Box, Atari ST User, Europa House, Adlington Park, Macclesfield, SK10 4NP.

THE KENNEL CLUB

Back in the beginning, when the ST was young and its programmers foolish, many products of, ahem, less than superior quality appeared on the market, then quickly disappeared amongst a flurry of denigration. Every dog has its day however and here in the Kennel, we feel it's time these dogs of the software world returned to the light of day...

Ever wanted to spend good money turning your colour TV into a black and white TV? How about exchanging a spanking new VHS video for a crappy old Betamax or your latest boy-racer vehicle for a Skoda? Don't pooh-pooh the idea, the big downgrade is just what Digita International expected you to do with the company's ludicrous offering, E-Type.

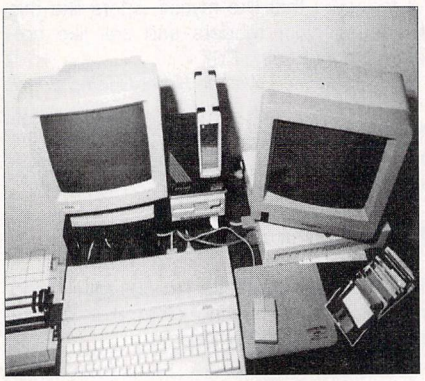
"Turn your ST into a Typewriter" ran the advertising blurb, and that's just what the program did. You started with a sleek and powerful 16-bit silicon monster growling hungrily on your desk-top, ran E-Type, and ended up with a eunoch ZX81. Remember those fake plastic Petite typewriters of yester-year? You know, the ones little girls always got their fingers jammed in? E-type was worse! Completely, utterly and entirely useless, E-Type gets the Great Dane award for the biggest software dog so far...

DICKY DESKTOPS!

Have you got a strange set-up? Do desks awash with disks, joysticks and junk make it decidedly difficult for you to compute? David Bedford of Lightwater, Surrey sent this shot, but all it proves to Dicky Desktops is what a neat 'n' tidy guy he is. Everything laid out in orderly rows, disks to hand and the printer loaded with fresh paper, ready to go.

It's like the 'after' shot of a 'before and after' ad for the Bonco Desk-o-Clean - not good enough Dave-baby and printed only as a warning to other 'neatos' looking for page space.

Desks resembling cesspits make it to the safety of the page, so if yours contains everything in hideous excess, snap it and send it in.



by lines

"It's like owning one of the first light bulbs ever made and then having to wait for your town to be wired with electricity!"

A keen STE owner living in New York USA, waiting to get hold of some software that makes use of the graphics and sound in his new machine.



Raunchy Grannies

Does your Granny compute? If the old dear regularly gets hot over silicon, makes croaky-voiced exclamations such as "How about a cup of tea and pass me a disassembler, sonny..." snap her, wrap her and send her in. A handsome prize to the STer with the raunchiest Granny...

INSIDE TRADER

Len takes TT on tour - last month's revelation of the move to boost the TT's performance with a 32MHz clock speed came to light without even a mention of a rather interesting visit to Europe, by none other than VP of Atari development, Leonard Tramiel.

Naturally enough reports are still unconfirmed but word is that Leonard turned up in Europe - more specifically Germany - and took the trouble to ask a few developers exactly what they thought the TT should be like and what should be done to improve it. "Make it at least as powerful as Commodore's A3000" is reputed to have been the reply. Leonard must have taken some notice and sure enough, news of a suitably fast 32MHz TT started to trickle out soon after - manufacturer denials were conspicuous by their absence.

Trader points out that this is good news for Atari fans, as they'll soon be able to get even more power without too much on the price...

Other movements on the TT front suggest rather strongly that Atari will be launching the new TT at the 1990 Dusseldorf show at the end of August. But hang on, didn't that happen last year? And wasn't there a TT preview at the Hannover show the year before that? Far be it from Trader to speculate, but if you hold out 'till Dusseldorf '91, you might even catch a glimpse of an ultra fast TT with a 48MHz Motorola 68040 CPU. Who knows what's going on over in Sunnyvale, this might not be the claptrap you should be dismissing it as...

TOS plays the game - a reader from the Nertherlands has written claiming that he's found a simple game built into the STE's operating system. Because the enhanced machine has greater ROM space, the TOS programming team have had a little room to spare. Our anonymous contributor says that the game is a crude character-based shoot-em-up with with a few simple sound effects.

Apparently, the game is activated from the Desktop by pressing a combination of keys including control, alternate, left-shift, F7 and a key out of the main QWERTY set.

Mr X. from the Netherlands says that he found the game by accident one evening, but can't remember the exact key combination he used. He thinks you have to press the keys in a specific order. If anyone else discovers this neat little trick, please write in and let Trader know how it's done...

Trader wants to hear it from you - there's no gossip without gossip mongers, so trader is very keen to hear from anyone who wants to spill the beans on anything interesting or amusing that's happening in the ST scene. We can't guarantee your snippet will make the headlines in Trader's column - after all, there has to be some censorship. You can remain anonymous if you wish, but the juiciest stories are more likely to get an airing if Trader knows his leg isn't being pulled too hard. Ouch!

Seeing is believing!

Lattice C 5

Actually shipping at last, Lattice C version 5 is an extremely versatile and powerful development system for the popular C programming language, adhering closely to the new ANSI standard. The system is characterised by a truly flexible environment together with the attainment of a very high speed of object code execution.

In the development of Lattice C 5 for the Atari ST, the emphasis was on producing a package which can be used easily by the novice to the language as well as by the seasoned expert. Freedom of choice for the user was essential if this goal was to be attained and this has been achieved at all levels of the development cycle resulting in a flexible, easy-to-use and extremely powerful collection of programming tools - probably the ultimate C system for the Atari ST!

Key features

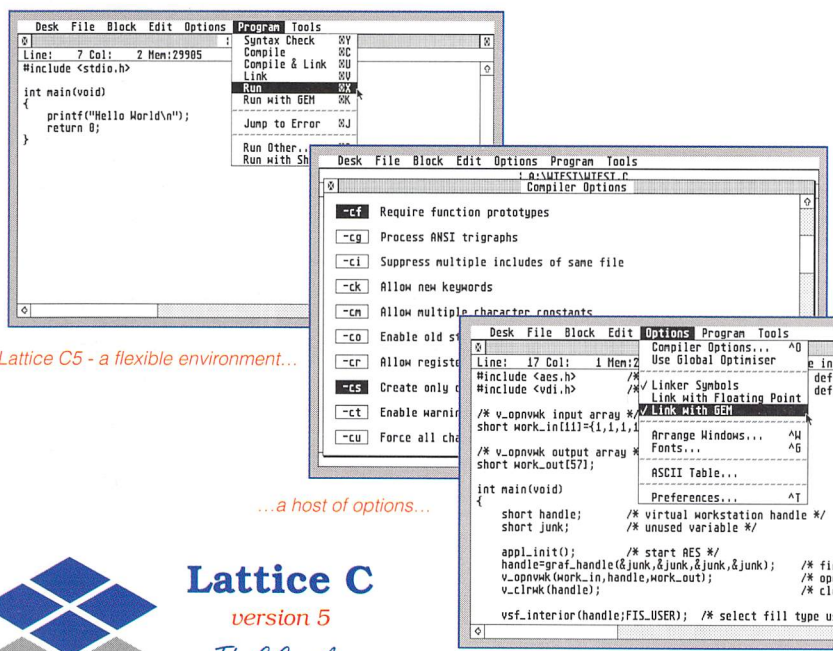
- Powerful C compiler generating very fast native code, plus high ANSI conformance
- High performance global optimiser for removing redundant code
- Fast linkers with many features including automatic branch extension
- Fully integrated HiSoft environment with complete configurability and brand-new, multi-window editor, from which you can run all the other tools
- The most complete set of C libraries ever released on the ST: Lattice C 3 , HiSoft C, Lattice C 5, ANSI, UNIX, AES, VDI, BIOS, XBIOS, GEMDOS and LineA
- Librarian for examining and constructing libraries quickly & easily
- Powerful and flexible Resource Construction Set, the very latest version of HiSoft WERCS
- Standard assembler allowing quick & easy low level programming. Link with other assemblers like DevpacST
- Disassembler for you to optionally hand-optimise the code produced by the package
- Special version of the MONST debugger allowing automatic loading of your source code and tracing via line numbers together with a host of low level debugging commands

Lattice C 5 requires:

- Any Atari ST computer with at least 512K memory, a double-sided floppy disk drive & TOS in ROM, although the use of 2 floppies or a hard disk & 1Mb+ of memory is recommended.

The package contains:

- 3-volume documentation; User Manual, Library Manual and Atari Library Manual giving comprehensive details of the complete system including a step-by-step tutorial
- 7 double-sided disks in a protective wallet
- Full installation instructions for your particular system.



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version 5
The C Compiler for your Atari ST

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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 MMU°° 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

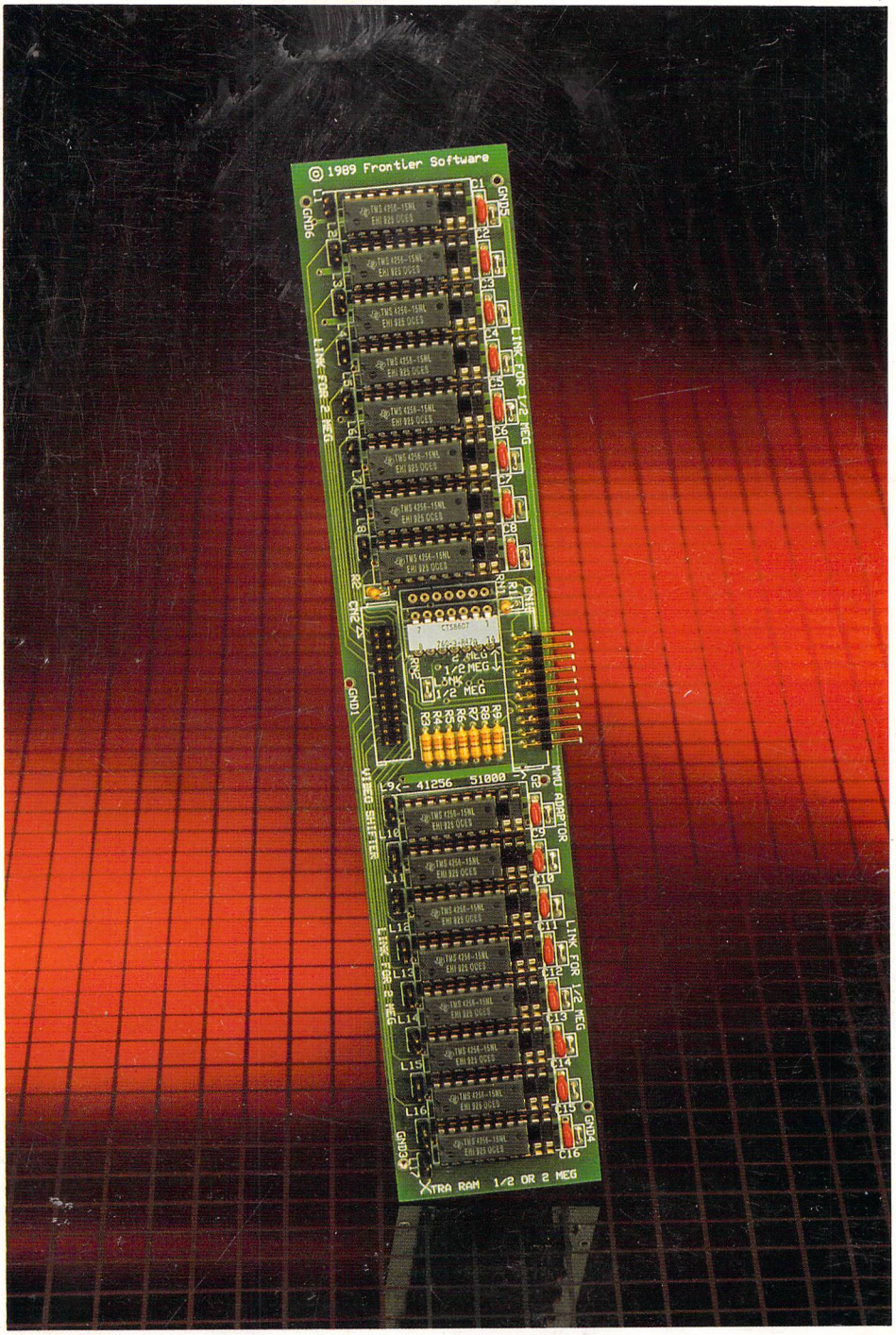
Most RAM upgrades leave you with your $^1/_2$MB ST upgraded to 1MB and that's it! If you need any extra memory at a later date you are expected to go out and buy a Mega ST - Not so with the XTRA-RAM. The XTRA-RAM has been designed to take two sizes of industry-standard RAM memory chips. With sixteen 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

The extra RAM memory that the XTRA-RAM gives you is totally compatible with all of your Atari ST programs. The ST's memory controller chip 'logs' in the extra memory and makes it available for your programs. You will automatically get more memory for DTP, word processing, MIDI, running the Atari Laser printer and everything else that you use your ST for.

• Software Included

Every XTRA-RAM upgrade is supplied with a free RAM testing program (so that you know *with certainty* that your installation has worked), RAM disk and printer spooler software.



• Satisfaction Guaranteed

The XTRA-RAM is supplied under Frontier's ten day money back guarantee, which means that if you don't like the XTRA-RAM, for any reason, you can return it for a full refund within ten days of purchase. The XTRA-RAM also carries a full twelve months' guarantee.

• Available With Or Without RAM Chips

Frontier supply the XTRA-RAM in three ways:

(1) Unpopulated (with no RAM memory chips, so that you can purchase your own),

(2) Populated with 16 256Kbit RAM chips (taking any $^1/_2$MB ST to 1MB. This, of course, can take your ST to $2^1/_2$MB whenever you wish simply by changing to 1Megabit RAM chips)

(3) Populated with 16 1Megabit RAM chips (to take any keyboard ST or Mega 1ST to $2^1/_2$MB or any Mega 2ST to 4MB).

• Prices

XTRA-RAM Unpopulated	**£64.99**
XTRA-RAM Populated to upgrade a $^1/_2$MB ST to 1MB (can later upgrade to $2^1/_2$MB simply by changing RAM chips)	**£79.99**
XTRA-RAM Populated with 16 1Megabit RAM chips to upgrade keyboard STs and Mega 1STs to $2^1/_2$MB and Mega 2STs to 4MB	**£189.99**

All prices include VAT. Please add £2.30 postage and packing to all orders under £120.00. Frontier accepts payment by Visa or Access.

Available from your local dealer, or direct from:

Frontier Software

P.O. Box 113, Harrogate, North Yorkshire HG2 OBE.
Telephone (0423) 567140/530577. Fax (0423) 522874.

°°The XTRA-RAM must be fitted to STs with surface-mounted MMU chips by Frontier Software. You can fit the XTRA-RAM to STs with surface mounted RAM chips with no soldering as long as the MMU and Video Shifter chips are in sockets. Call Frontier for more details.