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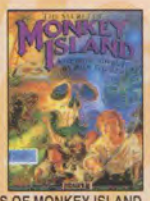

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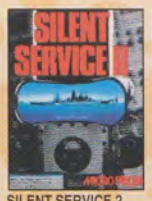

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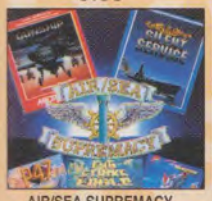

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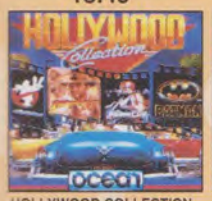

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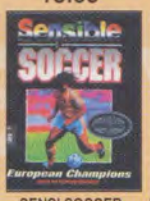

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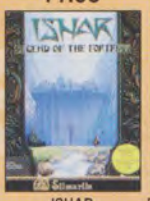

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OCTOBER 1993

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COVER FEATURE

BORN YESTERDAY

Eight years of the ST has led to the emergence of literally tens of thousands of programs in almost every conceivable area of life. Art, painting, graphics, music, word processing, DTP and utilities, not to mention thousands of games.

This issue of ST Review looks back at the best, with a special box for the rest. Also included is a mention of the special hardware that has made the ST one of the most dominant computers of all time, and a selection of embarrassing quotes, or should that be misquotes!

Finally, we show you how it used to be with the original Atari 8-bit range of machines.

Born Yesterday – but most certainly still alive and kicking today!

Bart incurs the wrath of a whole host of enemies! Turn to page 51 for our preview...

The Patrician – a good candidate for game of the year? Find out on page 52...

ON THIS MONTH'S COVERDISK

EASY MONEY

... a super, personal finance program that can handle cheques, receipts or even your pocket money. Simple to use, especially with our excellent two-page tutorial starting on page 10...

ST DOODLE

... a superb mono doodling program direct from the USA, again backed up with an *ST Review* tutorial special!

PLUS

SEE PAGE 14 FOR:
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PROCALC, a full scientific calculator.
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PLAYING THE COVER DISK GAME

Do you remember the first time you saw a disk on the front cover of a computer magazine? Probably not, and even if you can I doubt whether you can remember the programs it contained. At first, cover disks were an interesting ploy, a novel way to get you to take a magazine off a shop's shelves. This idea scored highly in terms of curiosity value, but the general quality of programs left much to be desired.

The stakes were raised considerably when double cover disks started to appear, shortly before the birth of ST Review. And while our first two or three offerings were poor, we have consistently given you better commercial-quality software than any other ST magazine – and that's a fact. Timeworks, HiSoft BASIC, 1st Word Plus, Cyber Paint, Studio and Control, Write ON!, Easy Draw 2 and Easy Tools, Concerto, Prospero C and now Easy Money. I doubt whether any other computer magazine in the land can list such an impressive array of commercial programs, especially in the short timescale of 15 months. I've been personally involved in the sourcing of most of the cover disk programs since June 1992 and I feel justifiably proud of ST Review's track record in this respect.

There is a price to pay for such success apart from the financial one. I'll make no bones about it – we have upset some companies along the way by cover-mounting competitive products to those within their range. In some respects this saddens me; damaging the livelihood of honest manufacturers is not the object of the exercise. But ST Review is the only glossy magazine of a truly serious nature and our cover disk programs reinforce this. There would be little point in giving you a single-level game demo unless it was a secondary product to a commercial program of a befitting nature. This is how ST Review has always operated, and will continue to do so in the future.

In many respects, giving you access to such superb programs has probably heightened your awareness of what quality software can achieve. And while the sales of some competitive products may have been affected in the short term, I firmly believe that the interest we generate in the various markets is of benefit to all.

What we offer you is free quality software, backed up by excellent tutorials. These are invariably written by experts in their field. Take Prospero C for instance; the author of the tutorials is a programmer of note and will be taking you through the use of the C language for some time to come. Such tutorials are worth their weight in gold – and those of you who want to move at a faster rate can always obtain the manuals via our exclusive offers.

Christmas is fast approaching, and I can promise you a bumper feast of commercial software for the remaining three issues of 1993 and well into 1994. ST Review doesn't follow in anyone's footsteps – then again, leaders never do...

Vic Lennard
Editor

EXCLUSIVE FIRST PICTURE • EXCLUSIVE FIRS

JAGUAR

As *ST Review* went to press, new details and a first exclusive picture of the 64-bit Atari Jaguar were revealed.

The console, due to be released on the east coast of America this month, has a 64-bit RISC processor, 16 million colours and a DSP with 16-bit CD-quality sound. Many applications are planned for the 32-bit expansion port, including connecting to cable and telephone networks, DAT (Digital Audio Tape) players and the Jaguar CD-ROM. The latter will be dual speed and feature the capability to handle audio CD, Karaoke CD, CD+ Graphics and optional Kodak PhotoCD. Also planned for release is an MPEG2 cartridge allowing users to play full length motion pictures from CD.

Initial pricing of the Jaguar is said to be "around $200 in the USA with software priced between $50 and $80".

JAGUAR SOFTWARE

Although a list of companies working on Jaguar software is unavailable at present, the following are the first titles in production:

Crescent Galaxy: Play the part of Corporal Trevor McFur of the Circle Reserve Core in this multi-levelled side shooter. You are the last hope to save the galaxy from an evil monster and have to battle through nine 3D levels on five different worlds.

Cybermorph: A one-man rescue probe that can change shape depending on its environment is the setting for this game. You have to fly the Cybermorph at low levels through 50 different moons in an intergalactic battlefield to rescue survivors.

Raiden: The ultimate arcade conversion! *Raiden* was essentially developed as a yardstick for performance, colour and sprite comparisons to show off the Jaguar's capabilities. Fly over enemy territory and shoot tanks and aircraft in this vertical scrolling shoot-'em-up.

Evolution – Dino Dudes: More familiar to games players as *Dynolympics* on the Lynx or *Humans* on the PC, this 80 level platform puzzle game promises cavemen, dinosaurs and evolution, all using vivid colours and enhanced animation facilities.

Club Drive: A 3D futuristic driving game set in a 21st century theme park sees the players driving through an old western town, a futuristic city, present day and even toytown!

Chequered Flag II: Jaguar racing at its fastest with real-time 3D action.

Tiny Toons Adventure: Popular Warner Brothers characters try to save the planet Aurica from Montana Max and his new toy, a TiToonium-Gold Converter.

Alien vs. Predator: Two of the most evil of 20th Century Fox's movie monsters meet head to head.

Kasumi Ninja: If you like fighting games, this one features 91 different martial arts movements, nine opponents and realistic landscapes and backgrounds.

Tempest 2000: Another arcade conversion featuring CD-quality stereo sound, vector graphics polygons and rapid fire. Popular in the 80s, *Tempest 2000* brings the game up to date.

RE • EXCLUSIVE FIRST PICTURE • EXCLUSIVE FIRST PICTURE • EXCLUSIVE FIRST PICTURE

DETAILS EMERGE

COMPO SIGNS GENEVA

Compo Software are to distribute Gribnif's forthcoming multi-tasking operating system, *Geneva*, in the UK. *Geneva* has been under development by the *NeoDesk* authors for almost two years and a UK release is expected by the end of this year. It runs on any ST/STE/TT or Falcon and has a number of advantages over *MultiTOS*, the most important being that it requires far less memory and runs much faster. Although designed as an alternative to *MultiTOS*, *Geneva* can be used with *MiNT* to run *MiNT*-specific applications.

Geneva replaces the AES but not the VDI, making it fully compatible with screen accelerators such as *Warp 9* and *NVDI*. *Geneva*'s task manager allows programs to be 'put to sleep', freeing up CPU time for more processor intensive tasks. *Geneva* does not include a Desktop and does not work with GEM as supplied in ROM. Although you can effectively run your system using the task manager alone, a *MultiTOS*-compatible replacement Desktop such as the forthcoming *NeoDesk 4* is recommended.

One of the key features of *Geneva* is its ability to run almost any program. Single tasking allows you to run programs which will not normally run under a multi-tasking environment. This is done by disabling all other programs while the selected application runs, then re-enabling them when you exit. *Geneva* will be offered as a stand-alone product or in a bundled deal with *NeoDesk 4*, which is expected towards the end of this year or early 1994.

Congratulations to Peter Bailey, winner of our Falcon competition. Peter and his family were invited up to ST Review to be presented with the £3,000 first prize by the editor, Vic Lennard. Two year old Lee certainly took a shine to MUSiCOM – let's hope that dad gets the chance to play with it as well!

SERIOUS SUCCESS

It has been over three years since the last show aimed at the serious side of Atari products, but the **Le'ST Get Serious Show** in West London on August 14th showed that there are still a large number of the public supporting the ST. Over 500 people turned up to see most of the major companies showing products that had previously been written about but never exhibited at a show.

The room was crowded to near capacity for most of the day.

CGS ComputerBild launched *Digitape*, a 32-track digital audio playback system with four simultaneous effects and a waveform editing screen, priced at £499. The six track 'Lite' version costs just £149; impressive demos were on hand. Also being shown for the first time was *InShape* (£149-£299), a fully integrated 3D modelling, rendering and animation system for the TT and Falcon with a maths coprocessor. The demo showed how impressive this is against the older generation of similar ST-based products both in terms of speed and results.

Much interest was shown in the various new CGS products including InShape and Digitape.

"There was a much bigger response than we expected," commented Ray Cross, the Managing Director of CGS. "We are now committed to three more shows this year."

16/32 Systems were on hand with a plethora of new products including *Xenomorph 2* (£99), a *MultiTOS*-compatible update to *Xenomorph* with enhanced colour capability, and *Artist*, the upgrade to *Prism Paint*. Also on show were *D-Graph* (£89), with up to 50 graphing styles, *Raystart* (£89), a budget ray-tracing package, and the excellent Nova graphic cards.

Some products on demo hadn't even hit the news pages yet such as *Hyperion* from **Titan Design**, a sub-£80 true colour image processing and editing package from the company also showing the Graffiti and Fresco genlocks and Reflex colour cards.

Compo Software did a roaring trade with a variety of products including FalconSpeed, the new 80286 emulator for the Falcon, and Screenblaster. The forthcoming *That's Address 2* was also on demo. "We had an excellent day," enthused Neal O'nions, the Managing Director of Compo. "It was great to meet so many of our users face to face."

On show in an impressive way was Xenomorph 2 from 16/32 Systems.

Other supporting companies included **WarpZone PDL**, **Sinister Developments** and **Golden Image**. The next show will be the London Atari Show at Alexandra Palace on September 26; see page 49 for full details.

NEWS

EXCLUSIVE!

FALCON GROWS WINGS

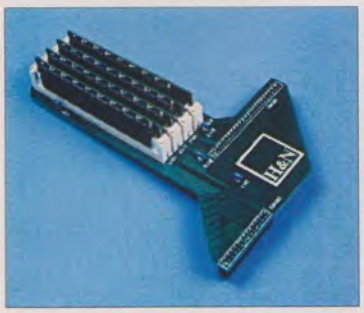
The latest memory upgrade boards for the Falcon have arrived offering 4 or 14 megabytes of usable memory. **FalconWING**, which does not require soldering or any case modifications, lets Atari-authorised dealers fit the expansion without affecting the manufacturer's warranty.

Karl Brandt of System Solutions said, "We are pleased to be sole distributors for falconWING and we'll be offering a generous trade-in allowance against the existing four megabyte boards."

Prices range from £59.99 for an unpopulated board to £799 populated to 16 megabytes, with a two year warranty.

System Solutions have also announced a new accelerator board for the STFM and Mega ST machines offering 28 and 36 MHz clock speeds. Offering an average speed increase of over 850 per cent over a standard STFM, the boards are expected to sell for £199 and £299 respectively and will be on show at the London Atari Show at Alexandra Palace on September 26th. The first 10 will be fitted free.

Further information from System Solutions on 081-693 3355.



Flying high with falconWING, the new memory upgrade from System Solutions.

PORTABLE PRINTER

The Joyriter from Fujitsu is an inkjet printer which is the size of a one inch thick A4 pad and weighs just over a kilo. It outputs at a resolution of 360 dpi and a speed of 81 cps, emulating the IBM Proprinter X24e, Epson LQ850 and Fujitsu DPL24C Plus. Four fonts are built in and it is supplied with both an AC adaptor and a NiCad battery pack as standard, the latter allowing you to print up to 20 pages per charge. Unlike other inkjet printers, the Joyriter's ink cartridge can be re-used several times using replacement ribbons. The Fujitsu Joyriter costs £374.83.

COVERDISKS ON TAP

Desktop BBS now have most of the *ST Review* cover disk programs available for download – apart from the commercial programs, of course!

You can call the BBS at any time between 8pm and 8am weekdays and 3pm to 8am at weekends on 0782 541305. Connection speeds of up to 14,400 baud are supported.

STRAIGHT TALKING

***STraight FAX* has recently been upgraded to v2.0 which fully supports both Class 1 and Class 2, allowing the cheaper Class 1-only FAX modems to be used. The *STraight FAX* Manager currently has drivers for *Calamus*, *PageStream*, *Calligrapher*, *That's Write 2*, and *Speedo GDOS* based applications, which allow you to print to disk in a format that can be transmitted by your FAX modem.**

***STraight FAX* is *MultiTOS*-compatible and allows you to export FAXes in a variety of graphic formats or print them out. You can broadcast FAXes to up to 100 destinations and schedule transmissions for a specified time. The program requires at least one megabyte of memory and a hard drive is recommended.**

Cost is $109.95 but registered users can upgrade by returning their master disk plus $25 (or $20 if purchased after June 1st 1993) plus $5 shipping outside the USA. Contact Toad Computers, 570F Ritchie Highway, Severna Park, Maryland 21146, USA, Tel: 0101 410 544 6943; Fax: 0101 410 544 1329; BBS: 0101410 544 6999.

FREE MEMORY!

Audiogenic are giving 1000 people the opportunity to upgrade their computers to one megabyte totally FREE!

According to Peter Calver, Managing Director; "Sales of *Graham Gooch World Class Cricket* have been held back because it requires one megabyte of memory. We're prepared to give a cheque for £10 towards a memory upgrade to the first 1000 ST owners who order the game through our Customer Services telephone line between now and the end of the year."

Turn to page 54 for a full review of *Graham Gooch World Class Cricket* and, if you want a copy, ring 081-424 2244. The game costs £29.99 and, if you're quick, you'll get £10 back towards your memory upgrade. Then turn to page 58 to order your £9.99 *ST Review* upgrade!

Buy a copy of Graham Gooch World Class Cricket and get £10 towards your memory upgrade.

IN BRIEF

● ZZSOFT ON THE MOVE

zzSoft, publishers of *Easy Text Professional* and others, have recently changed their address. The new address is 114 Sparth Road, Clayton Le Moors, Lancs, BB5 5QD. Tel/Fax: 0254 386192.

● NO ACTION?

Games magazine *ST Action* has been moved from Europress Interactive to Europress Enterprise and will be edited by *ST User*'s John Butters. He recently commented that "In the long term, *ST Action* will probably be included inside *ST User*, leaving Europress Enterprise with just *ST User* and *ST Review*".

● FIX FOR FALCON OWNERS

The **Falcon Information eXchange** (FIX) is a user group that specialises in musical applications for the Falcon. They have a regular disk magazine and membership costs £20 for a year. Contact Computing For Music, 11 Ferrestone Road, Hornsey, London, N8 7BX, Tel: 081-340 1871.

● SPECIALLY RESERVED!

Special Reserve, the computer and video games club, are offering a Fiat Cinquecento as first prize in a free to enter competition in the August/September edition of their club magazine, NRG. There are a total of 20 prizes up for grabs and membership prices start from £4.99. For a free Special Reserve catalogue phone 0279 600204 or check out their adverts in the computer press.

System Solutions

FLY LIKE THE WIND...

NVDI replaces the Atari display routines. Screen updates with NVDI are 3-10 times faster. Works with all TOS versions on all Atari ST, MegaST, TT and for the Falcon. MultiTOS and SpeedoGDOS compatible.

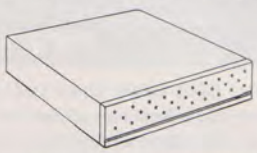
"Scrolling through a long text file in 1st Word Plus took half the time ... Calamus, Calligrapher and Wordflair also showed a marked improvement ... Compatibility is remarkable and we have yet to find a program that is not compatible with NVDI. ... a must for all ST and Falcon owners"

ST Review Issue 16, August 1993.

NVDI Version 2.5 - £49.95

Hard Drives

"Extremely nice looking..." Professional Quality SCSI Hard Drives Systems, 40 -2600 Megabytes from £299. "This is the fastest of the drives reviewed and is superbly engineered, not to mention great value for money." ST User, Issue 90, August 1993.



Special Offer:
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£369 inc.VAT

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Ideal for hard-disk recording
1000Mb, 10ms, 5 yr warranty - **£1199**
330Mb, 12ms, plug-in-and-go - **£569**
For other capacities please phone.

High Res Monitors

The SM14s is a perfect replacement for the Atari SM124/5 monochrome monitors, exceeding the original specifications. The 14" Philips high resolution paperwhite FST gives a perfectly centred, crisp and sharp image without blurring at the edges.

On/Off switch, Volume and Brightness at the front; Vertical Size, Horizontal Phase, Contrast and Focus at the back. The tilt and swivel base and a monitor cable with the correct connector are standard.

An amazing 40% extra workspace can be gained with OverScan ST. The SM14 is a totally plug-in-and-go unit.

"Essential Buy, 90%" ST Review, May 93

without audio
SM14 £149.95

with audio
SM14s £169.95

40% Bigger
Display with OverScan ST.

High Density

elCo doubles Disk space to 1.44Mb!

- ★ Automatic floppy disk detection
- ★ Compatible with your floppy disks
- ★ Software is included. (ACC and CPX)
- ★ Fully supported by TOS 2.06
- ★ PC and Emulator compatible
- ★ A perfect replacement floppy drive!

Kit price still only £ 79.95 inc VAT

World Record!

68000 CPU running at 36Mhz.

Two new Accelerators are available for the MegaST and ST(FM) computers. Performance and prices are sensational. The T36 with a 36MHz clock is 4.5 times faster and the T28 with a 28Mhz clock is 3.5 times faster than the original ST's clock. The use of the original 68000 processor guarantees near perfect compatibility. CPU cacheing is switchable for added compatibility with cartridge port devices. DTP, Graphics Software and Cubase show a fantastic speed increase.

Compared with a standard ST without Blitter, GEMbench V3.12 gives the following results:

	ST(FM)	T28	T36
CPU	100%	299%	373%
Graphics	100%	949%	1097%
Average	100%	763%	890%

The combination of the T28/T36 and NVDI transforms the humble ST into a powerful graphics workstation - a deam come true for all those who want more speed at an affordable price. To celebrate the release of this exiting new product we will give away a free copy of NVDI with every T28 and T36 sold.

Hurry! Offer is valid only until 30th Oct 1993.

T28 Accelerator, 28MHz, 64kb Cache **£199**
T36 Accelerator, 36MHz, 64Kb Cache **£299**

To order and for further information telephone or write to:

System Solutions

Windsor Business Centre, Vansittart Road,
Windsor, SL4 1SE Fax: 0753-830344

Mail Order Telephone

0753-832212

or come to our London Showroom at:

The Desktop Centre

17-19 Blackwater Street, London, SE22 8RS
Tel: 081-693 3355 Fax: 081-693 6936
Dealer enquiries are welcome

The Falcon Column

Are you planning to purchase a Falcon? How much of the old kit will work? Or do you just feel tempted and want to know how much a complete system would cost? For advice and a personal quote phone Karl: 081-693 3355 or El: 0753-832212.

Now in Stock

Falcon030 Starter Packs:

1Mb, 14"Mono Monitor & BlowUP £689
4MB, 14"Mono Monitor & BlowUP £889

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Using Software and/or Hardware the display expands up to 400%. Virtual screens up to 8000%.

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falconWING SIMM memory board

Accepts 4x 1Mb or 4Mb SIMM modules and replaces the original memory board.

falconWING - 0Mb £59.95
falconWING - 4Mb POA
falconWING - 14Mb POA
Ask for a trade-in deal on your old memory.

Falcon Tower £179.95

Integrates the system, space for extra hard drives, separate or replace the keyboard. Phone for the Tower Fact Sheet and price list. DIY or ask for a quote on ready-to-run fitted systems.

14"HQ GreyScale monitor £129
14"Multiscan .28dp £349
15"Multiscan .28dp £395
17"Multiscan .26dp POA
ScreenBlaster - Display Expander £ 79.95
68882 FPU £69.95
Falcon Speed - The PC Emulator
2.5" Internal Drives IDE
65/80/120/210/330Mb
SCSI II cable 0.9mtr & 1.8mtr

If what you are looking for is not listed, please phone.

Repairs & Upgrades

All repairs are carried out by qualified personnel. If you want to know how much it will cost, please ask for an estimate. Need it back in a hurry? Then ask for our professional next day service. Call us to discuss your upgrade requirements. We fit all quality upgrade products available. We can collect and deliver.

Call the professionals now for your personal quote.

Windsor Service Centre:
Windsor Business Centre, off Duke Street
Windsor, SL4 1SE. **Tel:0753-818816**
London Service Centre:
The Desktop Centre, 17-19 Blackwater Street,
East Dulwich, SE22 8RS. **Tel:081-693 1919**

ATARI WORKSHOP

POCKET MONEY!

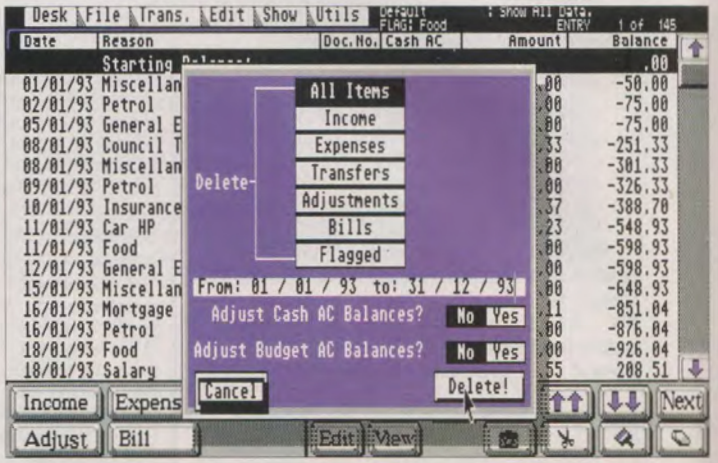
Do you ever feel, as you write out a cheque or sign another Visa voucher, that you might just be pushing the boat out a little too far? Then you need Easy Money, our main cover disk program. Colin James makes the introduction...

This is an absolute gem of a program! *Easy Money* will keep track of all your personal finances, and you can even use it as a sophisticated financial planning tool. As all transactions are held in memory, it's lightning fast!

Easy Money runs in either mono or med-res colour and features a first-rate interface to make the job of money-tracking as easy as it can be.

As well as a main screen in which you can scroll all your transactions for a given period, and edit or view them in detail, there are facilities to show balances in accounts at the end of whatever period you choose, trial balances, reports based on expense categories you set up – everything you need for a complete view of your finances. You can even ask *Easy Money* to show you what your financial situation will be when bills which are so far unpaid have been settled.

Epson FX and LQ printers are supported should you wish to turn some of this valuable information into hard copy.



It looks drastic, but you're really doing little more than taking your first step towards creating a new file when you delete all data. The original is still quite safe on the disk unless you save the changed file under the same name...

STARTING OUT...

Use *STRBAKUP.PRG* to copy the cover disk and then delete everything apart from the EZ_MONEY folder to create a working disk. Load the program by double-clicking *EASY.PRG*. After a few seconds, the User Options screen appears. Set the current date and choose one of the two printer drivers. Don't worry about the other settings for now – the default ones are correct for this exercise.

Click the Done button and the main ledger appears, showing the entries that have been made in an example file, *CURRENT.PAC*, created by Orpheus Systems. The letter that precedes each unique transaction number in the ledger indicates whether the transaction was an Expense, Credit, Transfer, Adjustment or Bill (more on these later).

Have a look at the menu bar, running from top left to top middle, and the various buttons at the bottom of the screen. Several of these have the same function as some of the pull-down menu items but are quicker to use.

The menus and their items are largely self-explanatory, and we'll be making use of most of them as we go through the following tutorial. Do investigate them all, however, remembering that no permanent changes can be made to the sample file unless you save it...

The double upward and downward arrow buttons near the bottom right are for paging up and down the ledger. You can also use the arrow keys on the keyboard.

CREATING YOUR FIRST FILE

With the sample file (*CURRENT.PAC*) loaded, and with the main ledger on screen, pull down the File menu and click on **Delete Data**.

In the dialogue that appears, make sure **All Items** is selected, then choose **Delete**. You will be asked if you really want to delete everything – again click Delete. The ledger should now be clear apart from one item, **Starting Balance**, which has .00 entered.

At this stage, it's sensible to save the file. From the File menu, choose **Save As...** and give the file a new name, such as *MYFILE.PAC*, so that you do not overwrite the sample file which you may wish to look at again later. Save at regular intervals to avoid losing any data.

Choose **User Options** from the Utils menu and set the date to 20/10/93. Now pull down the Utils menu and choose **Set Cash**. This is where you enter the names of your accounts. Unspec. cannot be deleted, but delete all others. Type in **B.Soc** for your first account and **Current** for the second. Leave the start balances at zero for the purposes of this exercise, but you can enter balances if you know them when you set up your personal accounts for real later on. Click Done.

Pull down the Utils menu again and choose **Set Names**. In the entry box on the left, called **Expense Categories**, delete everything except Council Tax, Electric and Food, and add Rent. It doesn't matter if you have any empty lines in the box, or where in the list you make your new entry. We'll **Sort** them in a moment.

Now move to **Payment**, which details payment methods, and delete everything except Cheque and D.Debit and add Deb Card (for debit card). Move to **Users**, delete all the existing names, and enter Tom and Harriet as the people who will be using the accounts you'll shortly set up. Click the Sort button and watch any gaps in the list close up, and all names appear in alphabetical order. Click Done.

Next, choose **Set Unique Nos** from the Utils menu and set all of these to 1. Time to enter some transactions. Click the **Income** button near bottom left and in the entry box that appears type 04/10/93 for Date, £1,084 for Amount and Salary for Reason. Click the button next to **To Cash** and choose Current from the pop-up list (there are only two

SHOCK, HORROR!

Setting up and using expense categories can be a real eye-opener. For instance, how much does your family spend on food in a month or a year, and what's the real cost of running your car?

There are three main steps involved in gaining this valuable (if occasionally upsetting!) view of specific areas of expense.

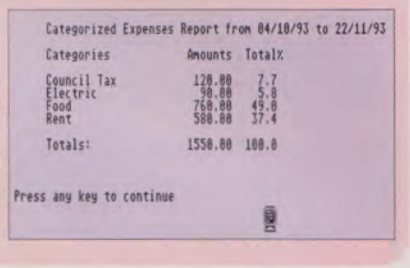
Entering the list of expense categories in the Set Names box.

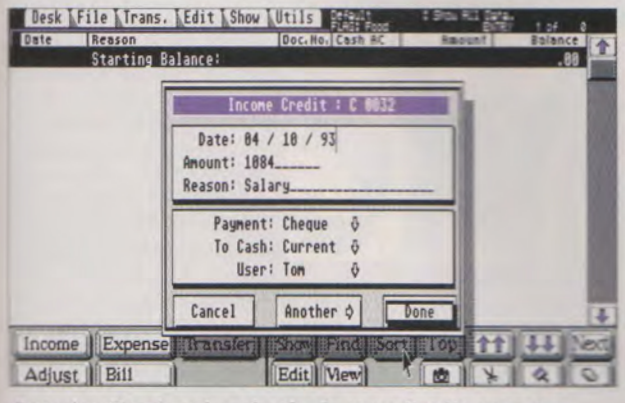
- Choose **Set Name** from the Utils menu and enter your list of expense categories.
- Whenever you enter an expense transaction, be sure always to choose the correct category from the menu that pops up when you click Category in the expense entry box.

Setting a date range in the Expenses Listing box.

- When you've entered a reasonable number of expense transactions in this way, choose Expense Report from the Show menu, set a date range in the Expenses Listing box that appears, and choose screen or printer for the report destination.

Now you can sit back (or perhaps reel from the shock) as *Easy Money* shows you how much you're spending and on ***Expenses listed on screen, revealing Food as the most expensive category...***





Entering Tom's salary in the Income Credit entry box

accounts here at the moment, but you can have more in your "real" file when you create it).

Similarly, click the arrow to the right of **User** and choose Tom. There's no particular need to include method of payment as it's income, but you can choose Cheque from the pop-up list if you wish.

Click Done, then choose the Income button again and this time enter Harriet's salary, placing the following information in the fields: Date – 05/10/93; Amount – 1356; Reason – Salary; Payment – Cheque; To Cash – Current; User – Harriet.

Now click Done and the two transactions will appear in the ledger. As both Tom and Harriet know their salaries will not change for the next six months, we can now copy these transactions into the ledger six times in each case. With Tom's salary entry selected, click the **Camera** button to copy it. Click the **Brush** button. In the dialogue that appears, type in 6 as the number of times to paste and 1 Month as interval. Click proceed and Tom's salary credits for the next six months now appear in the ledger. Do the same with Harriet's Salary entry and click the Sort button. With Date selected in the dialogue that appears, click Proceed. The transactions in the register are now placed in date order.

Click the Expense button then enter 11/10/93 as the date, £45 as the amount and Electricity as the reason. Choose Electric as category, D.Debit as Payment, Current for From Cash and Tom for user. Voucher No. is for entering cheque, petty cash or other document numbers, but you need enter nothing in this field for this exercise.

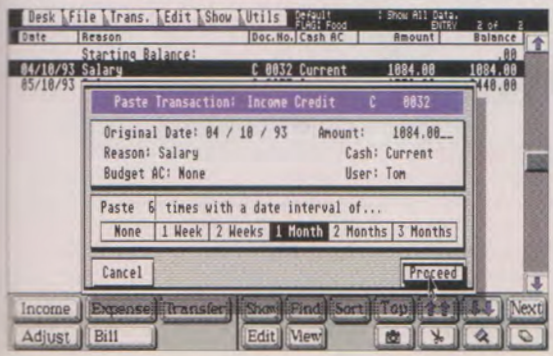
Now click Done and, as we appear to be heading towards a kind of projection of the financial position six month's hence, again copy this transaction and paste it six times using the monthly interval.

Now enter expense transactions for Council Tax, Food and Rent, the dates and amounts being: 13/10/93 – £60, 15/10/93 – £380 and 21/10/93 – £290 respectively. Choose whichever payment method and user you wish, but try to ensure you've used each payment method at least once. The categories to enter are obvious. Choose the Current account for From Cash in each case. Copy each of those transactions for the next six months, and Sort the ledger by date.

Your last transaction here is to **Transfer** some money from your Current account to your Building Society account. Click the Transfer button and enter the date 22/11/93, Amount – £750, From – Current, To – B.Soc, Reason – Holiday Fund, By User – Harriet, and click Done.

Use any of the variety of **Show** options, and **Cash Balances**, **Trial Balance** and **Expense Report** on the Show menu, using various from and to dates, to glean information about Tom and Harriet's financial situation. For instance, if you choose Cash Balances and set a date range from 04/10/93 to 22/11/93, you should find that there is .00 in Unspec., £750 in B.Soc and £2,580 in Current, with a total of £3,330.

When you create your own personal file, you will want to include more information than we've done here in order to gain sensible views of your finances, but completing this tutorial will have given you a valuable insight into *Easy Money*.



Setting the number of "pastes" and the required interval in the Paste Transaction box

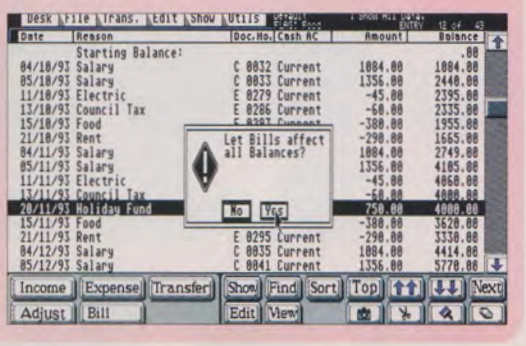
BILLS AND BALANCES

You thought the financial future was looking quite bright until you received a sudden glut of bills. Although you haven't got around to paying them yet (the red ones haven't landed on the mat so far) you might want to see what your financial position will be after they've been settled.

So choose Bill and enter some imaginary amounts, clicking Another after each one until they've all been entered, followed by Done. Then Sort the ledger by date.

Now go to the Show menu and choose Bills Affect Balance. Answer "Yes" to the question "Let Bills affect all Balances?", and the balances in the ledger screen following each bill will change accordingly.

Switch Bills Affect Balance off again using the same procedure, but this time clicking No in response to "Let Bills Affect All Balances?"

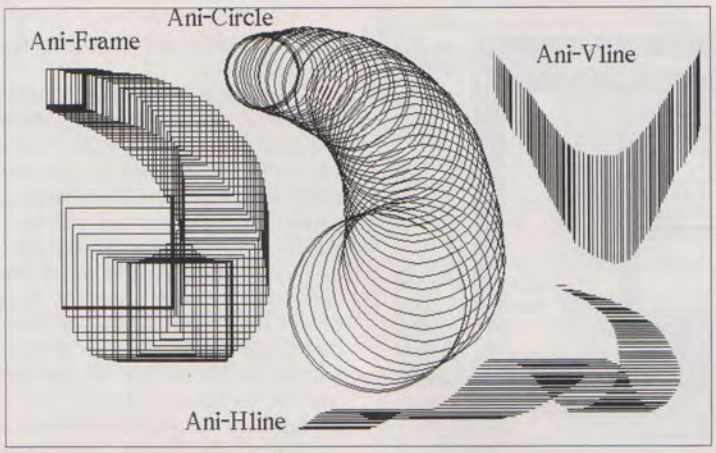


Yes, I've summoned the courage – let's see what effect the bills are going to have on my financial future!

Now turn to page 14 for some stunning offers...

DOODLE DODDLE!

Ever wished that you could turn your ST into a doodling pad? Dream no more – here's Dave Munsie's ST Doodle! And in his very own fashion, Keith Berry gets you started...



With a workspace consisting of 640 by 792 pixels, *ST Doodle* gives you a workspace the size of two standard hi-res screens one above the other. Running only in mono and requiring a minimum of one megabyte of RAM, a .PI3 file can be saved from, or loaded into, either half once it has been scrolled into place. A whole "page" can be saved as a .PG3 file and a selected block may be saved as a .BLK file.

After loading, click the left mouse button to see the menu of functions. To choose one, left-click on it, and to move the slider that appears beneath some of them click on its left and right arrows. In general, clicking the left button starts drawing and the right button completes and exits to the menu, at which point you can right-click again and a dialogue box offers you the option of deleting the last edit. Note that this means everything you drew since the last appearance of the menu, not just the last item!

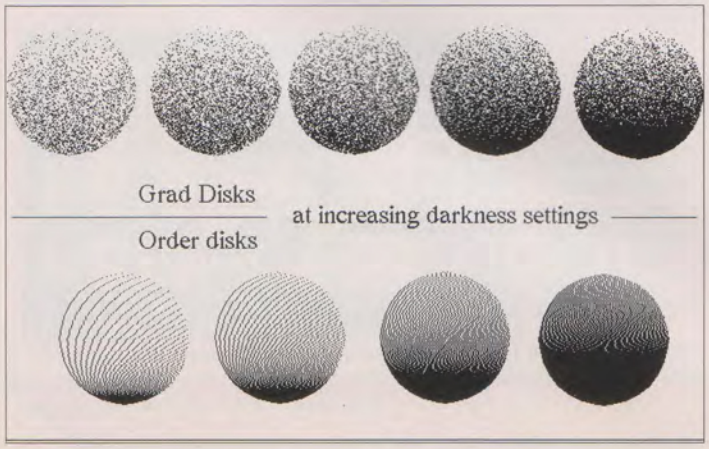
The wide range of drawing tools are detailed in the STDOODLE.TXT file on the cover disk and most of the usual ones are included, but there are a couple of special functions worthy of particular mention:

ANI CIRCLE/FRAME/HLINE/VLINE: These cause the selected shape to grow and shrink at a selectable rate as the mouse is moved. A dialogue box offers you the option of experimenting by changing three preset parameters. **Vline** can be useful for handwriting effects.

GRAD/ORDER SHAPES: These pre-defined shapes are drawn ready shaded, the depth of which is adjustable by the sliders under each shape on the menu screen. **Grad** shapes have the appearance of stone and **Ord** discs that of wooden balls. Newcomers to hi-res drawing may find that *ST Doodle* has everything they need whereas aficionados of the "standard" *Degas Elite* will probably find the different approach frustrating after a while.

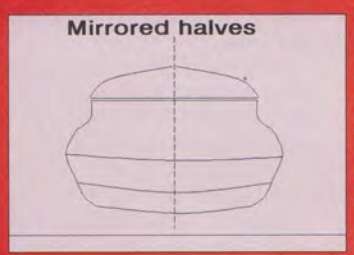
As both programs share the .PI3 format you can transfer files between them to benefit from the strengths of each.

Experiment with *ST Doodle*. Following through the picture-led boxes on these pages will help you to get into the swing of things. But most of all, enjoy yourself!

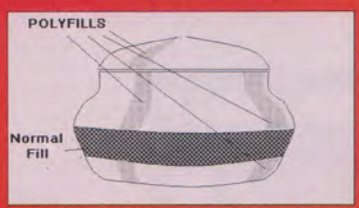


STEP BY STEP

Beyond just doodling, ST Doodle can be used to create quite complex diagrams, such as this cooking pot...



1 Draw the outline of the pot with Mirror ON to maintain symmetry, starting with two straight Lines for the joint between pot and lid. Select the Curve tool icon from the menu, left-click on the end of one of the straight lines and again at the apex of the lid, when mouse movement causes the line to curve. When the shape looks correct left-click to set the line or right-click to cancel it and start again.



2 Add the remaining curves in the same way, right-click to return to the menu and then turn Mirror OFF. Move the slider under the menu's Fill icon until a suitable pattern is displayed for the centre band. Check that Framing is Off – the rectangle in the Framing icon should have no border. Select Fill by clicking on the new pattern and then left-click within the drawn band. Move the same slider to a lighter pattern and select Polyfill to create the shaded areas. Left-click to plot each of six points and the patterned area will appear within the area that you have defined.

HINTS 'N' TIPS...

Check out these pics and how they are "doodled"...

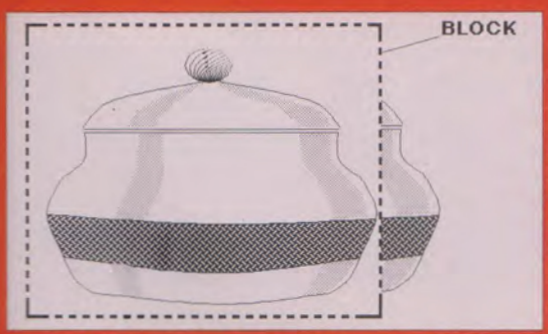
ST Doodle has a selection of graduated shapes for drawing objects with ready-made shading, but they can also be employed over the whole screen area – in this instance a full-sized Ord Box provides a background to a rather weird-looking landscape, the result of adding a couple of Grad Disc trees and Ani Hline smoke. The program takes a considerable time to fill the screen with these boxes so it's as well to save the result as soon as it has finished. It's much quicker to re-load a screen even from a floppy than to execute a re-draw!

The same method was used here. The shape was drawn using the Eraser, with Grad discs added for the eyes and nose, and then the bordering excess was removed with Polyfill and plain white obtained as described above. The Spray tool was used in its narrowest spread to add extra detail and then widened to blend in sections.

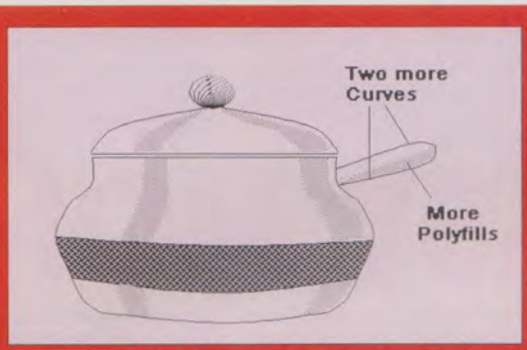
Here, a screen-size Grad Box has been "carved" into letters, with extra shading added by means of the Spray. You may have noticed that there is no plain white available from the Fill pattern slider, but this is easily rectified by pressing "F" on the keyboard and positioning the resulting small square over a plain white section of the screen. If you move the Fill slider fully to the right, you will see that the user pattern is now white. With this selected, any Fill tool can be used for such carving, Polyfill being particularly useful.

The outline fur was fluffed out with the use of the Smear tool at its medium setting. More blending was done with Magnify – a predominantly black (or white) area responds well to random editing in zoom mode – and the shadow was added carefully with Polyfill.

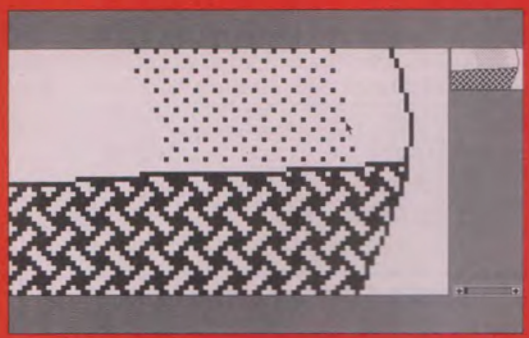
3 *Plot several small overlapping areas to fill each section – the joins won't show if Framing is off, and inaccuracies can be adjusted later. Complete the remaining shaded areas and right-click to return to menu. Clicking on the small arrows, move the slider on the Ord Disc icon until it's just left of centre and then select the Ord Disc and use it to add a knob to the lid. Increasing the value of Snap to 03 helps to create round circles; remember to return it to 01 afterwards.*



4 *If you accidentally remove part of the newly-moved pan, no problem. Right-click back to the menu, right-click again and reply "Yes" to the dialogue box asking if you wish to Undo Last Edit. Now add the handle to the right of the re-sited pan using two Curves and shade it with several more Polyfills.*



5 *The use of the Mirror has caused the pan to be created centrally on the screen. To move it to the left, select Block (the scissors icon) from the menu, click on Make Block, rubber-band the pan and select "S" from the 17 options shown. Slide the resulting block to the left and left-click it (twice) into place, right-clicking to exit to the menu. Now select Eraser and use it by left-clicking to remove the left-over, unwanted area of the pan.*



6 *Use the Magnifier to examine the result more closely, if necessary using the slider to increase or decrease the level of magnification. Make any corrections by left-clicking on any pixel to change its on/off status (from black to white or vice-versa), but you cannot draw lines; only one pixel at a time can be changed.*

AND THERE'S MORE...

...with a nifty selection of utilities!

GENERAL GDOS

PD UTILITY • BY ANDY BROWN • ANY RES

Display and print GDOS fonts...

This simple utility will display and print GDOS fonts. It works in all ST/Falcon screen modes and with all versions of TOS including MultiTOS.

A text file is included with a full explanation of how to use the program.

IF YOU HAVE PROBLEMS WITH YOUR COVER DISKS...

DON'T PANIC!

If your cover disk causes problems, remove any peripherals and try again, switching it off for at least 20 seconds before continuing.

If this doesn't solve your problem, return your disk, with a stamped addressed envelope, to **P.C. Wise Ltd., Dowlais Top Business Park, Dowlais, Merthyr Tydfil, Mid Glamorgan, CF48 2YY.**

PC Wise will test the disk and send a replacement as soon as possible. You can contact the PC Wise Helpline with any urgent problems concerning faulty disks on 0685 350505 between 10.30 and 12.30 on weekdays.

SAFEMENU

AUTO PROG/CPX • BY K. HINSON AND D. FIEBELKORN • ANY RES

Change how your menus operate...

Safemenu lets you change the way menus are accessed. It's controlled by a .CPX module that works with Atari's *XCONTROL* panel and gives four different ways of reaching the menu bar.

Place the program *SAFEMENU.PRG* in the AUTO folder on your boot disk and *SAFEMENU.CPX* with your other .CPX files and reboot. You can now configure *Safemenu* by calling up the configuration option from within the control panel.

STRBAKUP

EXCLUSIVE UTILITY BY OFIR GAL

Back up your cover disk and keep the original in a safe place.

Run the program and carefully follow the on-screen instructions. There is no need to format your backup disk as the program will do this for you.

STRBAKUP.PRG is for backing up your cover disk. We do not recommend it for any other use.

PICSWITCH

SHAREWARE UTILITY • BY JOHN BROCHU • ANY RES

Image processing with Picswitch...

Loads, converts and processes 20 different picture formats. A full manual is provided on disk.

PROCALC

SHAREWARE ACCESSORY • BY JOHN BROCHU • MED/HIGH RES

A professional calculator...

How many times have you found the need to make complex calculations? Enter *ProCalc*, a full programmers' calculator.

Change the name to PROCALC.ACC and reboot the computer with this in the root directory of the boot disk. The calculator is then available from the Desk menu.

EASY MONEY OFFERS

As you've seen from our tutorial, *Easy Money* is an easy-to-use program that really can put you in control of your personal finances.

But tutorials on their own can never unlock the true power of a program. So *ST Review*, in conjunction with Orpheus Software, can offer you the 32-page manual at just £7.99! There's also a substantial upgrade to *Easy Money* in the form of *Easy Money Plus*. This offers all of the standard features plus Macros for automating any procedure, Graphs for showing any kind of information visually, Budget for handling a specific sum of money, and support for laser and inkjet printers. All in all, a very worthwhile upgrade for just £19.95.

Finally, if you run a business, you'll definitely be interested in *The Biz Plus*, a substantial piece of professional accounting software for just £79.99!

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When you buy your new Atari 520 or 1040 ST-E/FM computer from Silica Systems, we will give you an additional £324.75 worth of software FREE OF CHARGE, including some great entertainment and productivity programs. These free gifts will introduce you to the world of ST computing and help you to get off to a flying start with your new ST. Plus, with every ST, we will give you 16 nights holiday hotel accommodation for you and your family to enjoy a break at home or abroad.

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RICK DANGEROUS	£24.99
ROCK 'N' ROLL	£19.99
SKWEEK	£19.99
TRIVIAL PURSUIT	£19.95

PRODUCTIVITY PACK:

1st WORD* (word processing package from GST)	£59.99
SPELL IT (Spelling checker to complement 1st Word)	£19.99
ST BASIC (basic programming language with tutorial)	£24.99
TOTAL VALUE:	£324.75

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*1st Word not supplied with STs where non-UK is already included 1st Word.

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ATARI 1040ST-E MUSIC MASTER

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FROM SILICA - See Top Left

The Music Master Pack features one of the most popular computers used by musicians, combined with the renowned MIDI package PRO 24 III, to provide a perfect environment for both novice and professional alike. The acclaimed MIDI Recording and Editing System from Steinberg, PRO 24 III is used by many top musicians including Dire Straits and PWL. Using any MIDI keyboard, PRO 24 offers the ability to write and compose music to a very high standard. You can record up to 24 tracks simultaneously, and then apply real-time editing to remove mistakes.

HARDWARE:
1040ST-E COMPUTER - 8MHz, 16-bit 68000 CPU, 1Mb RAM, 1Mb 3½" Disk Drive, Mouse, TV Modulator, PSU — £299.99

SOFTWARE:
PRO 24 III — £149.95
State-of-the-art music package.

PLUS! - FREE FROM SILICA:
TENSTAR GAMES PACK — £219.78
10 great games in one pack. See top left panel for details.
SILICA 'PRODUCTIVITY PACK'* — £104.97
TOTAL VALUE: £774.69
LESS PACK SAVING: -£575.69
SILICA PRICE: £199

PLUS 16 NIGHTS HOTEL ACCOMMODATION

1Mb RAM	2Mb RAM	4Mb RAM
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ATARI 1040ST-E FAMILY CURRICULUM II

FREE GIFTS
FROM SILICA - See Top Left

The new Atari Family Curriculum Pack has something to offer at any age group. It includes the SHARD II and a collection of modules which include subjects such as learning to read and write, maths, science, and general knowledge. SCORE maths, French geography, word processing, music, paint, animation and programming software. Plus 12 great games, 8 Love and Peace and FREE from Silica, the Tenstar Games Pack and Productivity Pack (see panel on left).

HARDWARE:
[illegible]

SOFTWARE MODULES:
[illegible]

GAMES:
[illegible]

PLUS! - FREE FROM SILICA:
TENSTAR GAMES PACK — [illegible]
SILICA 'PRODUCTIVITY PACK'* — [illegible]
TOTAL VALUE: [illegible]
LESS PACK SAVING: [illegible]
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PLUS 16 NIGHTS HOTEL ACCOMMODATION

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THE NEW ATARI GENERATION

32-bit 68030 16MHz PROCESSOR

The Atari Falcon 030 is a new and exciting breakthrough in the field of personal multimedia. It brings together unparalleled performance with a wide variety of potential applications. It offers 32-bit processing power, making it a powerful workhorse [illegible]

Graphics:
- [illegible]

Sound:
- [illegible]

Hardware Options:
- [illegible]

System Software:
- [illegible]

Software Included:
- [illegible]

1Mb RAM + HARD DISK		4Mb RAM + HARD DISK	
	£599	64Mb HD	£899
4Mb RAM NO HD	£799	107Mb HD	£999
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12" MONITOR GREYSCALE - ST & FALCON

BUILT-IN STEREO SPEAKERS

FREE! CABLE - WORTH £14.95
HI-RES EMULATION SOFTWARE

ViewTek

The ViewTek VT12 12" Monitor offers high quality monitor output at an affordable price and is ideal for text and graphics applications on the Atari Falcon, ST-FM and ST-E. It can also be used in low and medium resolution modes on the ST-FM and ST-E to produce greyscale graphics for entertainment software. It also produces stunning greyscale graphics on the Falcon. High resolution emulation software is supplied free to use with specific applications on the ST-FM and ST-E, eg. DTP.

- *12" GREYSCALE MONITOR*
- *REPRESENTS COLOUR IN UNLIMITED SHADES OF GREY*
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  WORKS IN LOW (320 x 200) + MEDIUM (640 x 200) RESOLUTION MODES - ALSO HIGH (640 x 400) RESOLUTION WITH FREE SOFTWARE INC.
- *FALCON*
  WORKS IN LOW (320 x 200) + MEDIUM (640 x 200) + TRUE COLOUR (640 x 480) RES MODES + USING OVERSCAN (768 x 480) RES
- *STEREO SPEAKERS BUILT-IN*
- *SMALL FOOTPRINT 325mm (W) x 300mm (D)*
- *CASE COLOUR COMPLEMENTS ST HOUSING*
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- *FOR USE IN HIGH-RESOLUTION MODE ON ST-FM OR ST-E*
- *OPTIONAL FALCON ADAPTOR - SEE BELOW*
- *640 X 400 RESOLUTION*
- *CASE COLOUR COMPLEMENTS ST HOUSING*
- *EASY ACCESS TO CONTROLS FOR VOLUME, BRIGHTNESS AND CONTRAST*
- *INCLUDES TILT & SWIVEL BASE*

FREE INCLUDES FREE CABLE FROM SILICA FOR CONNECTION TO THE ST-FM OR ST-E.

FALCON ADAPTOR
The Falcon requires an ST-E adaptor to work with the Tatung MM14SAE High Resolution Monitor - Ref: CA55772

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INC VAT - MON 3144

The MM14SAE requires additional speakers to enable sound output.

ALL PRICES INCLUDE VAT - DELIVERY IS FREE OF CHARGE IN THE UK MAINLAND

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Which computer(s), if any, do you own? 79K

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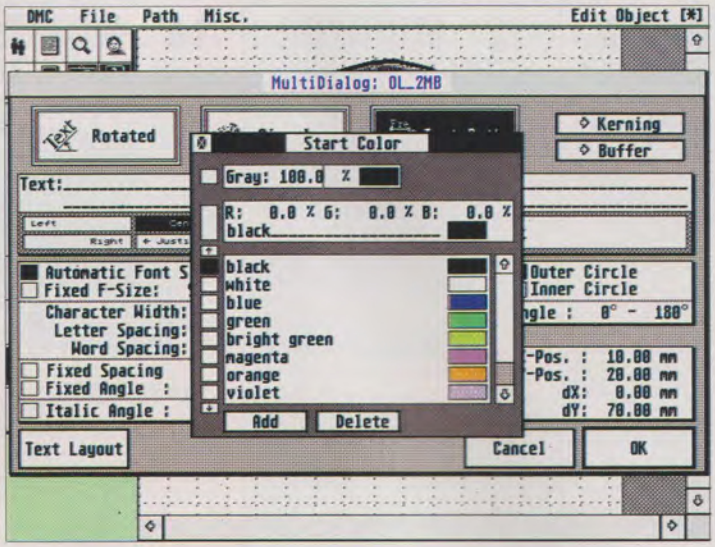
STAND IN

For a long time, Outline Art was the only ST vector graphics package worthy of consideration. Nial Grimes gets to grips with version three and asks whether the legend continues.

For years, the ST lacked a proper colour vector graphics program and then all of a sudden *DA's Vector* appeared to take the market by storm. *Outline Art 3* is DMC's reply and claims to offer all the power of its predecessor, in gut-wrenching 24-bit colour! Impressive claims indeed, but how does it perform?

No fancy installation program is provided, and none is needed – *O-Line* is even happy to run from a single floppy disk at a push. In common with almost all DTP-oriented packages these days though, it's a monster memory-wise. Two megabytes is adequate for simple work, but in order to use the hypertext help system you'll need four.

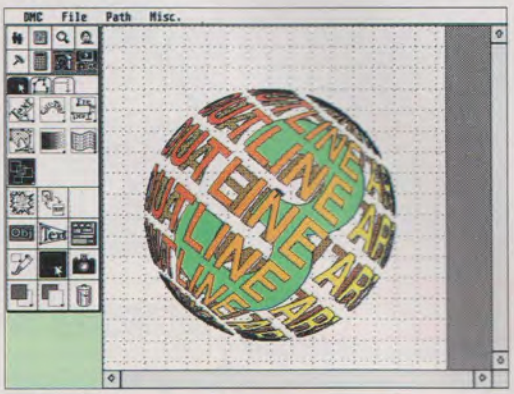


A colour selector takes the place of all greyscale percentage settings in the new version, although a slightly more user-friendly approach would be appreciated.

For most people, the mere mention of *Outline Art* is enough to send shivers down the spine – the original was not an easy package to use, and unfortunately neither is its successor.

The interface is a little more logically arranged than earlier versions thanks to the *Calamus SL*-style control panels, but overall usage remains depressingly complex.

Three of these icon panels make up the backbone of the system. The first deals with layout and from here you position your circular text, graduated colour boxes and so on. If a path is needed, such as for free-text, you'll be moved to the second panel which naturally enough deals with path editing. The final set of icons is dedicated to guidelines – a new addition.



For pure effects, Outline Art 3 is hard to beat. Here some text has been mapped onto a globe with the calculator and the whole thing rotated through 320 degrees.

COLOUR AT LAST!

The biggest change in the package has to be the addition of colour and this is dealt with very naturally. Wherever the original *Outline Art* would ask for a grey percentage, version 3 has a colour selection dialogue. Unfortunately, there's not a slider in sight and all values have to be entered as RGB percentages. On the bright side, SL colour lists can be loaded up directly, so it needn't be too much of a problem.

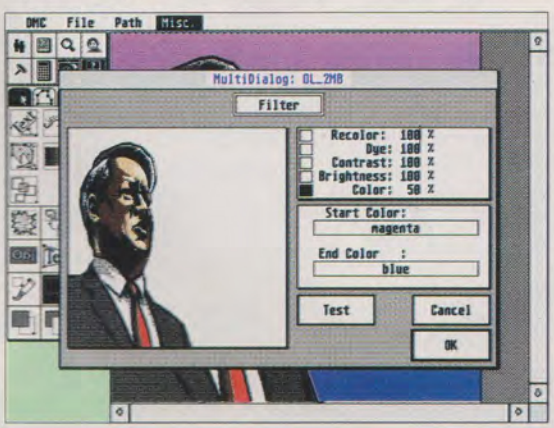
The colour capability brings with it several new features. First and foremost is the "filter" dialogue, which lets you adjust the brightness, contrast and colour saturation of any object. It's also possible to automatically add colour to a monochrome object, based on its brightness – ideal for dragging some boring old CVGs into the '90s! Start experimenting with graduated colour or text and you'll have a job not going over the top! (*can't say we didn't notice... Ed*)

Much of *Outline Art*'s unique flexibility can be attributed to one feature – its calculator. This can be used to map objects onto regular shapes and to rotate or distort objects in countless other ways. Formulae for cones, cylinders, globes and rotation are built-in, but you can always add your own with the right knowledge.

The calculator can also be tied in with the copy function, giving you the ability to copy an object fifteen times, while rotating it and reducing the colour value by ten percent as you do so. None of these features are explained too well, so it's a case of trial and error.

The new version also brings a host of other refinements, such as improved export facilities. DMC seem to have finally woken up to the real world and PostScript export in *Illustrator* format is only a mouse click away. And what's more it's not only PostScript by name – it's genuinely compatible with most packages on the Mac, PC & NeXT!

The largest concern for ST owners will be the speed of operation, and thankfully there are no problems to report in this department at all. Screen updates are lively and the



The filter lets you adjust the colour of a single object or collection of objects, without resorting to a complete redraw.

INSIDE INFO

***Outline Art* made its debut to the English speaking world in 1990 and was eagerly snapped up by *Calamus* freaks everywhere. It represented a huge step forward from the hideous limitations of other packages available at the time and suddenly ST owners found themselves with the ability to distort, rotate and manipulate vector objects in previously unimaginable ways!**

Very little was said at the time about the lack of any real drawing tools, but most users found that the results were worth the effort of battling with the awkward interface. With the price now reduced to a temptingly reasonable level, it's still well worth a look.

LINE!

This is the type of quality you can expect from the all-new Outline Art on a professional quality output device.

JARGON JOGGER

Object Oriented – Object oriented, or vector, graphics packages store each component in a picture as a mathematical description. This means any element can be deleted, moved or resized without affecting the rest of the design.
Control Path – A grid onto which *Outline Art* can project an object to give it a three dimensional appearance.
Bezier Curve – A flexible curve that is adjusted through the use of two control points (representing tangent lines).
EPS – EPS, or Encapsulated PostScript, is a portable variation of the PostScript language that is used extensively on the Apple Macintosh.
Graduated Fills – A smooth blend from one colour to another.

only time you will long for an extra boost of speed is when using the calculator or transforming objects. Falcon and TT screen resolutions with up to 16 colours are supported and a 256-colour version is said to be in the pipeline.

MONEY WELL SPENT?

If you're used to using an earlier version, *Outline Art 3* is excellent. The original manual supplied does a fairly good job of introducing you to the system, although you'd have thought DMC (producers of the ST's finest desktop publishing package) could have scraped together a few new pages of printed documentation. The hypertext help system does go into detail on the new features, but of course you need four megabytes to make any use of it.

O-Line's main problem is still its lack of proper drawing tools. Surely constructing a four-sided path, selecting a colour and then converting it to an object is no longer a valid way of drawing a filled box in the 1990s! Something as simple as a loadable library of pre-defined shapes, such as that used by Didot, would solve the problem. On the other hand, most people will be using it for effects only, a feat at which it is arguably unsurpassed.

At first glance you could mistake *Outline 3* as just "*Outline Art* in colour", but scratch a little deeper and you'll find a more flexible, powerful, and even a little more user-friendly program, at a very attractive price! It's not *DA's Vector* by any means, but remains an ideal upgrade for any die-hard *O-Line* fan.

✓ Speed and versatility
✓ Compatible with Calamus colour lists

PROS AND CONS

✗ No basic drawing tools
✗ Complex path editing
✗ Memory requirements

"A flexible vector art tool sadly eclipsed by DA's Vector"

NAME: OUTLINE ART 3
COMPANY: DMC PUBLISHING
CONTACT: 010 416 479 1880
PRICE: $189.95CDN (ABOUT £100)
MIN MEMORY: 0.5MB

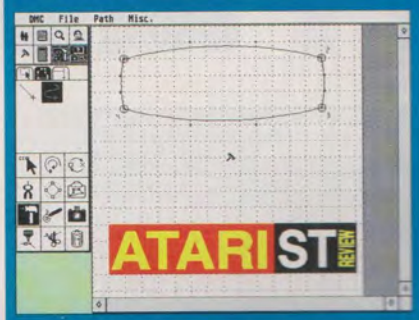
EASE OF USE
DOCUMENTATION
EFFECTIVENESS
VALUE FOR MONEY

OVERALL 79%

STEP BY STEP

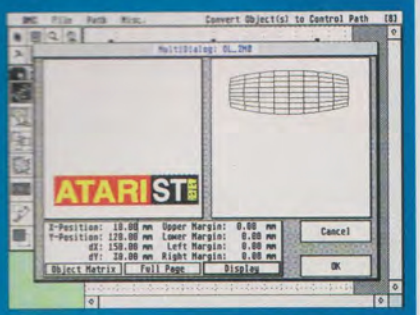
MAKE THE GRADE

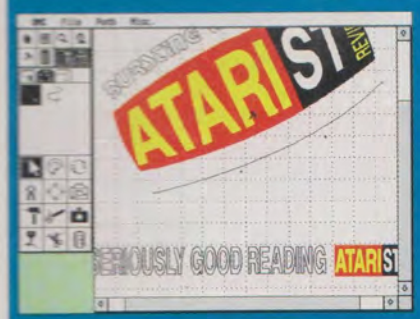
To give you a feel for Outline Art 3, we're going to put together a colourful design for use in an advert...



First design your logo, and then a "control path" on which to lay it. Once you've got the basic shape right, mark the corners and move back to the editing panel.

Select both items while holding down the <SHIFT> key and click on the "transform object" icon. After a few seconds, a pleasantly bulging graphic should appear and you can now safely delete your control path.





Next rotate the whole object with the calculator and use some free text to add the finishing touches to your design. It's best to disable the grid at this point, otherwise things can get messy.

Finally, add a few graduated fills to the background and export the whole thing as a CVG file. It could equally well be saved in EPS format for use on the Macintosh, PC or NeXT!

The now famous quote from Jack Tramiel, that became Atari's motto, has been revitalised. Tony Kaye looks at new moves to promote the 1040 STE...

Bargain prices – just £199 for either of these packs.

MORE POWER

Thanks to new moves by one of the major Atari distributors, price cuts to 1040 STE products have been announced. You can now buy the **Music Master** or **Family Curriculum II** packs for just £199 from Silica Shop or any other Atari dealer.

At these prices, some of you will consider buying a new machine. Whether this will be your first computer or simply an upgrade from your tired old one, you need to know what's on offer.

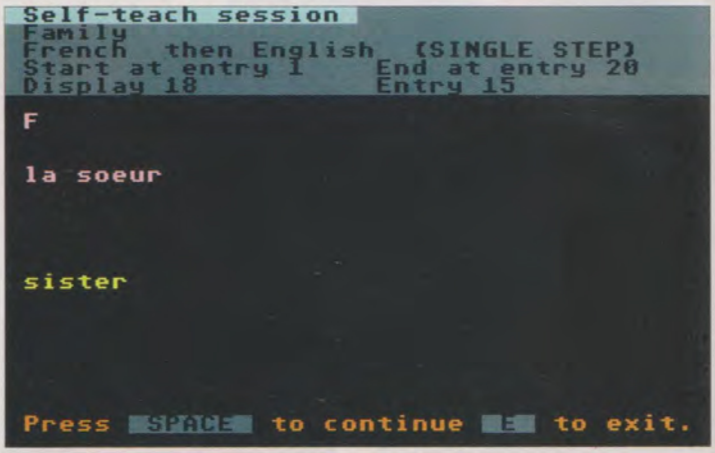
FEATURES

The original ST has been improved and upgraded over the years. The 520 ST was bereft of a built-in disk drive, TOS in ROM or a television modulator. As these were added, the computer became the STM (TV modulator), STF (built-in floppy drive) and STFM (both). This configuration was around for some years and became the most popular computer for that time.

Christmas 1989 saw the release of the STE model, the E standing for Enhanced. This had a new version of TOS (1.60, quickly upgraded to 1.62) as well as the addition of a 4,096 colour palette, stereo sound capabilities and two extra joystick ports. The extra capabilities, along with the use of SIMMs (Single In-line Memory Modules) for upgrading up to four megabytes, made the STE a desirable machine. Memory upgrades were a simple matter of opening the case and adding small, one megabyte SIMM boards. Up until a year ago, the 1040 STE was being sold for £399.

FAMILY CURRICULUM II

If the computer is for general use, then the **Family Curriculum II** pack is probably for you. Along with one megabyte of memory, a built-in double sided disk drive, mouse, manuals and television lead, you get ten pieces of software to get you started (Silica Systems also offer their "Tenstar" games pack, a productivity pack and accommodation vouchers; see the separate box entitled TENSTAR PACK). The 1040 STE has four 256 kilobyte SIMM boards giving a total of one megabyte of on-board memory. This can easily be upgraded to two or four megabytes by swapping the existing boards for one or two pairs of one megabyte SIMMs and the computer can, in fact, be bought from Silica in these configurations for £249 and £299 respectively.



Brush up on your French with this tutor.

BUNDLED SOFTWARE

A computer without software is as useful as a magazine without pages, so if there's a selection included in the price, it makes for even better value and saves you having to buy extras straight away. Mind you, it is advisable to buy a joystick if you do intend to play games as this is the one thing that is not included in either pack.

In the revised **Family Curriculum II** pack, there are two games and eight software applications covering education, art, music, programming and word processing. Here is a complete list of what's included.

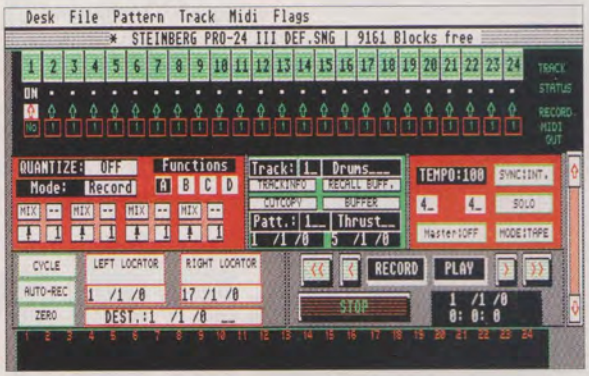
PLAY AND LEARN MODULE: *Prof Plays A New Game, Prof Looks At Words* and *Prof Makes Sentences* (£76.59).

The Play And Learn module is aimed at very young children and gives them their first steps into the world of "real computing". It takes gentle steps to interest the young and helps them get used to using the computer as a learning tool. The module contains two disks, a manual and five story books.

JUNIOR SCHOOL MODULE: *Answer Back Junior Quiz, General Knowledge Quiz, Spelling* and *Primary Mathematics* (£58.54). Two disks and four programs for children up to the age of 12, with challenging and fun lessons. The manual carries instructions and guidelines for the parents, suggesting how to present them to the child for optimum learning and interest.

Loads of software to get you going. The ideal starter pack?

If music be the food of love, play on... for less!



Pro 24 sequencing software from Steinberg.

WITHOUT THE PRICE

GCSE REVISION MODULE: *Micro Mathematics, French Mistress* and *Geography Quiz* (£55.54). For the teenager studying for those dreaded GCSE exams, this module helps with revision in three key areas: Maths, French and Geography. Written by people who work closely with the National Curriculum, these programs help with the revision process.

FAMILY COMPUTING MODULE

A collection of five disks and two manuals designed to have something for everyone...

- *Hyperpaint 2* (£39.99) – A painting package that works in any of the three ST resolutions, although hi-res needs a dedicated monitor.
- *Music Maker II* (£49.99) – An intro duction to the world of music and MIDI.
- *First BASIC* (£49.99) – The first steps to learning the BASIC programming language.
- *1st Word* (£59.99) – A fully-functioned word processor for those letters to the bank manager!
- *Ani ST* (£29.95) – Low resolution program to create animated sequences with your pictures.
- *9 Lives* (£24.99) – Rescue Bob Cat's girlfriend from the evil mad Scientist.
- *Prince*(£24.95) – Kill the enemy Prince and protect your own.

Also in this package, but not documented, is a self-testing program that will check the memory and the disk that is in the computer, along with *Neochrome*, another painting package.

There should be something here to interest all members of the family.

MUSIC MASTER

If you are upgrading your computer rather than buying a new one and have a specific interest in using the MIDI ports on that old Casio sitting in the corner, you may want to consider the Music Master pack. This is aimed at people who want to make music and has the attraction of *Steinberg Pro 24 III* sequencer software, retail value £149 on its own.

Offering professional quality, the sequencer has been used by many top musicians including Dire Straits, Climie Fisher and Midge Ure. This 24 track system is ideal for the amateur and professional musician; all you need to add is a MIDI-compatible keyboard and leads.

ST REVIEW CONCLUSION

Prices for the 1040 STE have never been lower. Now is an ideal time to replace your old machine or invest in the future. If you have a family or are buying your first computer, get the Family Curriculum II pack. If music and MIDI is important to you, then the Music Master pack is the one you want.

When buying, shop around for the best overall package, not just the best price, and buy from someone you can trust. You never know when you are going to need advice or repairs...

TENSTAR PACK

Both Family Curriculum II and Music Master come with their own software but when bought from Silica Shop, they also have some extras – ten games, a productivity pack and free hotel accommodation.

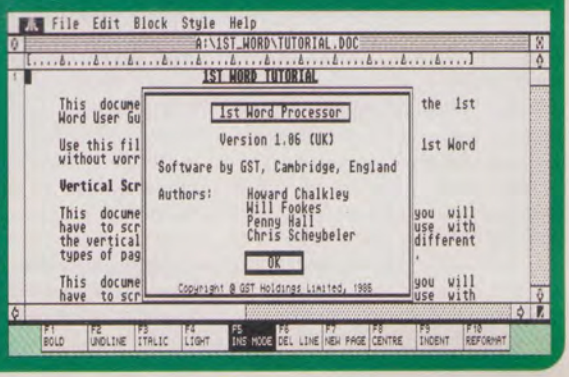
Chess Player 2150, one of the Tenstar pack.

The Tenstar pack contains *Asterix – Operation Getafix, Chess Player 2150, Drivin' Force, James Bond 007 – Live And Let Die, Onslaught, Pipe Mania, Rick Dangerous, Rock'n Roll, Skweek, Trivial Pursuit* and *A New Beginning*.

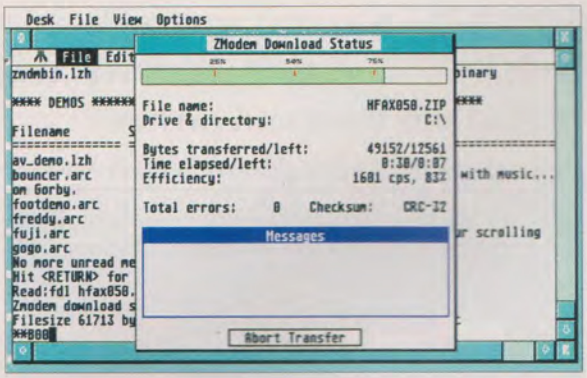
Each game is individually packaged and comes with full instructions. Don't expect to be stunned by them, but as they are all commercial packages, the quality isn't bad. There's certainly something here for everybody.

Also included in the Silica deal is a Productivity pack. *ST BASIC* is an alternative to the *First BASIC* in the Family pack and *Spell It* is a spelling checker for use with *1st Word*. The Music Master package also includes the *1st Word* program.

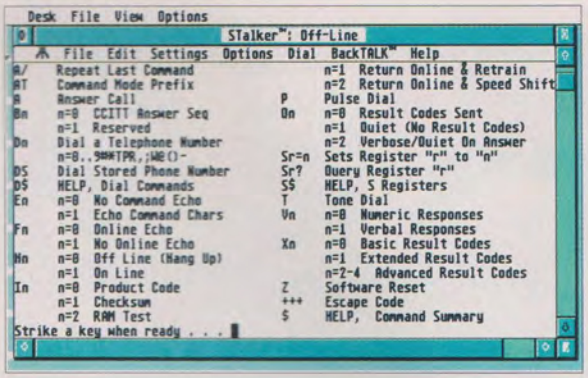
In addition to all of the above, you will receive a set of vouchers for up to 16 nights free hotel accommodation. Be aware that these are conditional on meals having to be taken in the hotel and paid for, but if you're planning a trip, it may save you some money.



1st Word is a fully functional word processor to get you started.



Downloading a ZIP file using STalker.



The modem's help screen.

HI-SPEED SPORT!

Maurice Collins knocks pounds off his telephone bill with a US Robotics high-speed modem.

High speed modems are a desirable item but if you're only downloading the occasional file and use an off-line reader to log onto a BBS or network once or twice a week, it would be very hard to justify the cost, even allowing for the savings to your telephone bill. On the other hand, if you want to start downloading the bigger and more interesting files – and perhaps even join *ST Review* contributors on CIX – it might be worth taking a look at the Sportster, a brand new budget high-speed modem from US Robotics.

The Sportster is a v32bis-compatible fax and data modem. This means it can normally transmit data (including faxes) at 14,400 bits per second though with MNP5 and v42bis data compression and MNP2-4 error correction, the maximum theoretical data throughput is a staggering 57,600 bps!

The Sportster is less than 7 inches long by 4 inches wide and stands only an inch or so high on the desktop. It comes complete with power supply, telephone lead and (PC only) fax software. It will work with any ST comms package though, including *STalker*, *CIXCOMM* and *STraightfax*.

The case is made of white plastic and there's a purple display panel on the front with seven red status lights for auto answer, carrier detect, receive data, send data, Data Terminal Ready, clear to send and ARQ/FAX. A rotary volume control is provided on the side to supplement the low, medium and high settings available via software commands. The power switch is on the front too.

At the back is the RS232 interface, power socket (power comes from a small power pack supplied with the modem), two telephone jack sockets and a bank of eight DIP switches. One of the jacks can't be used on the UK model – if you need to plug in a telephone handset too, you'll need a two way adapter at the wall socket. At least you can legally use it in the UK – it's fully BABT approved!

The manual runs to some 200 pages and there's an addendum for UK users, as the modem is designed and built in the States, plus a command quick reference card. It's clearly written and packed with information, taking new users step by step through plugging the modem in and getting it to work with the computer. Certainly cuts through the confusing jargon that surrounds the comms scene.

Sportster supports the complete Hayes command set and has some interesting features such as a help screen that lets you find odd commands at a glance and the ability to store four telephone numbers permanently in non-volatile memory. The factory default settings are perfectly adequate for most software packages – I took the modem straight from the box, logged onto CIX with the comms port set at 19,200 and immediately downloaded a ZIP file at something over 1,600 characters per second, seven times faster than my previous 2,400 baud modem.

As the ST is restricted to 19,200 bps through the serial port, without special (and unreliable) patches, I couldn't test the maximum throughput of text files which should be between 3,000 and 3,500 cps when connected to another v42bis modem. However, in the real world, very few of us need to send large text files – they're usually archived in one form or another first. With ZIP and LZH files, the modem regularly achieves 1,500 – 1,700 cps and some unarchived graphics and text files have come close to 1,900 cps.

U.S. Robotics' new Sportster 14,4000 budget fax/modem.

This means that you can download 1 MB of archived software in no more than 11 minutes, possibly less, making it a cheap and convenient way of getting hold of the latest PD and shareware utilities from a local BBS. If you have fax software such as *STraightfax*, of course, you can send, receive and print Group III faxes direct from your ST.

In day to day use, the Sportster is a reliable modem that I'd recommend to anyone who wants to get into comms seriously. Although the RRP is fairly high, the street price is nearer £300 – a real bargain for a BABT-approved, v32bis modem.

✓ Super fast file transfer
✓ Send/receive faxes
✓ Works straight away

PROS AND CONS

✗ Non -specific manual
✗ No software supplied

"A high speed, competitively priced modem that will certainly save on your telephone bill"

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DISK OF THE MONTH

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ARC 20 BLAT. Superb STE ONLY falling blocks game. 10 fun filled levels. Superb DMA sound, will work with 512k but is a real treat on 1Mb machine. Great graphics.

BRD 16 COURSE FISHERMAN. Superb treat for any angler. Needs 1 Mb to run. 12 different venues. Whole host of variations in tackle. A great way to while away the hours when you can't get to the bank.

ADV 01 DDST, DUNGEONS & DRAGONS, Role playing adventure. PARANOIA, ENCHANTED REALM and ELBOZO CITY. 3 more good adventures also on this disk.

BRD 04 CHESS, superb chess game. DECODER, excellent mastermind. SUPER SIMON, computer version of hand held game. DOMINOES, puzzle game. GOLF card game. Also on this disk DRAGON MAZE, 2 game, SENSORI BACKGAMMON, BRIDGIT, ST ARTREK, BATTLESHIPS.

ARC 14 HOME, and L'ORB 2 super pinball games. GALTIC RANGER, unusual shoot em up. MONKIES & BALLOONS, bounce the clown and burst the balloons. FIRESTORM, another good arcade game rescue the humans. LAZERBAL, super game and interesting version on the pinball theme. Also on this disk LOST TREASURE, WIDOW MAKER, SLALOM & BREAK OUT.

AST 01 PLANETARIUM simply the best PD Astronomy program. SKYMAP another great Astronomy program plus aSTronomer.

BRD01 MONOPOLY, LAZER-CHESS, OTHELLO, CHECKERS, WHEEL OF FORTUNE and more. A superb collection of BOARD GAMES.

WPR01 ST WRITER V4.2 and FIRSTWORD. The best word processors for the ST(E) plus a spell checker, print spooler and a selection of ready to use letters.

ODD07 THE WORLD OF STARTREK. Over 300K of text interviews and biographies from the original STARTREK and NEXT GENERATION plus loads of pictures from both series. A must for all TREKKIES!!!

ARC04 TETRIS, superb Tetris game. KLAX TRIX, WELTRIS & TETSIDE, 3 more good games on the Tetris theme. MR DICE, COLLAPSE & BURGER, 3 more good games to fill this super value disk.

WPR02 IDEALIST. Super multi column text printer. EX COLUMN, DUAL COLUMN, 2 COLUMN. 3 more good multi column text printers. DOUBLE PAGE. Print 2 pages at once on A4 on your SLM 804.

WPR03 ALICE. Super text editor up to 10 docs. In memory at once. EDITEXT. Super little text editor. Ideal for beginners. NEWORD 400v3. Easy to use text editor, again good for beginners. NOTEPAD. Make temporary notes from within any gem program. PHONEPAD. Pop up telephone book. FILOFAX and ORGANISER. Everything a paper filofax would have and much more in these two programm. TYPEWRITE – Turn your ST into a typewriter.

ART 07 Superb art package, ideal for simple DTP. 23 built-in fonts. A4 size paper works in monochrome for best quality of print. Ideal for leaflets etc. DS Disk.

BRD05 AMERICAN FOOTBALL. DALEKS. STARTREK. DELTA 3. CELESTIAL CEASERS (versions 1 and 2). SPACE WARS. RED ALERT. MATCH. HANOI. OGRE. 11 Board and Strategy Games. SPLENDID SELECTION!!

ARC12 BELUM INTERACTUM - Good galaxians clone. BLOCKADE. HAUNTED HOUSE. AMORTRACK. BOING. INVADERS. MANIA. Another superb selection of arcade games.

ADV03 CONQUEST. Graphic adventure. Should take weeks to complete! (Shareware).

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UTL134 SAGROTAN. Must be the best virus killer around. V.KILLER v3.84. Another excellent virus killer. EXORCIST. The latest version of this V.Killer. HD RESTORE. Repairs hard drive boot sector. RIPPER and PROBE. Two programs to grab music and graphics from disks and more...

UTL120 ZX SPECTRUM EMULATOR. Needs 1Mb SPECTRUM to ST DOWNLOADER. Gives details on how to transfer Spectrum games from tape to disk for the above emulator. ZX81 EMULATOR and 89 PROGRAMS.

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OPEN HOUSE

Look back in anguish...

Why did you buy your first computer? What made you eventually part with your hard-earned cash? Were you pleased with your decision?

When we decided to do a retrospective look at Atari computers, I decided to ask myself the same questions and see if I'm unique or if others have had a similar course into "life's great time-consumer".

I've always been a "gadget freak" and had to have the latest technology. Unfortunately, I never had the money to be able to get what I wanted, but I decided very early on that computers were for me. I went through the run of building Uncle Clive's "smallest radio in the world" and the original Cambridge calculator but my life was truly transformed when a friend of mine bought an Atari 800. This large grey box with its cartridge slot in the top, separate power supply and data recorder attracted me like a magnet. The early games I played were *Galaxy* and *Galactic Trader* and all 12 of Scott Adams' text adventures. I even spent an hour on the telephone to California trying to solve *Savage Island*!

At the time, I was working for a very understanding boss who allowed me to buy the computer through him. This meant interest free credit and no VAT. However, within a couple of weeks of owning the machine (which cost a massive £499 plus the memory upgrade to 48 kilobytes and the Data Recorder), I was back for the 810 disk drive.

The disk drive made an incredible difference. One Scott Adams adventure took 20 minutes to load on tape and just 45 seconds with the drive. So this was my start in "serious" computing. My next move (and biggest mistake at the time) was to buy an interface for a modem, which was needed to connect a printer or modem and cost £100. The modem itself was an acoustic 300 baud unit with a cradle into which you had to place the telephone for operation. I was active on the bulletin boards up and down the country and was well known after a period of two or three months at which point the crunch came – a £275 phone bill! The modem was put away and is still in my loft...

The 800 gave way to an 800XL with 1050 disk drive leading eventually to the 520STFM. This was an early one with TOS 1.0 and a single-sided disk drive. I upgraded it to one megabyte using chips and capacitors soldered to the motherboard and survived like this for some time. Spells of interest increased and decreased over the years, but the ST was always in evidence. I added an Epson LX-80 printer, considered one of the best in its day, but still the money wasn't there for a hard disk drive.

I was given a 20 megabyte Seagate SCSI drive and an old PC power supply by a friend in the computer field, so all I needed was a host adapter. I managed to get a GE-Soft adapter and ran the drive as it was for quite some time.

Now, my system comprises of a 1040 STE upgraded to four megabytes and switchable TOS 2.06, two hard disk drives of 52 and 90 megabytes, colour and mono monitors, enough disks to sink a battleship and a fair collection of peripherals. (*We're definitely paying you too much... Ed*)

I still wouldn't swap my ST. I may need to get another computer for work purposes in the future and this may well be a PC or a Mac, but the ST will still be there and hold a special place in my heart ...and on my desk!

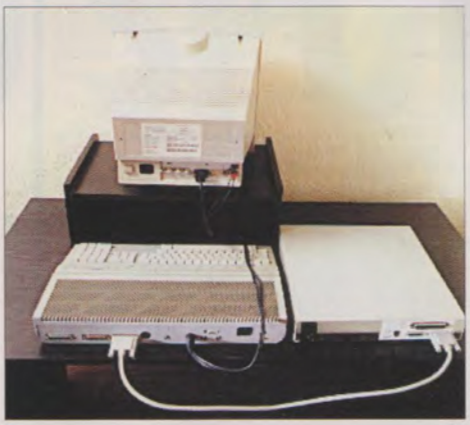
Be seeing you...

As deputy editor, Tony Kaye has his own desk in the *ST Review* office – but it's totally submerged in disks! Enough to sink a battleship? At least twice over...

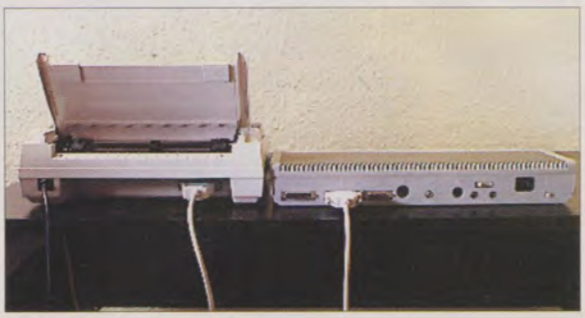
Sockets and cabling can cause headaches. Tony Kaye looks at how to get your ST connected...

WELL CONNECTED

A well-organised work area is safer and more pleasurable to work in.



Connecting leads neatly makes it easier to move equipment later on. Note how short the DMA lead is.

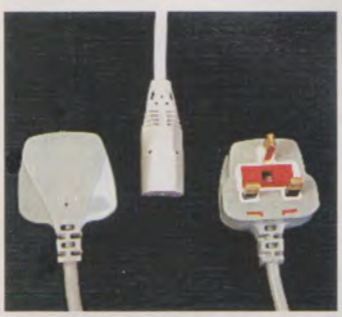


A printer is connected via its own port.

The broad title of connections covers a multitude of sins. Simple set-ups involve at least power and television cables in the back of your ST, mouse and joystick leads along with a power lead from the television. A more complex set-up could include two monitors, hard disk drives, external floppy drive, printer, stereo speakers, clock cartridge, MIDI equipment and even a modem. That's a lot of plug sockets!

THE SYSTEM

So, what can you do to ensure safety? The first thing is to make sure that each plug has its own socket. This may sound obvious, but how many of you reading this are using plugs with two sets of wires in them because of a lack of sockets?



Moulded plugs on "kettle leads" make for safer connections

The best way is to use a four-way extension socket, also known as a trailing socket, available from any High Street electrical store for just a few pounds.

Many "kettle leads" (such as the one that takes power to your ST) have moulded plugs on them, making it impossible to wire more than one set of mains leads into the same socket without cutting the plugs off and buying new ones. All equipment should be supplied like this; it is far safer to have the plug professionally wired. Some attempts at wiring a simple plug could make your hair stand on end – literally!

Another problem with a modular system like the ST is that cables can easily be tripped over if they aren't routed properly. This may involve crawling around under a table, but it is worth it in the long run. Your system will be easier to access and safer too.

CONNECTING YOUR SYSTEM

Make sure that you plan where everything is going before you fix any cables. It can be messy if you have to remove clips and replace them in different positions. Allow room for reaching on/off switches, the printer and floppy disk drive. Connect all the equipment together as neatly as possible, but don't plug into the mains until all the leads are connected and have safe paths. Bear in mind that a simple path is best. Not only will it be neater, but it will be easier to move things later on if you need to.

Hard drives are connected using a DMA lead. This needs to be as short as possible or there is a possibility of data corruption. As the lead is quite short, this often restricts the positioning of the hard drive.

PERIPHERALS

Once the main system is connected, there are other peripherals you may want to connect to your system such as a printer, external floppy drive, a second hard drive, modem, cartridge, stereo speakers and MIDI equipment.

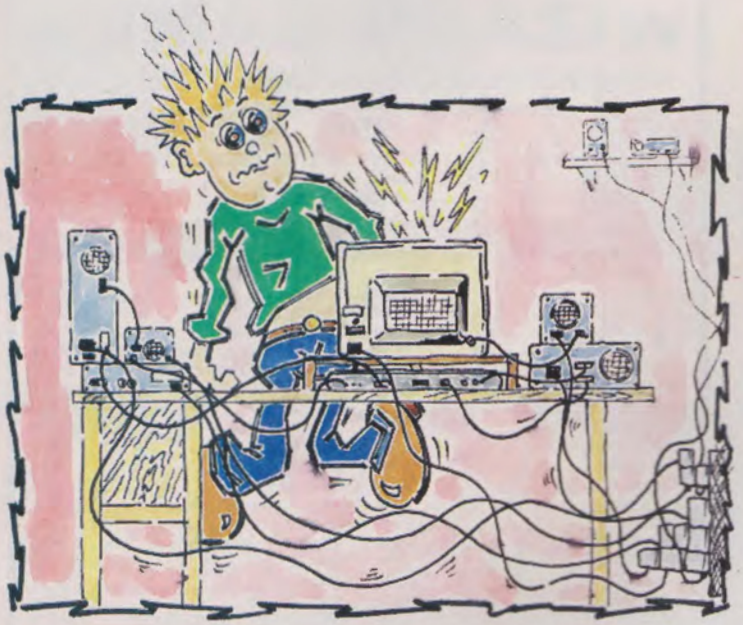
From the list, five of them need power so you may want to consider getting another trailing socket. Another alternative could be to visit an electrical store and find out about power distribution centres. These are either connecting blocks for bare leads or a block containing four or six miniature plugs. Both involve removing and rewiring the plugs, which should be done as safely and neatly as possible.

CARTRIDGE PORT

The cartridge port is used to plug in a variety of add-ons, the most common of which is a clock cartridge. However, it is also as a means of protection for some programs like Steinberg *Cubase*.

Two common problems occur with cartridges. If the contacts are

The ST's cartridge port is often used for connecting a clock or a copy protection "dongle".



not clean, the program may not find the port and, at best, will give an error message. To avoid this situation, make sure there is no residue on the contacts of either the cartridge or the ST's port.

The other problem is that of plugging in or removing the cartridge while the computer is running. This can result in serious damage to the ST. At all times, the computer should be switched off before this operation is carried out.

FLOPPY DRIVES

There are two different ways of powering an external floppy drive; mains power and via the joystick port. The latter method frees up a mains socket, but it puts extra strain on the ST's power supply which could result in an early power supply failure.

Nothing should ever be connected or disconnected while the ST is switched on. If you do this with your external floppy drive, it will not be seen by the ST which will behave as if the drive is not there.

OTHER PORTS

All around the ST, and underneath it, are several other ports for connecting additional equipment. You are probably familiar with the mouse and joystick ports sited under the keyboard. Constant use can render these useless, so an extension lead such as the one shown is recommended. A single port can cost as much as £40 to repair, so a £6 investment can save a lot of money and make life that bit easier.

'Make sure that each plug has its own socket. This may sound obvious, but how many of you are using plugs with two sets of wires in them because of a lack of sockets?'

On the rear of the ST is a port with a small telephone symbol. This is a serial port (RS-232C) for connecting a modem to the ST and can also be used for printing, although it is comparatively slow. The modem port can handle high speed transfers using telephone lines, although some versions of TOS require a small program to make this work correctly. This port can also be used to connect two STs together for file transfers and some two-player games. On the left of the machine are the MIDI ports. The MIDI Out is non-standard, but this has not stopped the ST from becoming the most popular music computer.

If you have an STFM or earlier machine then, apart from the television lead, you have reached the end of an impressive list of connections. However if you have an STE, you have another two pairs of sockets. On the back, there are two phono sockets for connection to a stereo sound source and on the left hand side, you have two extra joystick ports.

That's it – get connecting!

The mouse/joystick ports are not in the best place on the ST but an extension lead can help.

FACT OR FICTION

"I can use any MIDI cable with my ST."

Fiction. In their infinite wisdom, Atari combined the MIDI Out and Thru sockets into a single one, labelled MIDI Out. A correctly wired MIDI lead has no connections to the outermost two pins, but some cable manufacturers blob a lump of solder across the two pairs of pins on the right and left so creating a permanent MIDI Thru and absolute chaos!

Make sure that you use either a correctly wired MIDI lead or a standard five-pin DIN cable – not a mirror image audio lead.

DAISY-CHAINING

Connecting two hard disk drives or other peripherals like Atari laser printers, CD ROM drives and tape streamers using the DMA port is called daisy-chaining. The SCSI interface is capable of addressing up to eight devices.

Daisy-chaining two hard disk drives. The top is drive 0 and the bottom drive is designated as drive 1.

The Atari SLM804 laser printer has to be last in the chain and, as with any equipment used in this way, the device number has to be unique or a clash will occur, which is likely to result in the system not working at all. If you are using the Atari Hard Disk Installation driver (AHDI), then the drives have to be numbered up from zero (the first drive is zero, the second is one, and so on) or, again, the system won't boot properly.

Identification selectors are not available on all disk drives, but in our example the second drive has a selector, so it can be set as Logical Unit Number (LUN) one. The DMA IN socket goes to the computer on the first drive and the DMA OUT is connected to the DMA IN port of the second and so on down the line. Drive identification in TOS will show that the first partition on the second drive will have the next available drive letter after the partitions on the first hard drive are accounted for.

FACT OR FICTION

"I can use any 13 amp plug for my system."

Fiction. A plug has to conform to British Safety Standards and, for safety reasons, the fuse rating must be correct for the appliance connected to it. A 13 amp fuse may not react quickly enough to a fault and, in some cases, may not detect that fault at all so resulting in damage to your equipment. Fuses are generally available in 3, 5 and 13 amp ratings.

How do you work out the fuse rating? There should be a label on each piece of equipment stating how many watts it requires – for instance, a standard STE requires 120 watts. Now divide this by 240 and the result is the amp rating for the fuse. In this example, 120/240 gives 0.5 amp so a three amp fuse would be used (the one with the red label). Most devices need a three amp fuse, but do check the rating of printers and hard drives.

ST REVIEW ADVICE

- **Make sure that your system has no cables trailing for you to trip over. Keep all leads as short as possible, especially the DMA cable to a hard drive.**
- **Where possible, don't keep plugging and unplugging devices as this invariably leads to loose fitting or broken connections. Invest in mouse/joystick extension leads and a switchbox if you have two monitors or printers.**
- **Check fuse ratings, especially as almost all plugs come with an innate 13 amp fuse. Don't be tempted to use such fuses in equipment simply because that is all you have available. Also, don't wire two leads into one plug!**

TECH TALK

Comments on the Cook Mis-Report

Watching the Cook Report about computer pornography, many parents were probably horrified to learn that their kids' Curriculum Pack can be used to view pornographic material. The program was intentionally misleading with meaningless statements being thrown in by the bucket load. "There are 1,500 bulletin boards in the UK, 10% of which contain pornographic material." What is meant by pornographic material? I have a statement for Mr Cook's next "report" – there are thousands of newsagents in the UK, 99% of which carry pornographic material. By Cook's definition, the most popular newspaper in this country contains more pornography than the average bulletin board!

I am sure that there are some boards that carry pornographic material, but as a keen comms user, I have never found anything out of the ordinary except for some Page 3-style glamour shots.

The idea that full length porn films could be transferred down the telephone line is ridiculous. Even on the fastest modem available, using the best compression method, a single frame would take at least 10 seconds to transfer. At 25 frames per second, a one minute film would take over 4 hours to transfer over the phone! My Falcon takes about 30 to 60 seconds to decode a compressed colour image. This is insane! If I want to watch pornographic films, I can think of much easier ways. This is why Mr Cook could not find any films and had to superimpose one on a computer monitor. It didn't fool me.

He *may* have a point. It is possible that some people do get hold of hard core pornographic images via the telephone lines and have telephone bills to match. With the current technology, it is simply impossible to control this. CIX, for example, handles over 3000 private mail messages a day, any of which can contain pornographic material. Comments along the lines of "Which printer spooler do you recommend for use with *Timeworks 2*?" are far more likely! Who is going to check all these messages?

Cook is good at making interesting TV programmes, but he shouldn't abuse his position to create false impressions. Many people use their modems to exchange knowledge about computer programming, hobbies and general chatter. Students from around the world can share information and help each other in their studies. I have had electronic mail from Russia, South America, Scandinavia and even the Middle East. Chinese students used their Internet links to contact Amnesty during the Tiananmen Square revolt.

It would be a great shame if the life of bulletin board SysOps became difficult as a result of such scaremongering. Unlike the picture painted in the programme, most boards are non-profitable and are run by enthusiasts. Just let it be so, Mr Cook, just let it be so...

Ofir Gal is an experienced comms user whose wife works for Amnesty International, hence the comments above concerning the Tiananmen Square revolt. A copy of the magazine will be sent to the Cook Report.

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BORN YESTERDAY
...BUT ALIVE AND KICKING TODAY!
PROGRAMS MAY COME AND GO BUT THE BEST LIVE ON –
ST REVIEW EXAMINES EIGHT YEARS OF THE ST
Art • Graphics • Atari 8-bit Computers • DTP • Word Processing • MIDI •
Utilities • Arcade Games • Strategy Games • Add-ons • Quotes

OLD MASTERS

Rapidly approaching senility, Andrew Wright reminisces on his first attempts at painting on screen...

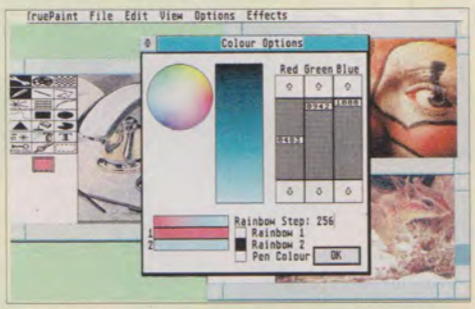
I can still remember that hot summer's day seven years ago when I walked into a small computer shop in York and walked out a few minutes later, several hundred pounds poorer with a large box under one arm. Things got even hotter when I got home, of course, but it was worth it – I'd seen my first demonstration of a computerised paint package in action and I was hooked.

DEGAS ELITE

The program was *Degas Elite* and it is probably the single most famous ST program around. There's been a lot of water under the bridge since then and other programs have come and gone, some better, some worse. *Degas Elite* is still around – my copy is still paying its way – and it can still hold its own with the best of the rest.

So, what makes *Degas* so good? Without a shadow of a doubt, it's all in the interface. By and large, there are three types of interface available to WYSIWYG programs like DTP, drawing and paint packages. Firstly there's the toolbox down the side and the work surface in a GEM window. This works well in programs like *Hyperpaint* as well as DTP packages like *Timeworks* and *Pagestream*. Secondly there's the two screen system that *Degas* uses – a menu screen for tool selection and a full screen work surface that is hidden when the menu is being used. The third option is a combination of the two, an approach that *Neochrome* and many newer programs opt for. This involves a floating toolbox or menu with the work screen partly visible behind.

With *Degas*, you select your tool, changing the parameters as necessary on the menu screen and then with a click of the right mouse button, you use it to create your picture on the workscreen. Every tool you're ever likely to need is included, from airbrush and stipple effects to polylines, rays and various shapes. You can define your own fills and patterns, add text with special effects like shadow or even slow down the mouse for accurate drawing. *Degas Elite* remains the definitive paint program that all the rest have had to beat. Even if it were withdrawn from sale tomorrow, it would live on in the form of the *Degas* file format which has become a standard on the ST but with the coming of *SpeedoGDOS*, it looks like getting a new lease of life.



TruePaint – the true colour way to paint.

MORE THAN 16 COLOURS

Unfortunately for the ST, 16 colour graphics is no longer state of the art. The TT can use up to 256 colours on screen and the Falcon something over 65,000 and one program in particular looks like making a big impact – if it hasn't done already. The program is *TruePaint* and while the interface is somewhat conservative, it offer some stunning true colour effects and animations as well as support for several graphics file formats. However, long before *TruePaint* was even a twinkle in HiSoft's collective eye, programmers were trying to devise ways of overcoming the ST's inability to display more than 16 colours. The best attempt was *Spectrum 512*, a paint program that lent its name to the still popular file format and one which, as the name suggests, used high speed palette switching to display more than 16 colours on a standard ST.

The Spectrum file format permits up to 42 colours to be displayed on each scan line, up to a theoretical maximum of 512, but most pictures actually contain much less.

Spectrum pictures are still widely used on the ST – bulletin boards and on-line networks contain hundreds of examples, usually converted from 256-colour GIF files or scanned true colour images.

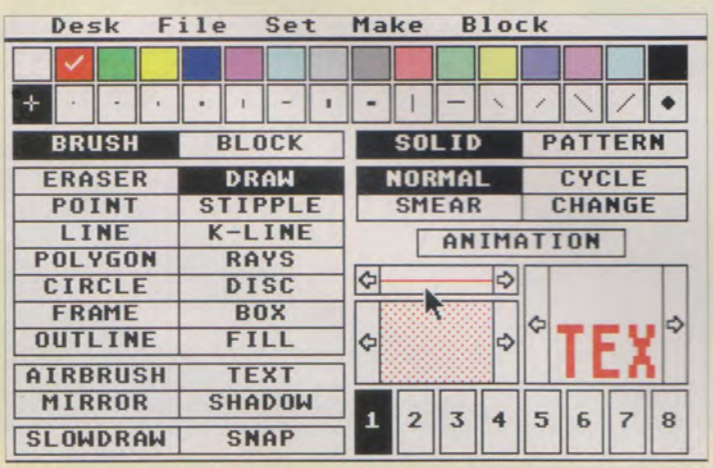
ALSO RANS

How can you possibly mention some graphics packages and not others? A list of ST packages would fill this page on its own and all of them could claim to have influenced some people.

There's *Neochrome*, originally distributed by Atari and one of the first paint packages around. And there's *Quantum Paint*, another paint program that squeezed more colours from the ST – up to 4,096 on an STE.

Perhaps *Prism Paint* deserves a mention for being the only paint package, in my opinion, that has come anywhere near *Degas* for ease of use and flexibility. Like *Degas*, it uses a movable menu screen with the work screen behind and it has a very similar text/button interface.

Finally, I have to mention the biggest flop. *Deluxe Paint* was already a standard on the PC and Amiga when it was ported to the ST. Unfortunately the interface, which might have looked wonderful to PC owners used to unfriendly DOS command lines, didn't go down at all well with ST owners and the program never achieved very much at all.



Degas Elite in all its glory.

Spectrum 512 – more colours for your money.

GRAPHICS UNLIMITED

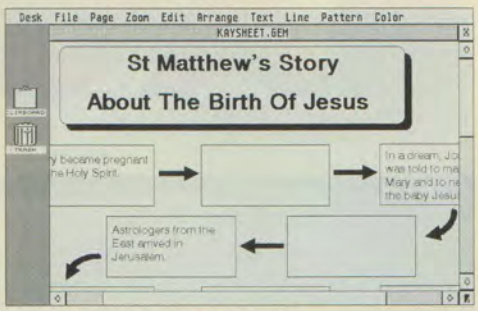
Maurice Collins looks back through his disk boxes and digs out the graphics packages that have made the biggest impact on the ST.

The ST is a highly graphical computer. Not only does it have some sophisticated graphics hardware to speed up screen redraws, but it also has a well-developed graphical interface installed in ROM. Those familiar little icons on the desktop and the GEM windows and scroll bars make it one of the easiest computers of all to use. I can't think of a single area of ST software development that hasn't made good use of the ST's graphics capability, including spreadsheets and word processors, but it's the graphics packages themselves that have really made a name for the ST, particularly those that have earned the label "serious".

EASY DRAW

One of the most influential graphics packages on the ST is also one of the oldest. It was given away on a recent *ST Review* cover disk, so it's probably influencing quite a few people all over again! The program is Migraph's *Easy Draw*, of course, and it has to be one of the best drawing programs ever devised, in terms of both power and ease of use.

The key to *Easy Draw* is its flexibility. It is a GDOS program, which means you can add all sorts of fancy fonts to the drawings you create or even import and lay out text on the page, almost like a DTP program. In fact, *Easy Draw* provided my first experiences with DTP – I bought version 2 in 1987 and used it extensively for two years to create work sheets for my wife to use in the classroom.



Easy Draw – drawing program or DTP package?

DIDOT LINEART

If *Calamus* was the program that transformed the ST from a games machine into a professional DTP platform, Didot *LineArt* has to be the program that did the same for illustration and graphic design. With its industry-standard PostScript support, auto-tracing module and the ability to use outline fonts, it opened up all sorts of possibilities and put the ST straight back in contention with other platforms. When Didot *LineArt* arrived, in 1990, ST owners could use their machines for professional design for the first time, merging type with graphics for logos and symbols, or using the powerful vector tools for complex illustrations and diagrams.

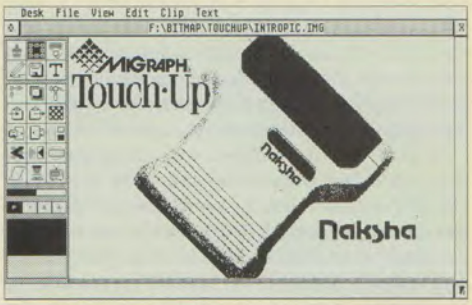
Didot *LineArt* needs an ST or TT with at least 2 Mb of memory, of course, which certainly shocked a few people. Two megabytes might be the norm now for serious applications but it certainly wasn't three years ago when the program was first released. What's more, Didot *LineArt* has now been superseded by a cheaper and even better package, *DA's Vector*. Programmed by the same team, it has most of the same functions but adds stunning vector animation to the list as well as intriguing graphing and charting facilities. Although *DA's Vector* is really geared towards life with a Falcon – it supports 24 bits of colour internally and uses the true colour mode for display – the vector animations and powerful graphics tools make it a must for designers.

TOUCH UP

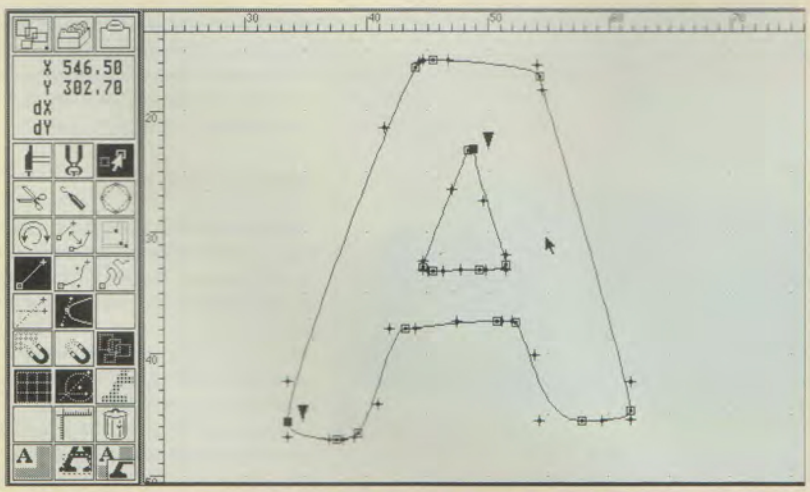
Eagle-eyed readers will have spotted that both the aforementioned programs are vector based. What about bitmap graphics? Illustration and design generally requires the precision of vector software but that doesn't mean there isn't a place for programs capable of tidying up scanned images and carrying out a few special effects of their own – programs like Migraph's *Touch Up*, for example.

When ST-compatible hand scanners first started arriving, everyone marvelled at the technology and the possibilities they offered. The main problem area was the software; most of it was geared to handling pictures created at screen resolution and there was very little that could handle the 300 dpi scans needed for crisp output on a laser or better. Many ST owners bought scanners and quickly found themselves looking for better software.

That changed with the launch of *Touch Up* in 1988, a friendly program with a dual menu/toolbox interface and plenty of features. Now at version 1.84, it is still the best choice of software for editing and manipulating monochrome bitmaps.



Touch Up – a touch more up market



Didot LineArt – power at a price

ALSO RANS

This kind of retrospective view has to be personal but the trawl through the disk boxes also produced a couple of other landmark programs.

On the bitmap side, *Imagecopy* is now at version 2 and still going strong. This is a powerful little program that grabs screens, converts a variety of images from one format to another and prints them out on most common printers. I don't expect you to have the same need for a screen grabber as I do, but it's certainly made an impact with journalists!

***Silhouette* deserves a mention too. The present trend is undoubtedly towards multipurpose graphics packages and *Silhouette* definitely leads the way in terms of price performance – not only can it deal with bitmaps and vectors but it can vectorise images too.**

Finally, from the public domain, comes another ST "great" – *PicSwitch 1.0* (*on this month's cover disk... Ed*). This modest viewer and converter must have found it way into more disk collections than any other graphics utility.

MISSED THE JUNE ISSUE COVER DISK WITH *EASYDRAW*? No problem – just turn to page 98 for information on how to order back issues...

Les Ellingham remembers the ST's predecessor which just happens to be undergoing a resurgence...

ATARI EXCELS!

Atari began life making the famous "Pong" arcade machines but by the late 1970's they had developed a home computer with dedicated sound and graphics chips and its own sprite system. The first machines were the Atari 400 with a fixed 16 kilobyte memory, and the Atari 800 with plug-in memory modules that could take you up to the heady heights of 48 kilobytes.

In 1980, when these computers were first on sale in this country, they would have set you back £345 and £645 respectively! In 1983, when other companies such as Commodore became a threat, Atari launched new machines in the 600XL and 800XL, which were basically a repackaging of the original machines but with a few enhancements. The final machines launched in 1987 were the 65XE (64 kilobytes of memory) and the 130XE (with twice as much RAM). Today, the machines you are most likely to come across are the 800XL and the 130XE.

Like most 8-bit computers, the Atari machines use cassettes or disk for program storage but, unlike others, a huge range of games and other programs were available on plug-in ROM cartridge. So you only needed to buy the computer to be up and running and it would take a long time to work your way through the hundreds of game cartridges available. When you wanted to expand your system, you needed an Atari cassette recorder or a disk drive.

Several cassette recorders were developed over the years in the shape of the 410, 1010 and XC12, but they were all much the same. The first disk drive was the single density 810 followed by the 1050 (on the launch of the XL machines). Termed an "enhanced" density drive, something peculiar to Atari, it gave about one and a half times the storage of a single density drive. In the late 1980's Atari finally launched a true double density drive, the XF551, but it was on sale for only a relatively short time and is not easy to find nowadays.

Long term users now dub the 8-bit machines the "Atari Classics" and support for them is still going strong.

The 130XE – Atari's top of the range 8-bit machine.

GAMES SOFTWARE

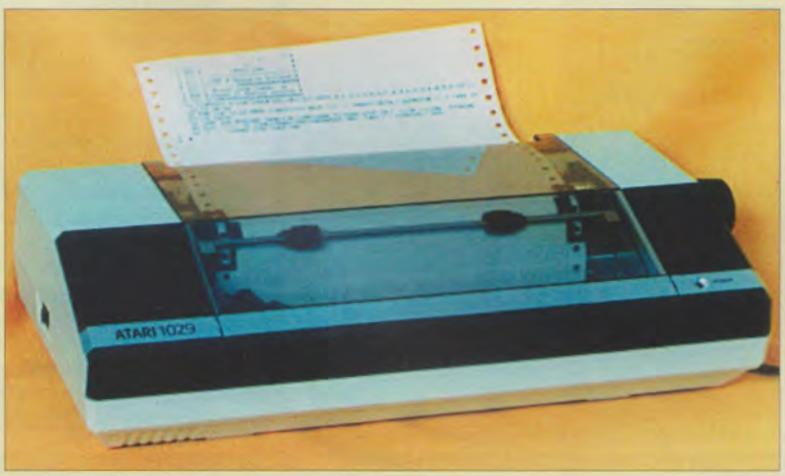
If you ask any Classic user to pick just one game from the thousands that have been written, it would almost certainly be *Star Raiders*. This space fighting game gained such a reputation that it alone sold many early machines. You command a space vehicle defending the Federation and can use long and short range scanners to find enemy craft in different sectors of the universe to which you can warp to engage in combat. Every so often you have to return to a base planet to replenish supplies. *Star Raiders* has all the elements of Star Trek and Star Wars and remains highly playable today. It is still available on cassette.

Atari developed many of the classic arcade machines and converted much of the software, so arcade standards such as *Pacman*, *Missile Command*, *Battlezone* and many more can all be played at home. Almost every type of game you can think of has been written for the Atari Classics including strategic war games, flight simulators, board games and adventures. Well known companies such as Microprose started by producing games for the Atari and some of their excellent early flight simulators such as *Spitfire Ace* and *Mig Alley Ace* are still available. Today, there are literally hundreds of games of every variety available and many more are now being developed in countries such as Germany and Poland.

SERIOUS STUFF

The 8-bit Atari machines are far more than games consoles and can be used for most serious applications. Several excellent word processors are available such as *Letter Wizard* and *AtariWriter*, later ported over to the ST to became the famous public domain *STWriter*. Probably the best word processor is *SuperScript*, a forerunner of many of the best word processors on 16-bit machines, which has all the features that any writer could need including a spell checker with a substantial dictionary.

There have been a number of databases such as *Data Perfect* and spreadsheets including the famous *Visicalc*, still available at a fraction of the price of similar spreadsheets on other machines. It is fair to say, however, that this type of program has suffered most down the years and there is little choice today. If you have a disk drive, however, there is a flourishing public domain circuit for the XL and XE which includes many serious programs.



One of the dedicated low-cost printers developed by Atari for the XL and XE.

WRITE YOUR OWN

Perhaps the one thing that sets the Atari Classics apart is their ease of programming. To be able to write programs for the ST you have to be a computer programmer but on the Atari XL and XE you just need to be interested. With a good book on Atari Basic such as *Easy Programming for the Atari Micros*, almost anyone can write their own programs or adapt those written by others.

Every Atari 8-bit machine has *Atari BASIC* built in, so there have been hundreds of thousands of programs written and circulated. Many of these have been published as listings in magazines such as

The Atari 800XL with a unique piggy-back ROM cartridge.

New Atari User and every Atari Classic owner can pick up a printed listing and type it in to save on their own cassette or disk. It is relatively simple to change that program to suit your own needs.

Some very sophisticated programs have appeared as magazine listings, even a whole new language! *Turbo BASIC*, a much enhanced and improved version of the standard *Atari BASIC*, originally appeared as a type-in listing in a German magazine. This excellent language is now widely available on disk or cassette. ST owners may even know of this program as it was later developed into *GFA BASIC*.

THE MARKET TODAY

Although Atari began phasing out support of these machines in the UK when the ST was developed, they continued to market them heavily in Eastern European countries such as Poland and East Germany where countless machines have been sold. With the integration of East and West Germany, and the collapse of Communism, a whole new range of software is making its way to the West.

German companies such as KE-SOFT often write much of their software in English so it is possible to buy their games direct or through a number of English based companies who import the software. Most prominent of these is Micro Discount who are also importing, and translating to English, a wide range of software from Poland. This software is primarily games based but includes programs that have not previously been available such as *Operation Blood*, a clone of the arcade classic *Operation Wolf*.

Timeslip, a good example of the use of 256 colours.

The XL and XE are well served with plug-in ROM cartridges.

What is remarkable about the software currently being developed by Polish and German programmers is that they are squeezing more power from the 8-bit machines than ever before and producing games, and effects, that were previously thought impossible.

In the USA, Atari have suffered badly in the market place so little new software is being developed. However, there is still a hard core of support – a new magazine called *Atari Classics* was launched only last year. The circle has almost fully turned and software being written and developed in Europe is now being exported to the USA via companies such as Micro Discount in the UK.

With hundreds of commercial programs still available plus magazine support and users in contact with each other all over the world, the Atari Classics are still holding their own in today's 16-bit dominated world. Who knows – perhaps they will outlive their big brother...

NEW ATARI USER MAGAZINE

The focal point for Atari Classic users in this country is *New Atari User* magazine, a professionally produced magazine that has been published for over 10 years making it one of the longest established computer magazines. In its pages you will find software reviews, programming articles, type-in program listings and much more including advertising from most of the companies that support the XL and XE machines in this country.

The magazine also provides support services such as an extensive public domain library and the sale of software for the XL and XE much of which is not available elsewhere. It serves as a point of contact for Atari users around the world with a free Contact column for subscribers.

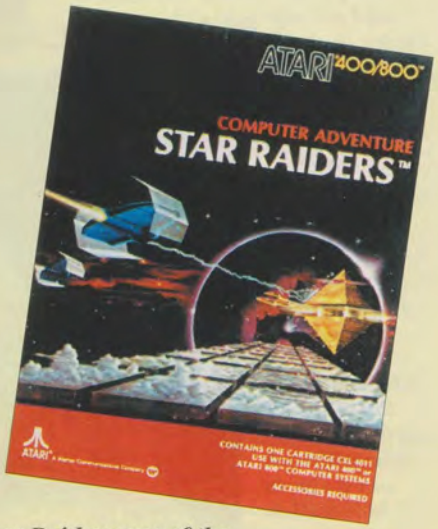
***New Atari User* is published bi-monthly and is available on subscription. If you would like further details, write to *New Atari User*, PAGE 6 Publishing, P.O. Box 54, Stafford, ST16 1DR, England. Tel: 0785 213928.**

TECHNICAL SPECIFICATIONS

800XL:

- 6502-based with dedicated graphics and sound chips giving 14 graphics modes and 4 channel sound.
- Resolution from 40 columns by 24 rows text to 320 x 192 pixel graphics.
- Dedicated chip for Player-Missile graphics giving four independently controlled 'players' (sprites) and four 'missiles'. 16 colours each with 16 luminances giving 256 colour display.
- Sound channels may be combined to give two 16-bit sound channels.
- 64 kilobyte memory including 16 kilobyte Operating System and built-in BASIC.
- Cartridge slot for plug-in ROM cartridges.
- Serial connection for disk drives, cassette recorders, interfaces and so on, which may be 'daisy-chained'.
- Two joystick ports that accept joysticks, trackball and touch tablet.

65XE: Same specification as 800XL.
130XE: Same specification as 800XL but with 128 kilobyte bank-switched memory.
1050 DISK DRIVE: Single-sided, single or 'enhanced' density with built-in controller. Several RAM-based Disk Operating Systems available.
XF551 DISK DRIVE: Double-sided, double-density drive programmable to single, enhanced or double density.



Star Raiders; one of the classic games of all time. A piece of software that sold many machines.

Nial Grimes brushes away a nostalgic tear and reminisces on Atari's part in the DTP revolution...

The ST has always been a natural choice for DTP. Released shortly after the much-hyped Macintosh and costing a fraction of the price, it attracted plenty of attention from software publishers and it wasn't long before a steady flow of releases began to appear.

The big breakthrough came with the appearance of *Timeworks Publisher* in Autumn, 1987. Admittedly it may seem primitive by today's standards, but back in the late eighties it was on a par with the industry standard *Ventura* which cost over three times the price! Files from the PC and ST version were completely interchangeable and it quickly shot to number one in the sales chart on both machines.

Perhaps its biggest asset was an intuitive nature, which was enough to convince anyone they could produce their own publications and at the time at least two news-stand magazines flew the *Timeworks* banner! It was perfectly happy to run on a standard half meg ST with just a single floppy drive – ah, those were the days!

Meanwhile, heavy rumblings were being heard from Germany (nothing to do with frankfurters I hasten to add) on a totally new concept in desktop publishing. The result was *Calamus DTP* – the first true WYSIWYG desktop publisher on any machine. Yes, while Macintosh users were living in a darkened world of jaggies and horrendously expensive printers, the *Calamus* community were happily using a beautiful screen display and getting crisp printouts without the help of PostScript.

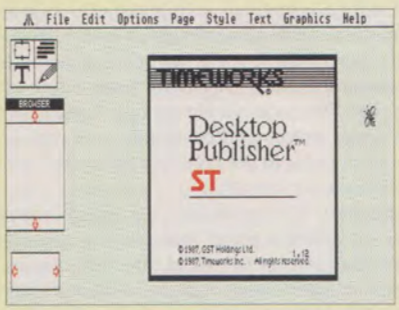
Unfortunately the news wasn't all good. *Calamus*' superb specification was badly marred by serious reliability problems. Early versions crashed on a regular basis and it wasn't until the release of the ubiquitous version 1.09n that it gained any reputation for stability. The price was also a trifle on the steep side at nearly £500 and this in itself caused a small war between official UK distributors Signa and Network News Services who were importing directly from the States. Incidentally, taking the far cheaper Network option meant installing a set of genuine US ROMs included in the price!

After several false starts in the form of *Publishing Partner* and the original *PageStream*, Soft-Logik finally got it right with *PageStream 2*. Huge adverts featuring a full-colour TT screenshot adorned the entire Atari press and left you in no doubt as to the power of the latest version. Even the first release was surprisingly bug-free and by version 2.2 most of the little niggles had been crushed.

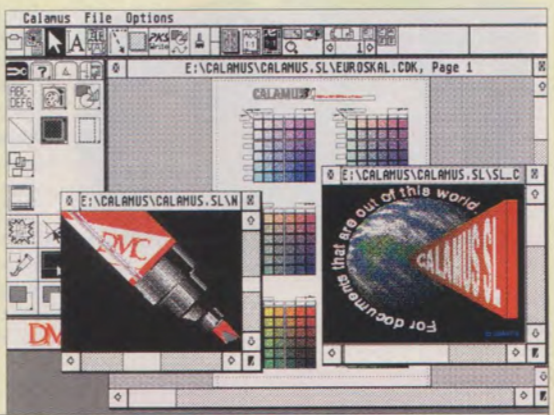
After the complex interface offered by *Calamus* and *Timeworks*' inherent limitations (we'd hit 1991 by this point), *PageStream 2* was a breath of fresh air. A favourite party trick at the time was to produce the complex PostScript test card using *PageStream* alone – a feat previously impossible in the world of reasonably priced desktop publishers.

Which leads us right up to date: 1993, and still going strong. With the likes of *Calamus SL* on the market, the software is better than ever and new hardware in the form of the Falcon is keeping desktop publishing on the Atari very much alive and well. *Calamus 1.09* and *PageStream 2*, both packages capable of professional results, are available for close to £100 and Speedo GDOS bodes well for future developments.

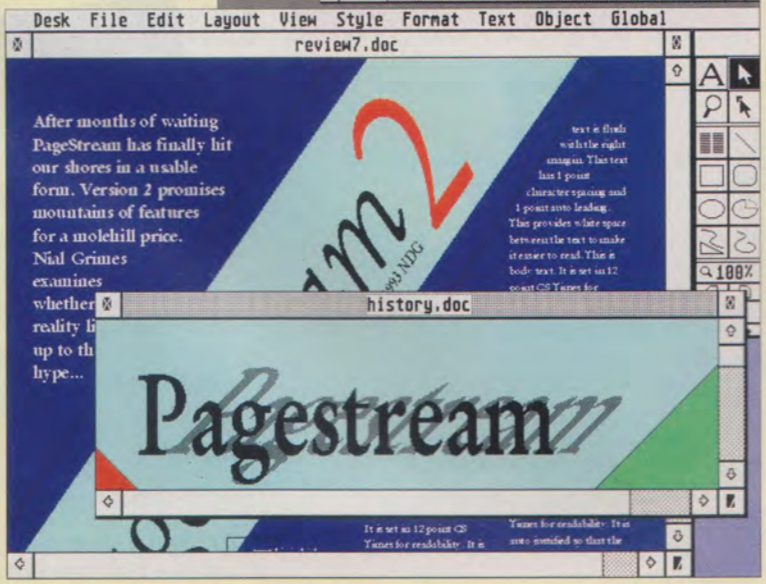
TAKE ISSUE



Timeworks DTP was one of the first packages to offer home users semi-professional print quality – and all at a price that put its competitors to shame!



Calamus SL – the pinnacle of ST desktop publishing software? Only time will tell, but Atari's Speedo GDOS bodes well for the future.



PageStream 2 introduced affordable colour publishing to the ST market and very few programs can claim to have such a skillful blend of power and ease-of-use.

ALSO RANS

In any competitive market there's never any shortage of also-rans, and DTP is no exception. Perhaps the most notable example is *Fleet Street Publisher*, which had reached the heady heights of version three before it bit the dust along with its creators Mirrorsoft. Its popularity lives on through a band of dedicated followers, still in love with its precise text-control and stability.

Early releases of *Publishing Partner* and *PageStream* are best forgotten, but by version 1.8 Soft-Logik were on the case and had wheedled out most of the serious bugs. It's still used by many today.

And finally to *Didot Professional*, which is very much alive and kicking, but somehow always seems to fall into the shadow of *Calamus*. Yep, there have been ups and downs in the Atari DTP market but on reflection, no real 'bad-guys' – just expensive pieces of history...

A WORD TO THE WISE

Tony Kaye looks back at the landmarks in word processing...

One thing that the ST has never been short of is word processors, which is fair enough – even if you're a hardened games player, you still need to write the odd begging letter for a bank loan to buy that latest release!

Chances are that you've stuck with the first WP you ever bought, but no round-up of software would be complete without mentioning the following three products...

1ST WORD PLUS

1st Word Plus is probably the most successful word processor ever on the ST, having gone through several transformations since its initial release. The original program, *1st Word* is now public domain and given away in every ST package for everyone to use. It's a simple program and fine for the average home if you only require basic functions.

1st Word Plus has had new features added to it over the years and the latest version is 3.20. The improvements are all minor, but add up to make the latest version a lot different from its PD cousin. For example, it now has the ability to print the document you are currently working on and supports keyboard shortcuts for most menu options. Altogether, the package is a lot more user-friendly and takes some beating in its role as a simple text editor.

THAT'S WRITE!

Desktop publishing was, for a long time, out of reach of the home user due to cost. This led to the emergence of word processors such as *That's Write*, a new breed of program combining elements of DTP within a simple word processing frame. You could now add different fonts to your document and mix text sizes on the page. While this ability sets such a word processor apart from its simpler relatives, there is a small price to pay – speed. Because it doesn't use the standard printer fonts, the output is slower than *1st Word*, so large or repetitive documents can take substantially longer to print.

That's Write and its junior partner *Write ON!* look and feel quite different from *1st Word Plus*. For a start, the font is displayed on screen, giving a full WYSIWYG (What You See Is What You Get) display. The latest version, *That's Write 2* has many new features including the ability to size the work window from any corner and preview the page before printing. As these programs are aimed at covering a wide range of user, features such as adding a table of contents and generating an index are included to appeal to someone writing a book, thesis or manual.

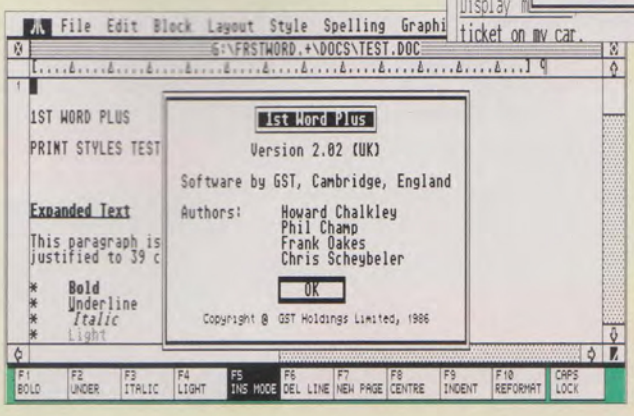
Calligrapher Gold from Working Title – a full document processor.

CALLIGRAPHER

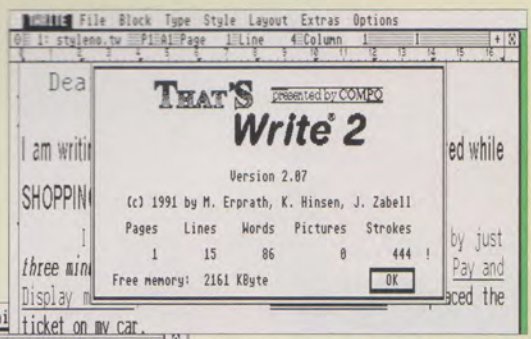
At the top end of the scale, and still different from a DTP package, is *Calligrapher*. This program from Working Title Software is designed for the professional rather than the casual letter writer. It has many writing tools that the average person would never use; for example, how many standard letters are arranged using a plot outliner or have formulae in them?

The ability to add fonts and different styles for chapter headings and page numbering are essential in a package like this as well as for the appearance of the completed text. Page numbering features include the ability to number just the odd or even pages and add chapter headings to each page. *Calligrapher* has all of the features found in the other packages, but it has a lot more too. This makes it quite difficult to master, but learning this package thoroughly is time well spent.

The different modules available include importing text from other word processing packages and reproducing bar codes (ideal for increasing the life of your character on your *Barcode Battler*!).



This version of 1st Word Plus (2.02) was given away on the cover disks from issue 5 of ST Review.



Compo's That's Write 2 – displays the correct fonts on-screen.

ALSO RANS

Some of the products that have been introduced and, for one reason or another, are not included in the "most memorable" list include:

***Word Writer* – a *1st Word* clone from GST. Adequate and capable with a built-in thesaurus. Still available.**

***Word Flair* – Basic word processing package from HiSoft. V2 still available.**

***Redacteur 3* – Very good package from France. Available in Lite and Junior forms, too.**

***Protext* – Non-GEM system for serious use only. Lots of features, but not easy to learn and use.**

***Signum* – Very complex program that didn't stand the test of time...**

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Notator Logic	P.O.A.
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SWEET MUSIC

The music scene is one area that the ST has dominated. Ofir Gal casts his thoughts back over the ground-breakers...

The combination of MIDI ports and a friendly GEM environment has made the ST the leader in MIDI. No other computer platform has the software and hardware range offered to ST owners and it's difficult to find a recording studio without an ST being used for MIDI sequencing. For better or worse, the ST along with the advent of MIDI synthesisers and samplers has changed the face of music forever.

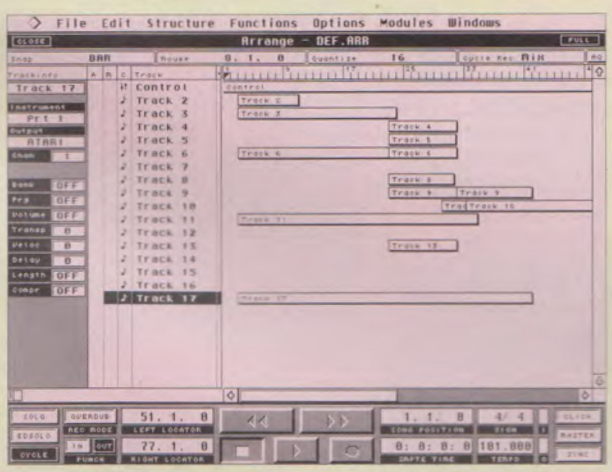
PRO-24

It all started when Charlie Steinberg decided to move away from the Commodore 64 which had been playing host to his first MIDI sequencer – *Pro-16*. The ST was relatively cheap, fast, had a nice operating system and above all, a MIDI interface.

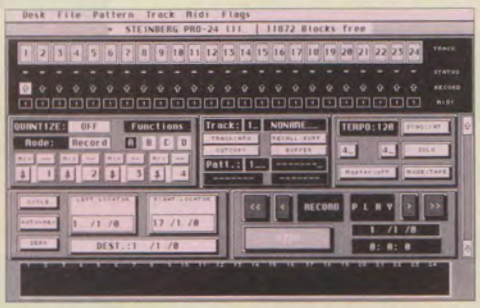
As the name suggests, *Pro-24* is a 24-track sequencer with flexible editing facilities based around grid and score editors. It became a major success and was upgraded up to version 3 with various hardware add-ons such as synchronisers and enhanced MIDI interfaces for the more demanding users. It is still available second-hand for around £50 and is popular among first time MIDI users.

CREATOR AND NOTATOR

Gerhard Lengeling was a freelance programmer for Steinberg but decide to set up his own company, C-Lab, and set the MIDI world alight with *Creator*. The approach was very different from *Pro-24* in that it was totally pattern based. *Creator* offered a faster interface and the pattern approach caught on with dance-oriented musicians and record producers.



Probably the most popular MIDI sequencer on any computer platform, Cubase features an intuitive and powerful user interface.



Steinberg Pro-24, a leader in its time. As Creator and Notator developed, it lost its edge and was later replaced by Cubase.

Notator was released following the success of Creator. It offers the same features with the addition of powerful score editing and printing facilities. By adding notation, C-Lab have managed to corner an additional section of the market. For a long time, *Notator* was the only choice for high quality score printing and is still the best integrated scoring and sequencing program on *any* computer.

Currently at version 3.16, both programs offer extensive editing facilities via grid and drum editors. The programs also feature HyperEdit for easy manipulation of MIDI data and you can send custom-defined MIDI messages from on-screen sliders for sound editing and mix automation.

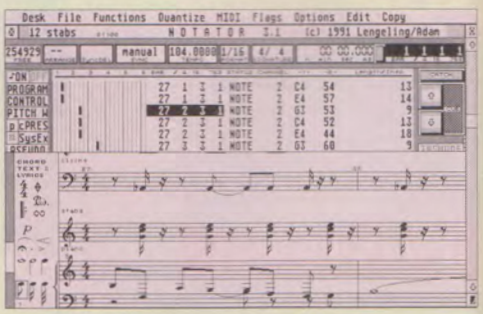
C-Lab have also added some hardware devices to their range of products with Unitor providing tape synchronisation and additional MIDI input and outputs. *SoftLink* is a built-in task switcher that allows you to run other programs concurrently with *Notator*. In a surprising move, the authors left C-Lab to form their own company earlier this year. EMagic, immediately announced a new program called *Notator Logic* which should be available by the time you read this. The program builds on the best features of *Notator*, but uses a multiple window system and a linear approach as opposed to *Notator's* pattern-based system.

CUBASE

After releasing version 3 of *Pro-24*, the programmers at Steinberg felt that they had taken the program as far as it could go and started to work on a new product called *Cubit*. The name was changed to *Cubase* after it was discovered that Cubit was a trademark of a major computer company!

When it finally arrived, *Cubase* was way ahead of the competition. It offered a multiple window environment, an array of editors and a true modular design. The whole layout of the program was graphically modelled on a multi-track recorder as opposed to a pattern-based sequencer. *Cubase* is highly intuitive and easy to use, yet extremely powerful and flexible. One of its many unique features at the time was the ability to continue playing music while saving to disk or moving through the various windows. An underlying multi-tasking system was invisibly handled by Steinberg's own creation – M•ROS. The MIDI Real-time Operating System also allows other programs to run while *Cubase* is still playing.

Cubase is now available on the Apple Macintosh and PCs running Windows, but the overwhelming majority of users still prefer the ST or Falcon. *Cubase Audio* for the Falcon should be available shortly and incorporates digital audio recording utilising the DSP alongside standard MIDI sequencing.



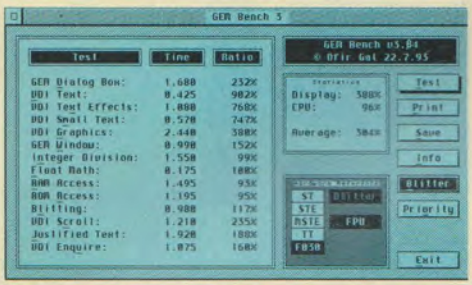
Notator and Creator – long time favourites with many musicians mainly due to the pattern-based approach and scoring facilities.

ALSO RANS

Many other music programs have been available to ST owners along the years. Some were exceptionally powerful, such as Digital Muse' *Virtuoso* but failed to capture musicians' imagination.

Among these are a whole range of programs in the *KCS* series from Dr. T which took a less graphical approach. This resulted in a faster display but made the programs feel a little too technical. *Sequencer One* by Gajits is very popular, offering excellent value for money and an upgrade path through *Sequencer One Plus* and the new *Breakthru*. Many professional users swear by Hybrid Arts' *SMPTETrack* software, one of the first packages to incorporate a hardware synchroniser and fully integrate it with the program.

The ST has had its fair share of utilities and add-ons over the years – Mike Robinson chooses his favourites...



NVDI transforms the ST by accelerating the display. The statistics obtained with GEMBench speak for themselves.

From disk copiers to alternative file selectors, screen savers and mouse accelerators – utilities abound on the ST. PD libraries have a vast collection of such programs and some have been so successful that they have now become commercial packages. In fact, there is so much around that it can be difficult to decide which to use!

Of all these utilities and enhancements, some have made a mark on the ST community and have almost become an unofficial standard.

PINHEAD

Written by Charles F. Johnson of Codehead, *Pinhead* was so useful that Atari incorporated it into TOS 1.04. *Pinhead* is still a favourite of many users because it is faster and more reliable than Atari's own version.

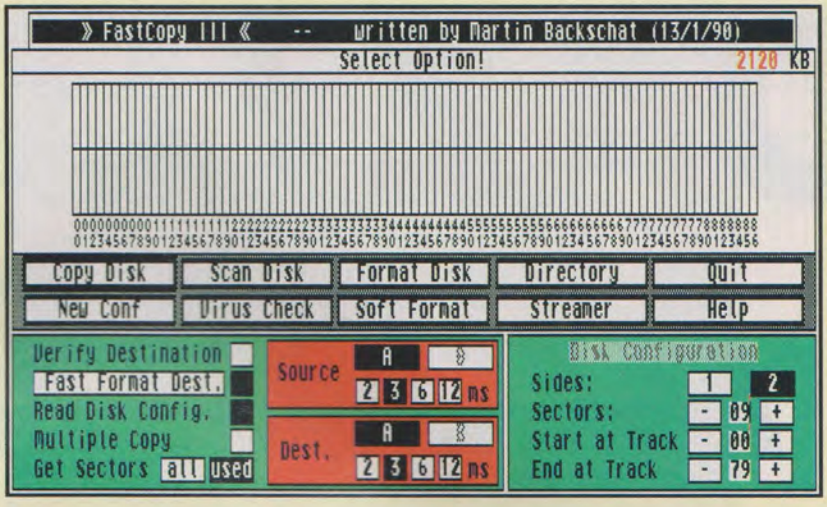
Whenever a program loads into RAM, the ST clears all the memory before actually loading it. This takes a second or two on a 4MB ST which doesn't sound like much. But there can easily be a dozen or so AUTO programs and desk accessories loaded when you boot the system, and this can add up to 30 seconds. *Pinhead* solves this problem by only clearing the portion of memory each program requires, eliminating this delay altogether. Version 2.1 is shareware and is compatible with all models including the Falcon.

UNIVERSAL ITEM SELECTOR

The GEM file selector is a useful tool, helping you find the files you are after with ease. Yet, it is very limited in features and there are plenty of replacement file selectors, both PD and shareware. These add a wide range of facilities such as file copy, move and delete, disk formatting and much more.

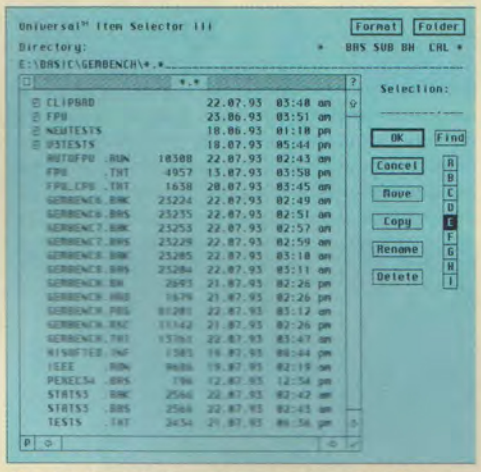
The *Universal Item Selector* is by far the most flexible of these offering a resizable window that can display 12 or 36 files at once. Up to 10 paths may be stored and recalled with the function keys and in addition, 25 file masks can be stored. If that's not enough, *UIS* includes a file search facility that can locate a single file by using wildcards.

When the file selector has finished its job, the program that called it needs to redraw the screen. This can take a while, especially when using DTP or graphics applications. *UIS* gets around this problem be temporarily storing the screen image and redrawing it back in a flash. No need to go back to the desktop to create a folder or to view or print a file – *UIS* does it all!



Still a favourite, Fast Copy III has been superseded by Fast Copy Pro. The commercial version offers better hard disk backup and even sector editing facilities.

HIGHLY USEFUL!



The Universal Item Selector has a full size window where at least 12 items can be viewed simultaneously. Once used, you just can't live without it!

NVDI

While TOS provides an excellent graphic environment with window icons and menus, this has one major disadvantage compared to text based systems like MS-DOS – its lack of speed. Screen redraws are slow due to a poorly programmed screen driver. The VDI, which is responsible for most screen output, is simply not up to the job and there were several attempts to enhance its speed. *Quick ST* and *Turbo ST* provided the user with an extremely fast display but never quite made it due to incompatibility problems. The only program which has managed to speed up the display while maintaining compatibility with existing programs did so by totally re-writing the VDI. *NVDI* took Germany by storm and success followed around the globe. Providing a display four times as fast as the original VDI and a high degree of compatibility, one wonders why Atari have not incorporated it into TOS...

FAST COPY III

The selection of disk formatters and copiers is overwhelming. Yet, one program has had an impact the others didn't quite manage – *Fast Copy 3* is indeed a fast disk copier and is used by PD libraries and software distributors to copy disks! It is fast, simple to use and reliable. In addition to the copy and format facilities, *Fast Copy 3* can check disks for viruses, provide basic hard disk backup options and even scan floppy disks for physical faults.

ALSO RANS

The *Little Green Selector* is still used by many ST owners but lacks the file manipulation facilities of *UIS*.

***Quick ST* was almost as fast as *NVDI* but not as compatible with other programs.**

***Turtle* and *The Vault* have been favourites of many hard disk owners for backing up to floppies and *DL2*, despite all the bugs, is still used by many to salvage lost data from a corrupt disk.**

Finally, *Multidesk* and *The Chameleon* are desk accessory loaders, eliminating the need to re-boot the system to load all those useful accessories...

DAZZLING ARCADE!

The good ol' ST has had more than its fair share of excellent arcade conversions and all-action originals. Tony Dillon glances back over the years with a small tear in his eye...

RAINBOW ISLANDS (OCEAN SOFTWARE)

Bubble Bobble caused a storm in the arcades, giving the first popular cute, two player game. Although limited in design, the game attracted ten pence pieces like a magnet, and it's successor, the unbelievably brilliant *Rainbow Islands*, did even better. This time, the cute dinosaurs Bub and Bob have become cute little men, who have to climb the colourful towers of the Rainbow Islands themselves in search of fruit, money and infinite happiness.

There are many compliments I could pay this game – far more than can be squeezed into this small space. It's a flawless arcade conversion, but you could be forgiven for asking what was so great about the arcade game. For a start, it had the most unique weapons system ever devised. When the fire button was pressed, a small rainbow shot from the hand of the current hero. This could be used as a stepping stone or a weapon to trap the opposing characters, either by encircling them or hitting them directly. It might seem a little complicated, but it worked brilliantly. It's fast, it's fun – it's the best arcade conversion ever, bar none!

Coin-op conversions are rarely this good.

SENSIBLE SOCCER (RENEGADE)

I am going to put this above *Kick Off 2*, but that's just my personal preference. To be honest, there isn't a huge deal between them, but this one just feels better to me. If you haven't already seen it, and I could spout all the old clichés here about sitting in a cave for the last ten years, *Sensible Soccer* is one of the new(ish) breed of football games. Before *Kick Off*, all football games were viewed from the side, from the ancient Spectrum classic *Match Day*, right up to *Emlyn Hughes International Soccer*. *Sensisoccer*, as it is more commonly referred to, utilises a top-down view, giving you a more realistic sight of the action while spoiling none of the feel.

The sprites are very small, but the control is so pixel-perfect that nothing is lost. In fact, you gain a lot more as you can see a far larger area of the pitch, making it easier for you to plan your passing attack without all that looking at scanners and diagrams. Simple controls make easy work of bicycle kicks and aftertouch, and there are more computer teams on here than in the real world. A very special game.

"Sick as a parrot, Brian," and all the other clichés are valid here!

FORMULA ONE GRAND PRIX (MICROPROSE)

While not strictly an arcade game, I could never class this as a simulation. Simulators were never this exciting, fast-paced, stomach churning or heart stopping! Looping the loop over the line of death is all very well, but taking Abbey curve at speeds that should never allow you to make the bend is enough to turn you to drink. This is certainly Geoff Crammond's Magnum Opus, so much so that a popular Amiga title recently voted it the best game ever, and the ST version has to be worthy of a similar accolade.

It has everything you could wish for. Fully customisable, from the name of the driver to the set of the wings. You can drive as many laps against as many opponents of any level you wish, with or without a myriad of driving aids designed to make your life easier. By cutting down the scenery, you can speed up the action, therefore increasing the risk of heart attack. This is so realistic, you'll wonder why Mansell ever left. Sheer perfection.

Budding Nigel Mansells apply here. In the pits during a Formula One race.

ALSO RANS

One game that has to be included is *Oids* from FTL. When the ST first started its journey, this was the game to have. Based on the popular game *Thrust*, you had to pilot a small, one engined craft through some nasty caverns, searching for small men. You were fighting against gravity all the time, and things were made that little bit harder by the small men running under you as you landed, thereby catching fire as they ran into your engine!

Another long time favourite is *Buggy Boy*. Bundled with the ST for a time, this father of all arcade racers was arcade perfect in every way, and still stands up against the competition today! Then there's *Kick Off 2*. Narrowly beaten in my opinion by *Sensisoccer*, this is still an incredibly playable game, and one that just slows down any office...

Finally there's Archer Maclean's incredible *Jimmy White's Whirlwind Snooker* from Virgin Games. The single most realistic version ever, this features a full 3D table with real working balls! So that puts it one up on Action Man...

MIND GAMES

Never adverse to spending hours at a time working through complex military manoeuvres, or so he claims, Tony Dillon pinpoints his top three strategy games.

A very "civilized" game from the legendary Sid Meier. This is one of the best "god games" ever, and recent, too!

CIVILIZATION (MICROPROSE)

This game made me think so hard I had a nose-bleed! *Civilization* is Sid Meier's finest hour. A superb strategy game, this clever little bundle of zeros and ones is quite possibly the best title of all time. Taking the best elements from *Sim City* and *Populous*, and a little dab of that Meier family magic, Sid created an environment where you, a small collection of people, must build a full civilisation with only time and the ever advancement of the other nations against you. Starting with only a small town and the tiniest scrap of visible land you have to spread your wings, exploring the land, killing barbarians and developing skills while your scholars and eventual scientists create more weapons and artifacts for the benefit of your kind and the destruction of all others.

The presentation of *Civilization* was so clear and informative that only a cursory glance toward the loading instructions was needed to get playing. To actually get anywhere in the game meant studying the extensive manual carefully, which while hard work to begin with, was soon rewarded hundred fold by the taxing and involved gameplay. A genius at work.

POPULOUS 2 (ELECTRONIC ARTS)

Another game that shaped the world of games was *Populous* – the world's first god game. God games placed you in the role of mediator and overall controller of the world your people lived in. Instead of controlling the movements and actions of your population, you shaped the land they worked on and lived upon, flattening it to create a stable base for their homes, and wrecking the land of the opposing people who worshipped a different god.

As your people settled, they created more people, and a direct result of this is that your followers increased in number, therefore increasing your power. As the faith grew, your special powers got steadily stronger. While all you can do to begin with is raise and lower areas of land, you soon find that you can unleash massive disasters, like earthquakes, floods and volcanoes upon your enemy, who can also do the same to you. Some very tough opponents plus a two player link option make this one of the most challenging games ever, and one well worthy of the massive sales it has attained.

LEGENDS OF VALOUR (US GOLD)

We now come bang up to date with one of the most revolutionary games ever, the mighty *Legends Of Valour*. Kevin Bulmer and company worked for nearly two years creating the first role playing game to actually feel like a role playing game! The reason this feels so different to all the other play-by-numbers RPGs is the impressive visuals. A texture-mapped polygon world gives a truly realistic view of the city of Mittledorf and all its denizens. Steering away from the usual compass direction controls of previous games, *Legends Of Valour* offers you complete freedom in a totally realistic working city, where the shops open for reasonable hours, everyone has a home and a job, and people remember your face.

A huge game, *Legends Of Valour* features guilds, goals, quests, family members and the most involved gameplay I have ever come across. If you get hooked, prepare to go without food or sleep for some weeks – just tell the neighbours you're going on holiday for a few months...

Legends of Valour is a relative newcomer that is quite outstanding.

ALSO RANS

When it comes to thinking games, Maxis really sewed things up. The game that gets the highest accolade for them is *Sim City* for its pure inventiveness. A plot of land, a bit of money and a building contract soon turns into a thriving city with more than a fair amount of city troubles, such as traffic congestion, high crime rates and all manner of population grumbles.

Do you have what it takes to control an entire city? If you don't you could always turn your hand to managing a national railway from humble beginnings in Microprose's *Railroad Tycoon*, another one of Sid Meier's superb creations. With one station and a little cash, you have to try and create a thriving transport system. Good luck, you'll need it!

For a more traditional feel, you could always explore some large, inhabited alien craft in Gremlin's wonderful conversion of the classic board game *Space Crusade*, where the turn of a die can decide whether or not your latest strategic crawl has paid off. Not one to play at night, believe me!

SOLID GROUND

Hardware add-ons and modifications have always been available, from hard disk adaptors to memory upgrades, graphics cards and accelerators. Ofir Gal finds that even Atari were responsible for some of them...

SM124/5

The ST was designed to cater for as many needs as possible and to accommodate both games and productivity software. So, three display modes were included. Low resolution was primarily aimed at the games market while medium resolution was for basic word processing and other text-based applications. Both resolutions were available via an RGB monitor and, with the introduction of the STM, a colour TV.

The higher resolution could only be obtained via the Atari SM monitor series that function at the relatively high refresh rate of 71Hz as opposed an RGB monitor where the rate drops down to 50 or 60Hz. Thanks to a digitally controlled display and the high scan rate, the SM series produced an extremely sharp and stable image, even by comparison with monitors costing substantially more.

As a direct result of such low cost monitors, the ST caught on with DTP users and musicians who required the extra resolution. While the SM124 and SM125 were very popular, the SM144 which promised to provide an even better and larger display was a disappointment when it finally appeared. Based on the same technology, it was a victim of low quality control and production was stopped. The SM146 then failed to arrive. However, the demand for these monitors has not faded and several third party models are now available.

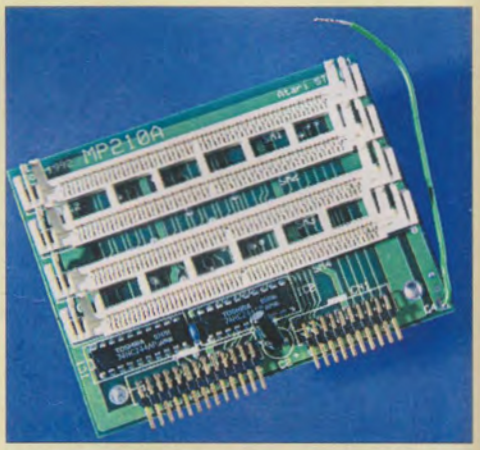
With the SM124 monitor, Atari truly justified the "Power without the price" slogan. A high quality display, suitable for DTP and music work.

XTRA-RAM

As programs grew in complexity and more features were added, the memory offered by even the 1040ST was insufficient for many needs. Atari failed to provide the users with low cost upgrades and the adverts pages started filling up with various memory expansion boards.

Many ST owners were keen to upgrade but reluctant to install the boards themselves as most required soldering skills. Frontier, a small UK company, came up with a solderless 2Mb board called Xtra-RAM – the original unit cost over £300 and sold almost 100 units at the computer show where it was launched. The board was followed by a 0.5Mb board that enabled upgrade to 1Mb and then later to 2Mb.

Frontier launch the Xtra-RAM Deluxe board in 1990. The board was unpopulated and accepted standard SIMMs, so proving popular. Despite the commercial success, Frontier folded in 1992 and was consequentially bought by two Frontier employees. The new company, under the name of Marpet, continued to develop products for the ST and Amiga. Their latest offering is an 8Mb upgrade, offering MegaST owners up to 12Mb of RAM.



The Marpet XtraRAM Deluxe board is easy to install and takes standard SIMMs, expanding the ST memory up to 4Mb.

ADSCSI

The ST has a non-standard hard disk interface which meant that if you wanted a hard drive, you simply had to buy the Atari Megafile or one of its predecessors in the SH205 and SH204. These were rather bulky units, difficult to upgrade and quite slow. The availability of low cost third party SCSI hard drives prompted several companies to design DMA to SCSI converters.

One such producer has managed to take a large slice of the market place owing to excellent design and flexible installation software. After a few preliminary models, ICD launched their successful ADSCSI series of hard disk host adaptors.

The current range of ICD products includes ADSCSI which is installed inside the hard disk case and ADSCSI Micro which enables you to fit an internal hard drive in a MegaST. The Link is the latest offering from ICD, a small host adaptor that plugs in between the ST and any standard SCSI drive.

Most ST compatible hard drives on the market use the ICD hardware and software combination. ICD also keep updating the software on a regular basis.

The Link enables ST owners to use industry standard SCSI drives and other devices such as the Floptical drive shown here. It simply plugs into the back of the ST; a single Link can be used to chain up to eight devices.

ST Review takes you back through eight years of honest, accurate quotes...

ONE FOOT IN THE MOUTH...

If you think it's easy being a reporter, this page should convince you otherwise. Companies learn how to "play" the magazines by telling them what they obviously want to hear such as new product information, release dates and the like. This information is published, generally in good faith, but can come back to haunt the writer!

Rather than embarrass both the magazines and writers concerned, the names have been withheld although the actual sources have been mentioned where possible.

The moral of this? Beware of company executives offering exclusives!

NEW COMPUTERS

"Atari will be releasing a new ST at this year's PCW show in September. The machine is tipped to use the 68020 which is capable of running 6 times faster than the 68000." – June 1986.

"Atari have bold and exciting plans to launch an ST based transputer workstation that will cost no more than a printer... it will enable the ST to run at speeds of between 15 and 20 MIPS... priced at £300 to £400 it is all set to revolutionise the world of computing." – December 1990.

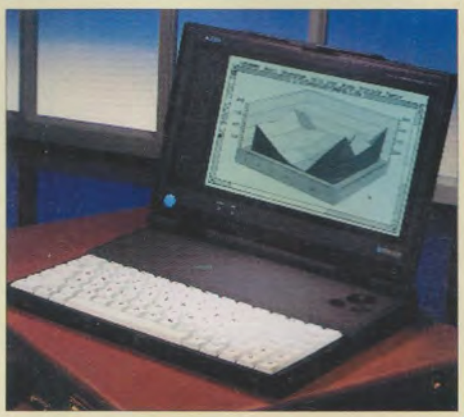
"ST Transputer available by the end of the year." – July 1991.

"The Falcon will combine leading new technologies, such as CDI drives, with a high end operating system such as Unix, in a bundle with TT-based technology."– August 1991.

After nearly a year of growing expectation, the Falcon finally landed in late 1992.

"We have at least four new machines coming out in the ST line... all four will be out in 1992."
– Sam Tramiel, August 1991.

"The Atari ST Book combines the power and ease-of-use of the ST range with the flexibility and portability of a Notebook. Entry level machine costs £1,299." – Atari press release, February 1992.



The ST Book was sold in Germany but never launched in the UK although one or two imports are available.

CD-ROM

"Atari will definitely launch a CD-ROM player, although the event won't take place for several months." – Sam Tramiel, May 1986.

**"We have a new CD-ROM drive coming out for the ST series shipping, let's say, to be conservative, in August..."
– Sam Tramiel, August 1991.**

"We'll... bring out a low-price CD drive for today's STs and then bring out a CD-within-an-ST as one machine as well. The one machine will be next year,

the separate machines might even be next year. We certainly have everything ready..." – Sam Tramiel, president of Atari Corporation, August 1990.

STYLUS

Did the STPad or STylus ever make it beyond pre-production, despite press releases and "launches"?

"Atari STylus, the keyboardless ST will be in production by December." – Sam Tramiel, October 1991.

"It'll (the STylus) definitely be a '92 release..." – Atari UK Spokesman, December 1991.

The STPad – shown as a pre-production model but never launched.

BEST OF THE REST

On being asked when Atari's PC emulator would be appearing: "To be safe I'll say late summer, maybe a little earlier, but late summer to be safe."
– Sam Tramiel, March 1986

"A multi-tasking TOS for the TT will definitely be available by March."
– Sam Tramiel, October 1991.

"We're going after the document processing market, or more particularly Apple." – Bob Gleadow, Atari (UK) Managing Director, after a 10% TT price cut in September 1991.

SOUND ON SOUND

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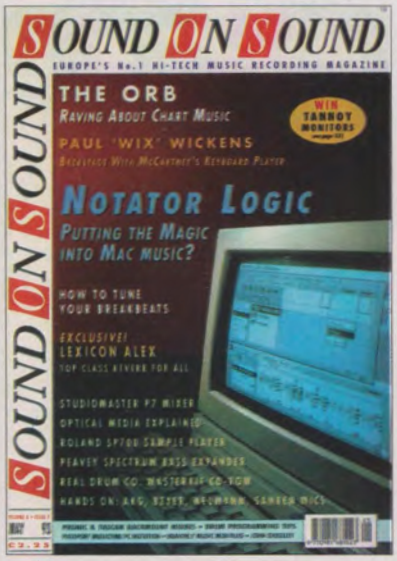
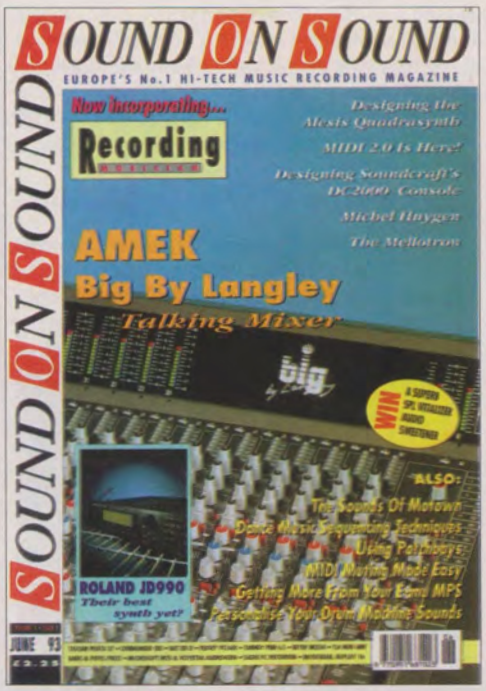


If you take your music making seriously and want to delve deeper into MIDI, synthesizers and recording, there's only one magazine you should be reading — *SOUND ON SOUND*, Europe's biggest and best hi-tech music recording monthly.

Wanna know how Depeche Mode recorded their last album or how Peter Gabriel does his thing live? *SOUND ON SOUND* tells you. Every month it's packed with practical articles to help you make more of your MIDI music gear, plus features on top musicians and producers, as well as the most in-depth, up-to-the-minute reviews of the very latest hot products — from music hardware to music software. In addition, our regular ATARI NOTES column brings you the latest music news for the ST, STE and Falcon.



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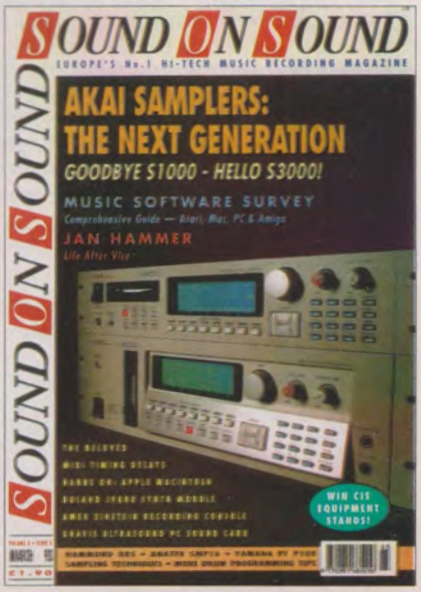
See July, August, September issues of SOUND ON SOUND for full details of how to enter or call Lisa Thompson on 0480 461244.

Read by all the best people — including *ST REVIEW*'s very own editor Vic Lennard!



On sale the last Friday of the month at all good newsagents — only £2.25 a copy.

SOUND ON SOUND is available every month from all good newsagents for a mere £2.25. Alternatively, you can subscribe now (UK £27; Europe £40; World £50) and gain all the extra benefits — such as special subscriber discounts off our mail order books and videos, plus automatic entry into our regular subscriber Prize Draws (we recently gave away a computer).

Do you watch MTV? Then dial up page 210 of MTVtext for SOS Hi-tech Equipment News!

AMERICAN PIE

News from across the water...

We are told Atari finally has plenty of Falcons in stock but it is still very hard to locate a dealer that actually *has* any. According to a local dealer, Atari isn't exactly providing a healthy profit margin for them. On a related note though, I called several music dealers throughout the USA and a good proportion of them had Falcons in stock. A couple even said they had had them in stock for over a month now. It would seem as if the musician's market will be the target for any early advertising and with the Falcon's direct-to-disk sampling capability, it makes sense. Can I make a small prediction and say that the average garage band's demo tapes will never be the same again?

Speaking of the Falcon, Atari is said to be working on a new game controller for the Falcon (and Jaguar). Pricing is said to be around $29 and will include a game. A strong candidate is the one and only Jeff Minter's *Llamazap*! By the time you read this I should also have had my Falcon for several weeks. And yes you can look forward to a few classic conversions for the Falcon as well...

PhotoCD on the Falcon! According to our US distributor there is supposed to be a program for the Falcon available soon that will allow you to view PhotoCD pictures directly. Some video sequencing is also supposed to be available in the software. Pricing is said to be around $35. Even Migraph is reported to be working on a new color hand scanner for the machine.

No *official* word on the Falcon040 yet, but there is a lot of talk about a much needed TT-style case. Also it is the opinion of a lot of users that the current Falcon pricing seems to be a little high compared to the competition. Either lower the price of the current models or upgrade the processor to 32MHz or beyond – or is the present Falcon system the future "low end" Atari computer?

Lynx owners are feeling a little left out as of late – hardly anything new is actually being released but what is coming out seems to be rather good. In a new title called *Gordo 106*, you play the role of a lab monkey trying to rescue his animal friends and deal with the wicked lab scientists. *Lemmings* is finally out also. How's this for a tasty rumor – a Lynx II in development using a subset of the new Jaguar's chips!

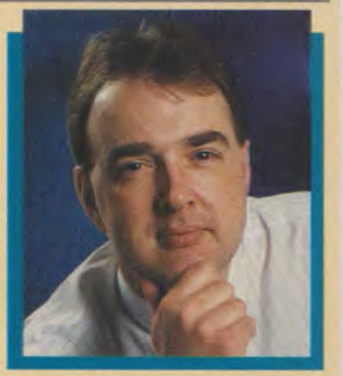
According to our ST software distributor, Microprose's *Civilization* has sold more copies than any game over the past 2 years. So a good program with decent marketing can still produce good sales on the ST/STe platform. Developers just have to work harder to get their program noticed.

Even though there has been quite a shake up in the US Atari ST magazines the last year, there are still at least two monthly mags with at least one new one coming out this year. If it wasn't for the imported UK titles like *ST Review*, we really wouldn't have any glossy color Atari ST/STe/Falcon mags here in the USA. Now there's a terrible thought!

Dave Munsie has been responsible for some of the best ever cover disk games – but have you had a look at his art program, *ST Doodle*? It's on this issue's cover disk and is an absolute doozie, as Dave might say...

WRIGHT ISSUES

Treacle pie



In keeping with the retrospective flavour of this month's issue, I thought I'd add my penny worth to the debate about Atari's future by taking a glimpse at its past. Having been an ST enthusiast since the early days – I've been using STs far longer than I've been writing about them – it seems quite clear to me what went wrong.

When the STE was released, there were grumbles and groans about the compatibility problems but I can't remember anyone pointing out what seemed rather obvious to many other people at the time. The STE was an enhanced ST and that was all – and enhanced is really bottom of the heap as far as upgrade adjectives go. It might have had stereo sound and a bigger colour palette but it wasn't really any faster, despite the blitter chip.

And speed was what people needed even then. Software developers were just starting to trot out the heavies like *Calamus* but, as everyone knows, running this on a standard 8 MHz machine is a bit like wading backwards through a vat of treacle. Not only do you fall over a lot, but you just can't get up to a decent speed. The overwhelming temptation is to lie back and let it all wash over your head...

If the STE had been a true 16 MHz machine costing just a bit more than the old STFM it would have changed the whole market overnight. Not only would thousands of existing users have upgraded their STFMs, whether or not any games took advantage of the new faster processor, but it would have opened up a new upgrade path for the hundreds of serious users experimenting with professional DTP and graphics.

Instead, along came the TT. The price was appaling – I personally never even considered it and I guess many others found themselves, like me, wondering just where they could get some extra power. IBM, perhaps? It was too late by the time the Mega STE appeared – users had moved on, changed platforms or added one of the increasingly popular accelerator boards.

And that is the crucial problem for Atari. They might argue that adding accelerators and so on means they're still locked into Atari. But are they? Add a 25 MHz Turbo board and you're unlikely to bother buying an STE again, I can assure you. Even the Falcon looks distinctly average when measured against a 68000 clocking three times its normal speed. By not providing that critical upgrade path when it was needed, Atari threw away a whole generation of power-hungry users who might otherwise have stayed in the fold.

Andrew Wright is a freelance contributor to various magazines and a long time writer for ST Review. And he's still sore about having to trade in his Turbo 20/25 for a Falcon...

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"Well constructed and designed for ease of use utilising highest quality mechanisms"–
Darren Evans, ST User

The Data Pulse Plus Sub System features a custom designed case of dimensions: 300mm x 295mm x 51mm (wdh). The power supply unit is housed internally providing a reliable power source for drive mechanism, host adaptor and Fan (Floptical & Floptical combinations only) without placing extra strain on the ST's PSU. The full metal case fully shields the internals from interference and surrounding equipment from radiation. It is also ideal for use as a monitor stand.

The ON/OFF switch is mounted on the front of the case along with the SCSI device number selector and a bi-colour LED which displays power on and 'Drive Busy' status.

All Data Pulse Plus ST Drives include the acclaimed ICD SCSI host adaptors. Full manuals are also included detailing hardware specification, setup and trouble shooting.

To ensure the highest possible reliability, the drives are tested at every stage of assembly by skilled technicians. We also format, partition and install a bootable driver as part of the test procedure to ensure that the drive is ready to 'Plug in and Go' when you receive it. When you first boot up your hard drive you will find a wealth of Public Domain Utilities which have been selected by our support staff as particularly useful.

All Data Pulse Plus drives include 12 months warranty and free phone advice and support by genuine Data Pulse Plus users.

The entire range of Data Pulse Plus Hard Drives are based on the highest quality mechanisms available. Quantum, Maxtor, Fujitsu, Insite, mechanisms are used, each of which feature a MTBF (Mean time between failures, measured in Power On Hours) in excess of 30,000 hours. All SCSI mechanisms used are 3.5" wide and just 1" high and are chosen for their performance and low power consumption.

The Low power consumption of these mechanisms means that they can operate well within their safe operational temperature ranges without the need for Fan cooling. This coupled with the design of the case results in probably the quietest Hard Drive range available for the ST.

All Hard drives are Autoparking, reducing the risk of head crash or damage during transit. All drives also come configured to be Autobooting.

All Data Pulse Plus drives for the ST now include the ICD LINK host adaptor. This external adaptor plugs into the SCSI port at the back of the drive. This configuration allows the drive to be used with any computer you may upgrade to in the future such as the Falcon 030.

Floptical Drives are capable of storing over 20Mb of un-compressed data on a single 3.5" Floptical disk. The Floptical disks store data magnetically just like a normal floppy disk but the positioning of the read/write heads is far more accurate due to an Optical positioning system. The Floptical Drive positions its heads using ultra fine guide tracks embedded in the Floptical disk surface. Using this positioning system, the Floptical Drive is able to store data on up to 1240 tracks per inch, compared to the 135 tracks per inch of a normal 3.5" floppy disk.

The Floptical Disk Drive combined with specially Up-dated ICD software can access the 21Mb on a Floptical disk and also Read and Write 720K and 144Mb 3.5" Floppy disks.

"Data Pulse is astonishingly fast"–
Andrew Wright, ST User

The Drive has an average access time of 65ms and a data transfer rate of 200K per second (6 times faster than Floppy disk).

The Floptical Drive is available as a stand alone unit, an upgrade for existing Data Pulse and Data Pulse Plus owners or as a combination unit coupled with any capacity of Data Pulse Plus Hard Drive.

Each Floptical drive includes one 21Mb Floptical disk. As many extra Floptical Disks as you require are available at a very low £ per Mb rate.

The Floptical drive is an ideal backup device for large hard drives. Coupled with a backup utility such as Diamond Back II which features compression you can back up more than 30Mb of data per Floptical Disk.

The Datapulse Plus Re-Writeable 128Mb Optical drive is a new addition to the Data Pulse Plus range. This drive features 30ms access time, 600K per second data transfer rate and 128Mb of data stored on one 3.5" Optical disk.

The disk rotates at 3600RPM giving hard drive performance with replaceable media flexibility. As with all Data Pulse Plus drives the mechanism is low power and does not require a fan. Data Pulse Plus Optical is fully compatible with the LINK and the FALCON 030 using ICD PRO utilities (ideal for direct to disk recording). Each Optical disk gives very high £ per Mb value.

All Data Pulse Plus Falcon drives come complete with SCSI 2 cable and cost £50 LESS than the prices quoted below. All Data Pulse Plus hard drive/floptical combinations for the Falcon come complete with SCSI 2 cable and the ICD PRO Utilities and cost £10 LESS than the prices quoted below (Phone for latest prices).

Data Pulse +85Mb	£349.99	85Mb with Floptical	£629.99
SPECIAL OFFER Data Pulse +170Mb	£399.99	127Mb with Floptical	£699.99
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- 16MHz 32 bit 68030 Central Processor, 16MHz Blitter, 32MHz 56001 Digital Signal Processor
- 1.44Mb 3.5" Floppy, up to 14Mb RAM. Displays 65536 colours from 262144 palette at 768 x 480 resolution
- 8 Channel 16 bit, high quality. Stereo sound sampling

FALCON 4Mb No HD	**£779.00**
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STE Packs

1Mb STE	**£199.99**
2Mb STE	**£289.99**
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Unpopulated Board	**£28.00**

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- Will fit any ST(F)(M) or Mega ST
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- Upgradeable in stages from the base 512K to 2Mb then 4Mb
- Solder in design for greater reliability (requires some technical knowledge)
- Fully tested prior to despatch
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512K Board	**£39.99**
2Mb Board	**£89.99**
4Mb Board	**£169.99**
512K SIMM's STE	**£6.99**
2Mb SIMM's STE	**£89.99**
4Mb SIMM's	**£179.99**
2 x SIPP to SIMM adaptors	**£3.00**

Monitors

Dataview Mono Monitor £139.99
Dataview 14" SVGA Monitor with ST adaptor (includes sound). Fully compatible with all ST Hi-Res Programmes.

Philips 8833 MkII £199.99
Includes 12 Months on-site warranty (Mainland UK) and free Lotus Turbo Challenge II game.

Dataview SVGA Col Mon £239.99
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Falcon VGA Adaptor	**£9.99**
Falcon ST Monitor Adaptor	**£9.99**
Philips SCART to ST/STE	**£9.99**
8833 MkII to ST/STE	**£9.99**

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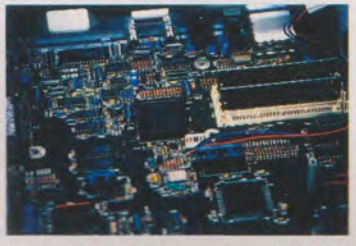
Our Service department can repair ST's in minimum time at competitive rates. We can arrange for fully insured, courier pickup and return delivery of your machine to ensure its safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day.

We can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc.

We offer a Quotation service for £15 for which we will examine your machine and report back with an exact price for repair. If you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge.

Please note: The minimum charge covers labour, any extra parts are chargeable.



Quotation	**£15.00**
Minimum repair charge	**£35.25**
Same day service	**£15.00**
STFM(E) PSU	**£34.99**
1Mb internal drive	**£39.99**
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- 105mm scanning head
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Hand Scanner + Scanlite/Silhouette

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Datanet Network Hardware
- Cartridge based high speed network solution
- Compatible with ST (F)(M), Mega ST, STE, Mega STE

Powernet Network Software
- MultiTasking Network software allows applications to run on the server while drive and printer accesses take place in the background
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- Full Falcon compatibility using LanNet device

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Prices quoted are for 1 Node. Each computer attached to a Network requires 1 Node.

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- Run PC Software on your ST
- Full installation instructions
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Ladbroke Computing International are one of the longest established home computer dealers in the U.K. We have developed an extensive customer service policy which involves testing of all hardware prior to despatch to ensure that goods arrive in working order, offering free advice and support over the phone and keeping customers informed. Although our prices are not always the cheapest we do endeavour to offer consistently good service and backup.

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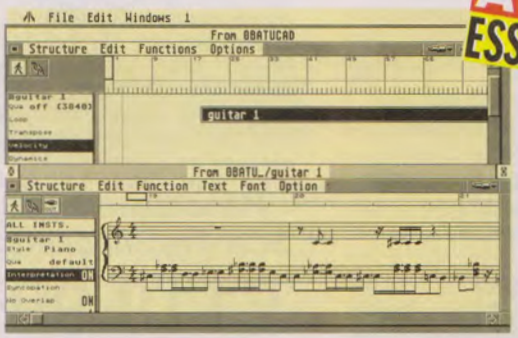
PLAYBACK

Looking for a quick introduction to dance music? Get into the grooves with Geerdes Pattern System MIDI files.



Part of the irresistible guitar rhythm from the Batucada disk.

Load a MIDI file into a sequencer and you can view a piece of music from a unique vantage point. You may decide to listen to instruments individually, take a bird's-eye view of the whole song or use a piano-roll editing screen to examine the notes' actual loudnesses and lengths. In short, MIDI Files provide the best opportunities for finding out exactly what makes a song sound the way it does. This is one reason why MIDI files are of interest to songwriters – as well as being music in their own right, they are highly educational and can be a rich source of inspiration.

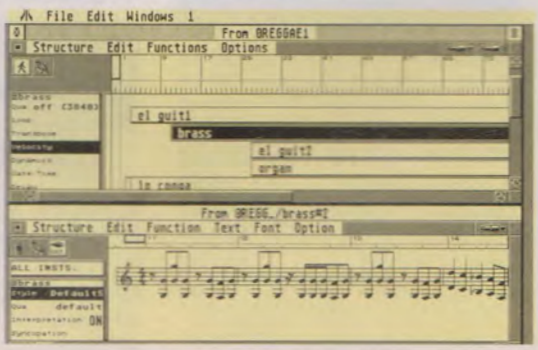
The expanding collection of Geerdes Pattern System disks from Newtronic aren't intended to be listened to as finished music, although each disk does contain an example of a completed backing track (in type 0 and type 1 Standard MIDI File formats). All the remaining files on each disk are patterns, elements of a particular style of dance music that can be put together in any order. Using these grooves it's easy to build unique dance tracks by combining the musical patterns in your own way and making changes to them as you see fit. Each disk has a number of patterns that can be safely used with each other for seamless dance music. This review is based around fifteen of the disks – ten Techno Groove, two Dance Groove, one Electronic Groove, one Reggae and one Batucada.

Techno and Dance Groove first. The ten Techno disks have a very European flavour to them, which is not surprising as Geerdes is a German company. But make no mistake, these grooves are manic enough for anyone irrespective of country. Time has been taken to include the wild pitch bend necessary for the insane extended sliding notes that all die-hard rave fans have come to know and love – whoever programmed these must have spent many hours at all-night raves to get the feel this good. For a genuine hardcore groove, just bump the tempo up. The music on the two Dance Groove disks is more suitable for those who are ready for a taxi home by 3am, but it's just as convincing and quite current. The first is a strain of house music, while the second has a gentle shuffle beat.

The Electronic Groove disk lies somewhere between Tangerine Dream and Kraftwerk, consisting of robotic, trance-like patterns. These files sound great from the off, but really lend themselves to experimental music. Interesting sounds are the key to success with this type of music, and these patterns cry out to be tried with different analogue synth patches.

Past experiences with reggae-style grooves have been mixed but the Reggae Grooves disk turned out to have a professional feel and wasn't at all embarrassing compared with others of a similar genre. Perhaps a little old-fashioned sounding, but let's face it – the continent has never been particularly famous for its reggae scene.

Batucada is Brazilian street music – a kind of urban Samba – and the Batucada disk was pleasantly surprising with some highly usable picked guitar rhythms.



The example backing track from the Reggae Grooves disk, here showing the brass score.

INSIDE INFO

Newtronic also supply the Geerdes Midimusic Collection, which at 2,500 titles could be Europe's largest collection of songs in Standard MIDI File format. The international pop collection started six years ago, and covers everything from A-ha to ZZ Top. The catalogue also extends to jazz numbers, ballroom dance music, TV themes and classical works, all available in GS format.

The Pattern System disks reviewed here started in 1991 when the first Techno Groove disk appeared. In response to popular demand, the range has now grown to twenty or so, with more disks in the pipeline. Other Geerdes products distributed by Newtronic include the *1stTrack* and *StarTrack* sequencers and various synth editors and librarians.

ATARI ST REVIEW ESSENTIAL BUY

CONCLUSION

For the professional or semi-professional musician, these grooves are great time-savers. For the beginner, there's probably no better way to learn how dance music is created. The disks cost £7.50 each if bought singly, but the price per disk drops to £7 for four or more and £6.50 for ten or more, with further discounts available for larger quantities. Go on – treat yourself!

✓ Great '90s grooves
✓ GS and GM compatible

PROS AND CONS

x You'll still need to find a decent singer!

"Convincing dance grooves in a ready-to-use format. Something for amateurs and professionals alike."

NAME: GEERDES PATTERN SYSTEM
COMPANY: NEWTRONIC
CONTACT: 081-691 1089
PRICE: £7.50 each – quantity discounts available
MIN MEMORY: N/A

EASE OF USE: ✪✪✪✪✪
DOCUMENTATION: N/A
EFFECTIVENESS: ✪✪✪✪✪
VFM: ✪✪✪✪✪

OVERALL 92%

TITAN DESIGNS

This month, Tony Kaye goes to Birmingham to find out more about genlocking and video effects from the masters...

The parking spaces of Nottingham, the traffic jams of London – who says you don't get around being a journalist! The latest addition to the travel saga are the Birmingham mazes. Anyone who has to negotiate Spaghetti Junction will know what I mean. Normal roads let you retrace your steps when you go wrong and start again – here, you get a 20 mile detour.

Selly Oak was the destination and, after a picturesque view of the M6, M5 and the Edgbaston traffic (with the fifth Test in progress), Titan Designs appeared.

David Encill is the man behind the company and is heavily involved in developing video genlock equipment for the ST/TT/Falcon range. He bought his first Atari computer, an 800, in 1982, replaced, in 1985 by an original 520 ST with an external drive.

David opened a retail shop called Magnetic Media in Tamworth, selling blank disks and other peripherals. Following a plethora of enquiries, he decided to supply Atari computers. Although the outlet is no longer there, the company is still in existence.

In 1988, David and two partners started a company called Elmtech Research. Development work started on a new graphics interface for the ST range called ParSec, intended to give a resolution of 1,024 by 768 pixels in 16 colours from any ST as well as supporting genlock. The idea was to incorporate 256 colours and a host of other features, but due to a lack of both cooperation and capability from his partners, the company was dissolved.

Marc Woodhead – graphics a speciality.

David at the helm.

REFLEX

Titan Designs was started in 1989, a partnership with David Glasspool of Take Control and resulted in the Reflex Graphics card. This, when fitted to any ST, gives a resolution of up to 1,024 by 1,024 pixels depending on the monitor being used. The card requires some case cutting on the standard ST although it's not difficult to install with some knowledge of hardware. With a comprehensive range of utilities, the Reflex card is ideal for anyone who uses the ST for DTP, word processing, art or any application that needs a large, clear display.

David Glasspool decided to continue with his main love, music, in mid-1992, so the partnership came to an end. But David Encill kept the company going and it is still offering the Reflex card along with a whole range of products today.

FALCON POWER

The Falcon opened up new possibilities. "The video capabilities are well ahead of anything else on the market and well worth the effort to develop hardware for", comments David. New products are continuously being developed, the latest three being **Graffiti**, **Fresco** and **Exposé**.

Graffiti is a professional quality video genlock for the range of Atari computers. It has minimum requirements of a one megabyte machine with a double-sided disk drive, although more memory and a hard drive are recommended. Graffiti comes with the *ImPro Animate* software package, a modular system that is both expandable and flexible.

The Graffiti Genlock in operation, but when is David going to invent a filter for Henry Kelly?

A studio quality Genlock package for the Falcon is provided in the shape of Fresco. It has inputs for composite, S-Video and RGB and has many facilities including morphing and "live" effects. The *ImPro Capture* software package is provided as standard.

Finally, Exposé is a studio quality digitiser that works on all machines. It connects to the cartridge port of the ST/TT range and straight into the internal bus on the Falcon. With the link to Fresco on a Falcon, it is capable of 25 frames per second sampling at 16-bit true colour (65,536 colours).

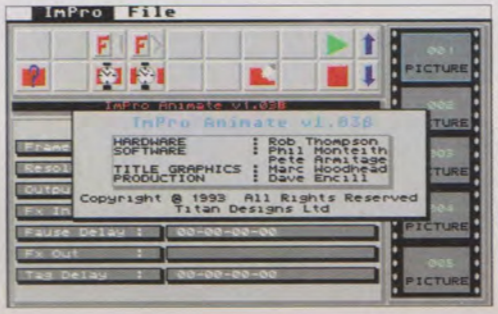
IMPRO

ImPro, written by the company secretary Phil Monteith, is a shell designed to run with all of the new hardware. The modular design makes it flexible and easy to use and it will be sold as a stand-alone program with extra modules available to enhance and improve the package.

An image processing and editing program called *Hyperion*, designed to run with *Exposé* and *ImPro Capture*, will be sold for less than £100. It was written by Laurence Moroney as part of his thesis for an M.Sc. degree.

FAMILY MEMBERS

Others involved with Titan Designs include hardware engineer Rob Thompson, Peter Armitage, in charge of special effects and based in Germany, and Marc Woodhead, a talented graphic artist responsible for the title pictures. As for David, "I helped with the icons and I make the tea!"



An early beta version of the ImPro shell. The potential is there for a very powerful suite of programs.

ST Review presents a complete suite of programs to get the best from your scanner...

FROM SCANNE

Following on from our *Timeworks Publisher*, *Easy Draw 2* and *Easy Tools* cover disks, we are offering *ST Review* readers a complete suite of programs to make the most of a hand scanner for graphics, text and word processing.

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INCLUDES MERGE IT! SOFTWARE

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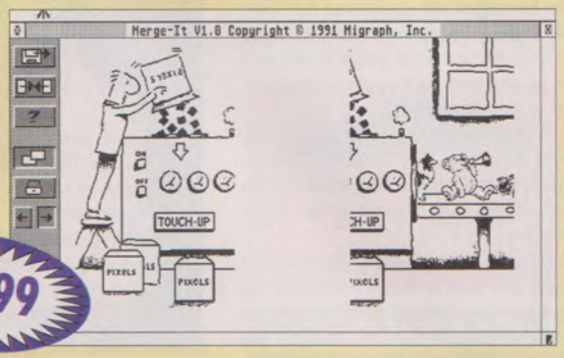

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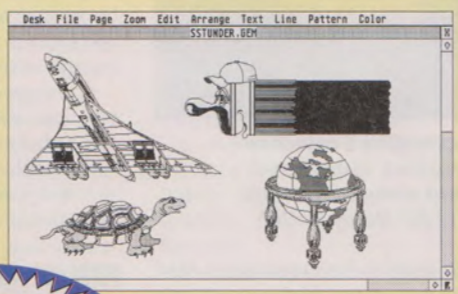
Sometimes, you just need to have access to a selection of quality images for your word processor or DTP package.

Enter *Draw Art* and *Scan Art*, two libraries of professional quality clip art in .GEM and .IMG format.



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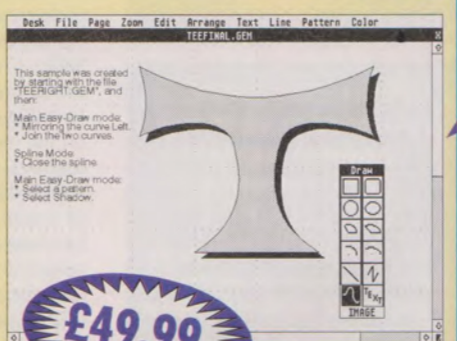
EASY DRAW 3

You probably already use *Easy Draw 2* from the *ST Review* Issue 14 cover disk. *Easy Draw 3* adds advanced features such as Bezier curves so that you can work with vector images as opposed to bitmap ones.

Easy Draw 3 is an essential upgrade if you want to trace images and get the greatest precision from your scanned image.



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A wide range of printer drivers are available – please call our Order Hotline for specific information.

ORDER HOTLINE

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'O A WORK OF ART!

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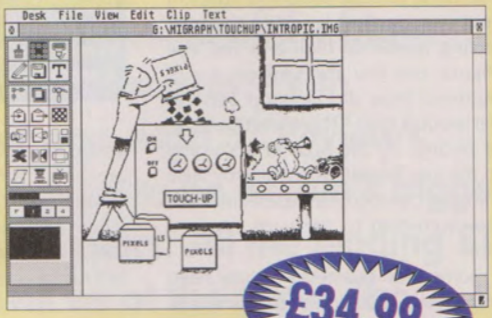
No matter how good your scanner is, you'll need to edit and enhance the image. *Touch Up!* is designed for the job. It imports and exports files in many common formats including IMG, TIFF and PCX.

Because *Touch Up!* is designed to work with DTP software, you can edit images at any resolution you want, unlike most paint programs which work only at screen resolution. (Requires at least 1MB of memory although 2MB is better.)



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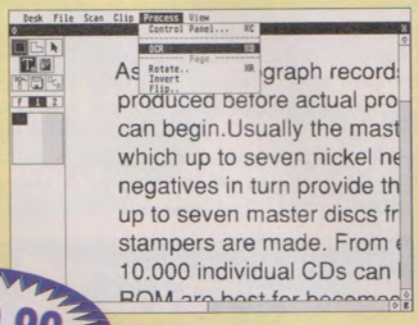
OCR

How often have you seen some text on paper and wished that you could use it in your word processor or DTP program? That's when you need *OCR Senior*. The OCR software will turn any scanned text into an ASCII file ready to load into your word processor. (Requires 2MB of RAM and a hard disk or 4MB of RAM and two floppy drives.)



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(Easy Draw 2 and Easy Tools 2 are available on the cover disks of ST Review Issues 14 and 15. If you missed out, see page 98 for information on how to order a back issue.)

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AT HOME WITH DTP

Most of you have probably considered working with DTP from home. Alan Woodcock did more than just consider it...

Shelf space is the order of the day in Alan's office!

From a humble beginning in 1983 with an Oric computer, Alan Woodcock has always been interested in desktop publishing. *Stop Press* on the Amstrad CPC6128 fuelled that interest and by the time he purchased his first ST in 1987, this interest had grown into a serious hobby. The purchase of *Timeworks* led to the laying out of various newsletters and compliments slips purely by word of mouth and without payment.

The recession led to Alan being made redundant in 1992. "I thought I might as well see if I could turn it into a full-time occupation", recalls Alan.

Accepted onto the Enterprise Allowance scheme, Alan presented a business plan for "Desktop Services" to his local NatWest bank. The eight page document outlined the nature and intention of the business as well as incorporating a CV, equipment list and projected balance sheet, laid out by Alan and kindly printed by his good friend, Mike Goodman. Where did the knowledge for such a presentation come from?

"The Training and Enterprise Council sent me on a business course. This was operated by a local firm who basically taught you marketing and how to do your books and sales. Running a business isn't an easy task – you've got to have several different heads!" laughs Alan.

INTO BUSINESS

Anyone working with DTP can easily draw up a "wants" list of equipment, but Alan only had limited funds for starting up. "I had a one meg STFM and an ordinary 24-pin colour dot matrix printer. The output wasn't brilliant and it took a while to print. I went to NatWest and said 'there's my business plan – I want a laser printer!' They said 'OK' and gave me a business development loan of £1,000."

After adding a Ricoh laser printer, "worth its weight in gold" according to Alan, and a four megabyte STE, Desktop Services started trading in May 1992. A local printing firm agreed to take the laser printed final copies and after negotiations, a standard price list was drawn up for letterheads, leaflets, business cards and so on. "When someone says to me 'how much for a hundred business cards' I can state the price straight away", explains Alan. "I then shopped around and found cheaper options – all part of the marketing exercise."

PRICING

The most difficult aspect of running your own business is setting the right pricing level. Too high and you lose clients; too low and you go out of business! How did Desktop Services get around this? "There are two ways of pricing; by the hour or according to the job. Layout work with my local printing company is based on a set rate according to the page size and job."

Some local businesses simply need small runs of a document which is run straight from the laser printer, usually via *Calamus*. These are charged out according to the number of copies.

WORKING IN COLOUR

With current colour technology, anyone involved in professional DTP has to be able to handle colour. "I've teamed up with Mike Goodman and Brian Cox", informs Alan. "Brian has a complete colour set-up and so we use each other. I supply him with *Calamus* files and he handles them from there".

With a team working together, there has to be an efficient way of transferring files. "Last November, I looked into the comms side of things, borrowed a modem and set up a bulletin board, Desktop BBS. This has grown and grown to the point where I am now the official *Calamus* support BBS for this country."

GETTING WORK

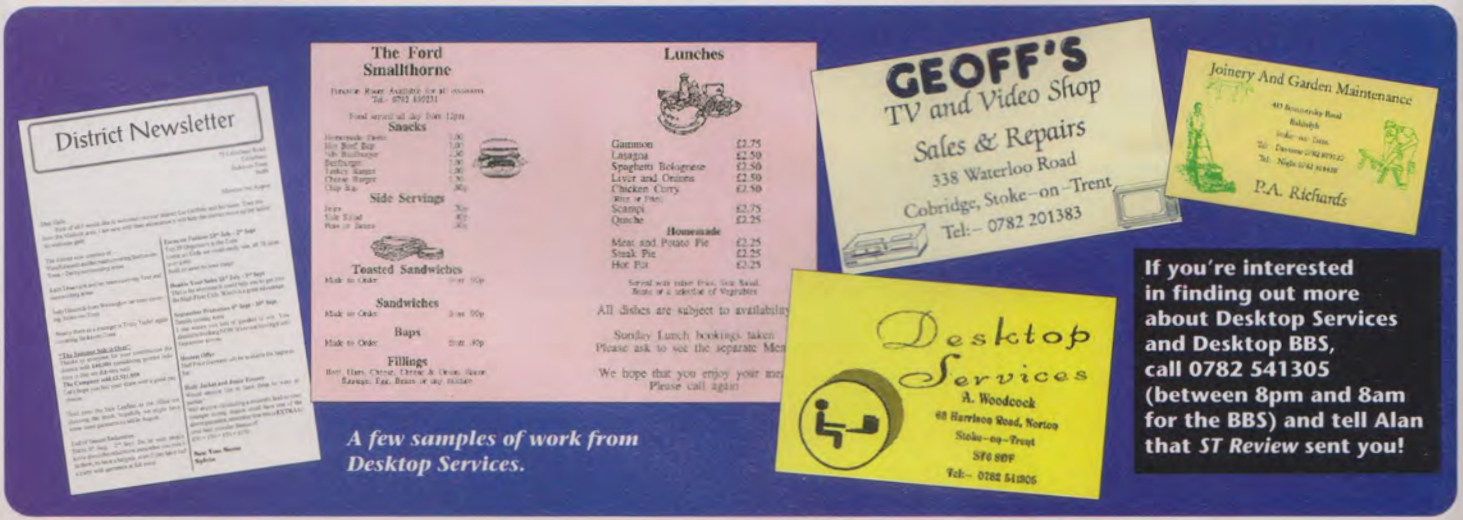
Alan has sought work by various different means. "Advertising didn't pay off with me. A mailshot to local companies didn't work and I only got one response from leafleting industrial estates. You have to be prepared to walk the streets and knock on doors", comments Alan. "Even repeat work tends to taper off after a while. You have to be on the lookout for opportunities".

Has the venture worked out the way it was intended? "It is hard, I'll be honest with you. But you have to realise that you must keep going, keep plugging away – get out there and shout your name the loudest!"

WHICH ST?

Alan's current set-up is an STE upgraded to 4Mb, a Ricoh LP1200 laser printer, 14" VGA and Philips CM8533 monitors, Profile 105Mb hard drive and a Golden Image hand scanner with Migraph *Touch Up* software.

The list of software is practically endless – *Calamus 1.09/SL, Fleet Street Publisher, Pagestream 2.2, Timeworks 1/2, Outline Art 1/2* and *1st Word Plus*. The business side is helped along by *Money Manager, Swiftcalc* and an excellent invoice and statement generator from Bay Computers.



A few samples of work from Desktop Services.

If you're interested in finding out more about Desktop Services and Desktop BBS, call 0782 541305 (between 8pm and 8am for the BBS) and tell Alan that *ST Review* sent you!

To be officially opened by an Atari representative

THE 1993 LONDON ATARI SHOW

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ATARI ST USER ATARI ST REVIEW

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Alexandra Palace

Sunday September 26, 10am to 6pm
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THE 1993 BIRMINGHAM ATARI SHOW WILL BE AT THE NATIONAL MOTORCYCLE MUSEUM ON 5 DECEMBER. THIS YEAR'S MANCHESTER SHOW WILL TAKE PLACE ON DECEMBER 12. SEE NEXT MONTH'S ST REVIEW FOR AN UPDATE.

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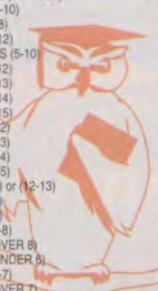

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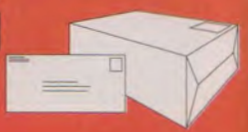
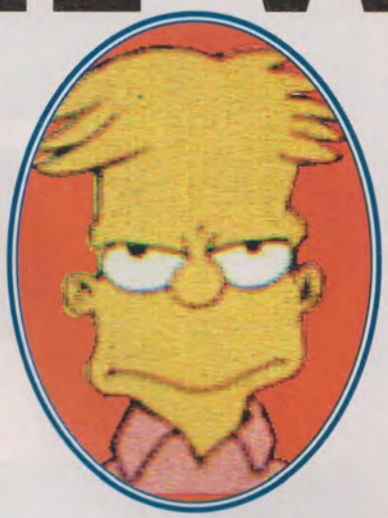


FIRST IMPRESSIONS

BART VERSUS THE WORLD

With Sunday afternoons already tied up with re-runs of The Simpsons, Tony Dillon prepares to lose the rest of his week...

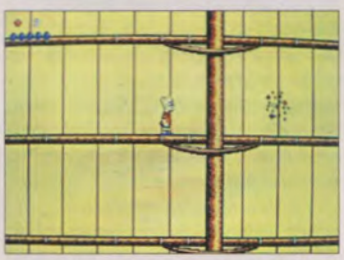


Virgin Interactive Media, previously known as Virgin Games, look set to revive a little of last years Simpson's mania with their latest licence from Acclaim. *Bart Versus The World* follows hot on the heels of the soon to be released – but not on the ST – *Mortal Kombat*. The show, featuring such classic catch phrases as "Woah man, don't have a cow!" and "Eat My Shorts", remains one of Sky One's most popular. It follows the dysfunctional Simpsons Family, just in case you didn't already know, and the game sees them enjoying an around-the-world trip at the hands of Homer Simpson's employer, one Mr. Burns, who runs the local nuclear power plant. The problem is that Mr. Burns hates the Simpsons, and essentially wants to kill each one of them in the most twisted and messy way possible. I must admit, I felt the same way myself last summer. Remember the lunch boxes?

RELATIVE TROUBLE

To help him, he has enlisted the aid of his relatives scattered to the four corners of the globe. In China you come across the terrible Fu Manchu Burns, master of martial arts. At the North Pole, the ever optimistic bunch come across the Abominable Snow Burns, complete with shaggy fur. Rameses Burns the First haunts the Great Pyramid and the Valley Of The Kings in Egypt and Eric Von Burns is to be found setting up traps all over Hollywood. Yes, I know that Hollywood isn't really a country in itself, but according to the press releases most people consider it to be on a different planet altogether! You've heard of adventure holidays – well this should top them all!

The game is broken up into so many different sub games, it's very hard to categorise it. So much so, that when pushed for a quote, all Virgin PR executive Caroline Stokes could find to say was "It's about time Bart hit the ST – thank God it's such a brilliant game!" On a very, very basic level, and doing no justice at all to the designers, it's a platform game with one large level for each of the countries you visit. However, as you travel through each level, you'll need to play a whole host of bonus games and qualifiers.



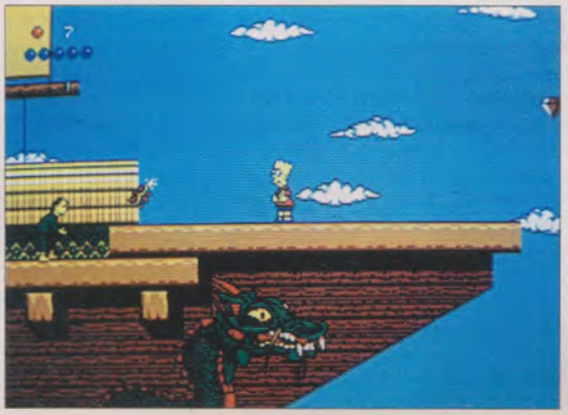
Bart has to get across the Junk in the Chinese harbour, a huge platform romp as you leap between the sails.

A BULL IN CHINA

For example, once you have managed to get across the Junk in the Chinese harbour, which is a huge platform romp leaping between the sails of the mighty barge and helping Bart collect rare Crusty The Clown articles, you may be called upon to solve a sliding block puzzle, or play a Memory card game.

After that, it's a skateboard ride down the Great Wall which for some reason has become littered with holes, ramps and fully working fire-breathing dragons (Triaddic Park?), followed by a round of Simpson's trivia and finally a few spins on a slot machine. Can you see where the difficulty comes in?

Already a huge hit on the Nintendo Entertainment System, the game is being converted to the ST by popular team Arc Developments from the original design drawn up by The Black Team of the USA, a think tank group who were responsible for Judge Dredd and Lennon Lewis Boxing. Matt Groening himself has been involved in the design, so it should be something special. Mind you, it shouldn't be too difficult to come out with a perfect conversion. Whether or not it will repeat the success of the console version waits to be seen, but as the game will be released in the next two months, we won't have too long to wait!



In China, Bart comes across the terrible Fu Manchu Burns, master of martial arts. Here, catch this firecracker...

Supplied by Twentieth Century Fox ©

The real Simpson family. I wonder what they think of it all!

ATARI ST REVIEW
ESSENTIAL BUY

GAME PLAY

It's bigger than anything ever! It's more popular than the machines it runs on! At least, that's Tony Dillon's opinion...

They laugh, dance and sing, and so they should. You've just invited all of them, plus their mates to a banquet they'll never forget.

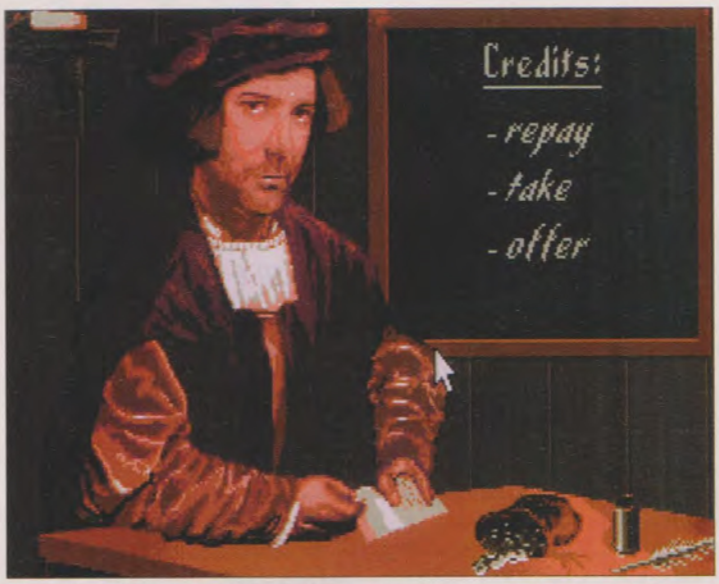
THE PATRICIAN

If you saw the preview of this awesome title in a previous issue, you will have been dribbling frantically. As you already know, the PC and Amiga versions of *Der Patrizier* have been topping the charts for as long as there have been charts – at least it seems that way sometimes. Quite why it took so long to finally create an English ST version I don't know, but it is here, and unfortunately I have to dip into the book of computer journalism *clichés* and say that it is most definitely worth the wait. Sorry.

This *wunderkind* of a game is set in a very turbulent point of European history. The tradesmen are sick and tired of being continually ripped off by everyone, and the constant threat of piracy is causing people to have to travel in convoy. That, plus the ever-present attacks on cities are frustrating and intimidating everyone. The time has come to put an end to the free for all and create a unified market. The port towns are agreed – a trader's guild must be created, and all countries must work together for the good of each other. Out of this, the Hanseatic League was born – a trade agreement of solidarity between the nations. A good idea, I'm sure you'll agree, and this time around everyone was allowed to see the treaties drawn up...

It might all seem a little confusing at first – after all, where would you fit in? The answer is simple, the league needs a leader. No, don't turn the page! This isn't a lesson in international economics. You are nothing but a trader, with a small ship and a smaller purse, who merely wants to get onto the political and financial ladder, getting rich and popular, and eventually reaching the stage of Alderman of the League, or to give it its full title – The Patrician.

Long before you can start worrying about all things political, though, you have to start making some cash, and now is the right time to get to grips with the backbone of the game. If you didn't already know, *The Patrician* is, on a very basic level, a trading game. You move between towns, collecting goods at as low a price as you can, and then moving them to other towns where people are willing to pay high prices. The cheapest goods are the most readily available, and it can be risky dealing with large quantities. There's no point filling your ship with fish, for example, as all the towns you visit are



Meet Mad Harry McNutter. He's miserable because everyone is paying back their loans on time, so he hasn't had a chance to beat you to death with your own boat.

No, you're not about to offer any of these a fight. You're here to recruit some fine fellows to navigate your boat.

Here they are, all the buildings you will ever need. From the left, they are: your office, the armoury, the pub, the bank, the town square (through the alleyway) and the town hall.

Have you ever seen an office this tidy? I must remember to leave a large tip for the cleaning serf next time he comes around.

Cor, they weren't half relaxed back in those days. Mixed bathing, and you can squeeze in wherever you want! Plus, of course, you can do some very dodgy deals in a place like this.

port towns, and therefore already reeking of kippers!

CAUSE AND EFFECT

Even with something as basic as that brief, there are still quite a few factors that affect the price. Availability for one, far more with exotic goods such as spices. When the spice ship sails into port, it's worth collecting as much as you can, and then storing it away. After a while, all the spice will be used up, and Europe will be crying out for more. Higher demand means higher prices, so you're laughing.

Two other important factors that affect the price are location and time of year. In the summer and autumn, wood is plentiful as there are stacks of trees to pull down. Come winter, though, and supplies of wood dry up. Similarly, small isolated islands will always need supplies from the mainland. Learning these patterns and rules is vital if you're going to win this game.

But that's just the start. Before you can start to make any real money, you're going to have to seek a private investor. However, there are a couple of problems. First of all, borrowing money is frowned upon by the church, and being as the church wields total power over the state, it is therefore illegal. Secondly, most people won't lend you money because you have no status, and those who will can only supply you with very small amounts at extremely high interest rates.

MY SWEET CAROLINE

Status is one of the most useful things you can gather, and there are essentially two types. There's *people power*, whereby everyone knows and likes you, which is reaped by earning stacks of cash and then throwing huge banquets. Then there's *political power*, which allows you to run for mayor's office, and then on to the ultimate position. Political power is gained by a combination of people power, luck and as many dirty tricks as you can possibly get away with, such as bribing important types. Oh what a twisted web we weave.

There are all sorts of things than can damage your reputation. You could get attacked by pirates, some of your earlier dealings with loan sharks could be uncovered, you might not get married and so on. Oh, sorry, I spotted a couple of things there that I haven't mentioned so far. For a start, I haven't told you about the pirates. Every so often, as you roam the open seas, you'll be attacked. If you like, you can leave it up to the computer to decide the outcome of the battle, or you can take control of the cannons yourself and battle it out.

This is the only arcade part of the game, and involves using the mouse to load, aim and then fire the cannons, with the obvious aim of sinking the opposing ship before it sinks you.

The other point is your partner in holy matrimony. Well, this is before the Renaissance you know – you surely don't expect the public to vote someone to a position of power who isn't married, do you? Luckily, finding your perfect mate is a lot easier than real life, Dateline excepted of course. As you visit each town, marriage brokers will present themselves to you and offer you a wife. Your only decision is whether to accept the wife/husband they offer you, and whether or not the size of their dowry is all that important in the quest for true love.

You can probably see how good the game looks, and I personally don't think that a printed paper version can ever do a game with graphics this attractive any justice. Ported from the 256-colour VGA PC shots, and then scanned down to 32 colours, every screen looks magnificent.

Apart from the arcade sequence, there is very little animation, but a game like this just isn't about animation. It's about design, and this has to be one of the best designs since Geoff Crammond thought it would be nice to do a racing game. *The Patrician* took eighteen months to create, and every second shows. Slick is a good word to use, as is incredible, superb and the phrase "of the first water". Having played the Amiga version for the past few months, I can personally guarantee that you'll be playing it for a long time. What more can I say?

✓ Stunning graphics
✓ Intricate design

PROS AND CONS

× Takes a while to get started

"Flawless design and incredibly visual. The perfect trading game "

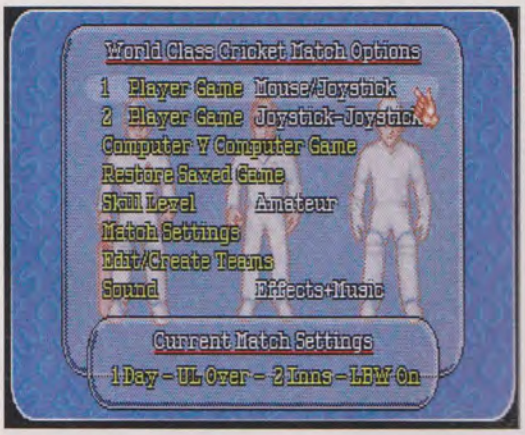
NAME: THE PATRICIAN
COMPANY: ASCON
CONTACT: 071-328 2762
PRICE: £39.99
RELEASE DATE: AUGUST '93
MIN MEMORY: 0.5MB

GRAPHICS	★★★★★
SOUND	★★★★★
VFM	★★★★★
PLAYABILITY	★★★★★
OVERALL	92%

GAME PLAY

GRAHAM GOOCH WORLD CLASS CRICKET

As a disastrous summer of international cricket draws to a close, Richard Barton looks at a way England could win!



The options screen lets you choose the length of the game and a host of other preferences.

Another disastrous summer on the field for "our boys". The once-mighty England cricket team have one again proved that we are not the force we used to be. First football, then cricket – what next, our international Tiddlywinks crown?

One of the few shining lights was the resignation of one of the finest captains the country has ever known, Graham Gooch. I have to admit to being a little biased, being an Essex boy, but he did lead from the front, didn't he!

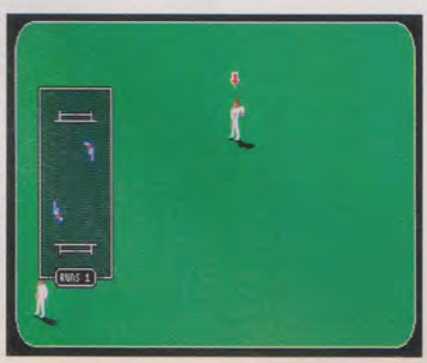
Audiogenic picked the summer to release *Graham Gooch World Class Cricket*, no doubt hoping for a better time of it on the field. Still, with the man himself being well respected, it should do no harm. With the performance of our chaps on the field, here's your chance to see if you can do better!

World Class Cricket is a combination of game and sports simulation and has all the excitement of the real thing. First, you have to work your way through a comprehensive options screen where you select whether you want a one or two player game, or even just watch the computer play. There are three skill levels to select, from Amateur through Professional to World Class. Matches can range from a small 20 over, single innings, one-day game to a full-blown, unlimited over test match. Choose the teams for you and your opponent and play commences. You can decide to have the computer pick the best 11 or pick the players yourself, so assuming you're England, you could bring Mike Gatting, Ian Botham and John Emburey back into the side. If you choose the World XI, you could end up with Gooch bowling to Gooch, too. In fact, the game I played saw Gower run out by Gower!

Playing the game will take a little while to get used to. You will have to suffer the humiliation of getting beaten by sides like Sri Lanka and Zimbabwe, much like the real England side, really. The difference between this and the real thing is that you can improve. There's a lot of joystick-waggling, but don't let that put you off as much of the fun is in deciding which bowler to use and to vary the deliveries to confuse the batsman. The ball tends to hit the rather short boundary quite often, which is a pity, because the sound effects of people clapping and cheering are, on the whole, poor.

Control is the one thing that needs a lot of practice. In a 20 over match against a World XI, three players in a row were run out for a total of 15 runs. Being just eight runs behind and with only had two bottom order batsmen left, it made for a close finish. The match was eventually won by one wicket, but I still don't fancy my chances against those Aussies.

Graham Gooch World Class Cricket is a fair old game with good graphics. It's fun to play and with all of the save game and editing sides options, it has longevity built in. You can add teams and players as you go along, so your favourites can play along with the best of them. If you like cricket, then this is a must. If you're borderline, then it's worth adding to the collection but its appeal will eventually wear off.



A short hit gives the chance of a quick run. But be careful – the return throws are very accurate.

Oh dear, not doing too well here. Still, a bit of practice, a new captain and a new selector will help!

✓ Great 3D graphics
✓ Atmospheric recreation of the game

PROS AND CONS

× Poor sound effects
× Can be long-winded

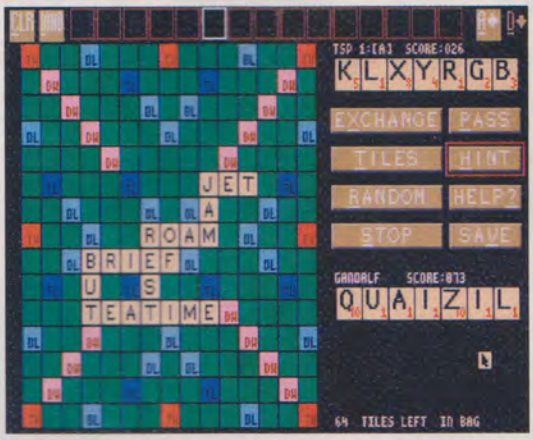
"Howzat! A good, fun game for cricket freaks "

NAME: GRAHAM GOOCH WORLD CLASS CRICKET
COMPANY: AUDIOGENIC
CONTACT: 081-424 2244
PRICE: £29.99
RELEASE DATE: OUT NOW
MIN MEMORY: 1MB

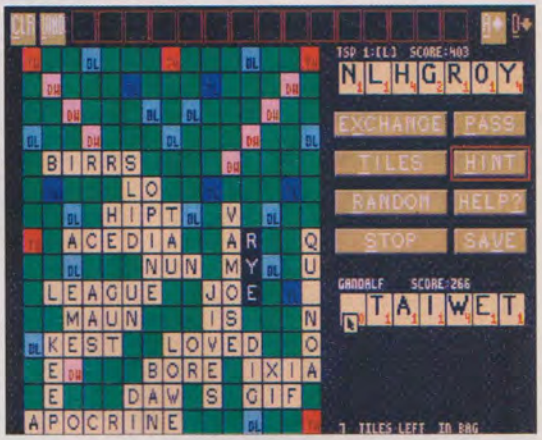
GRAPHICS	★★★★★
SOUND	★★☆☆☆
VFM	★★★★☆
PLAYABILITY	★★★★★☆
OVERALL	78%

GAME PLAY

US Gold's long-promised version of Scrabble finally makes it to the ST. Dave "Words R Us" Jones jumbles the letters for a triple word score...



On the easy levels, the computer can be beaten quite easily...



...but as you progress, it will find words you didn't even know existed!

SCRABBLE

The hint option will tell you how many moves are possible with your tiles.

Once upon a time, there was a humble word game called Scrabble. As soon as it appeared, people started playing it with gusto. Scrabble leagues started appearing and even a World Championship. To cash in on the market, Spears Games, who hold all the copyrights, brought out a deluxe version.

If you visit a specialist board-games shop, you'll probably find a whole rack devoted to Scrabble, including everything from replacement parts to score pads and gold-plated letter holders. The next logical step was to produce a computer game.

Scrabble from US Gold is not the first attempt at bringing the game to the ST. *Computer Scrabble Deluxe* was brought to us by Leisure Genius a while back, so what's the big deal? Well, how about a version that's hard disk installable and has a vocabulary of 134,900 words including all words of nine letters or less, uses strategy to place those words for maximum points and tries all of the possible values for blank tiles?

This is an officially licensed product and probably accounts for why several PD versions were removed from libraries a little while ago. It can play a simple game while you learn the rules – just in case you happen to be the one person in the universe who's never played it! Or, it can challenge even the best player with an average score of well over 500 on the top level.

The main screen is a faithful reproduction of the original board and you have the option to see your computer opponent's tiles while you play. A hint is offered if you are stuck; the computer searches through at the top level and tells you how many possible moves there are with the tiles you have in front of you. This is a fascinating aspect of the game; at one point, the computer told me that there were 234 possible moves with my selection of weird letters including one combination that gave me 36 points!

HOW TO PLAY

If you've never played Scrabble, here's a quick run-down of how to play. You have seven tiles with letters and point values on them with which to make a word. Using those letters or any others on the board, you have to get the highest score possible. Your opponent will be doing the same, and with the resources of the Chambers English Dictionary to draw from, it makes a formidable foe.

Tiles are moved by dragging them on to a grid at the top of the screen, leaving gaps for existing letters if you need to. Click on the A or D to select the direction of the word and drag the whole thing into place. You are then told the value of the move and have an option to play it or return to look at other possibilities. If you can't find a move, you can swap your tiles for new ones at the cost of a turn. The computer will shuffle the letters around for you to give another view of what you have in your rack and, if you're really stuck, give you a hint.

Scrabble is based on Original Scrabble from Spears Games. There are five other versions available in the UK, including Magnetic Pocket Scrabble and a giant set with large print in the manual. I wonder how many of them will translate into a computer version?

All in all, *Scrabble* is fun to play and educational too. This is the one to involve your parents in when they tell you that you can't learn anything from playing games on your computer. Mum probably won't let you get near it once she's learnt how to use the mouse to move the tiles!

PROS AND CONS

✓ Large dictionary
✓ True to the original game

✗ Easy to cheat
✗ Really needs two or more players

"A good multi-player game which will increase your word-power and often surprise you "

NAME: SCRABBLE
COMPANY: US GOLD
CONTACT: 021-625 3366
PRICE: £27.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5MB

GRAPHICS	★★★★☆
SOUND	N/A
VFM	★★★★★☆
PLAYABILITY	★★★★★☆
OVERALL	82%

PD SCENE

Nial Grimes goes with the flow to find the best public domain games around – for this month at any rate!

ATARI ST REVIEW BUDGET BUY

H-MEC

LAPD • DISK NO: G.293 • £1.50 • MEMORY: 1MB • SHAREWARE • STE ONLY

IN BRIEF: Take a standard *PacMan* game, add some hardware scrolling, a few neat tunes and a posh title screen, and you will have *H-Mec*. Yep, it's another standard "playability by the bucketload; originality by the eggcup-full" shareware game.

As PacMan himself, your all-too-familiar task is to clear a maze of power pills and avoid the evil clutches of marauding ghosts. Unlike most versions of the game, these little blighters are highly intelligent and even cooperate to trap you in a corner! Mind you, they're also quite predictable, so it's possible to play similar tricks on them.

The music changes on every level and most pieces are pretty good in a chip-warbling type of way. The introductory tune is the best attempt at house I've heard on the ST and the graphics are nicely done, if a little bland at times.

ST REVIEW COMMENT: "In twelve years, the simple *PacMan* concept hasn't lost its playability; load *H-mec* and you won't be able to part with the keyboard! In all, it's a very accomplished game, but not one which adds much to the genre."

●●●

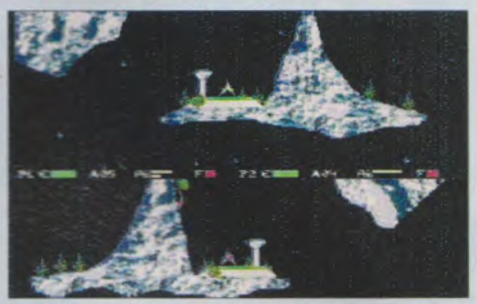
The graphics are great but how on earth that is supposed to spell H-Mec is anybody's guess!

Smooth scrolling and a killer soundtrack are what you can expect from H-Mec, but if you're after originality, look elsewhere.

UTOPOS

CALEDONIA PDL • DISK NO: STE.55 • £2.50 • MEMORY: 1MB • SHAREWARE • STE ONLY

IN BRIEF: Since its release, the STE has attracted little interest from commercial software publishers, but "E" specific shareware just keeps on coming. *Utopos* is a two-player battle game, set in a split screen arena; the simple aim is to blow up your opponent's ship without getting picked off yourself.



Battle it out head-to-head in deep space with Utopos – two player Oids with brass knobs on!

Controls are of the twist-'n-thrust variety and once you get used to them are as close to perfection as any game has ever come. Plenty of motionless asteroids fill the play area to provide cover from attack and if things get a little too hectic, you can activate your cloaking device. This will make you appear invisible on the other player's screen, but it's automatically switched off when you fire your lasers – nasty! Classy visuals and digital sound back up the faultless playability.

ST REVIEW COMMENT: "Polished until it absolutely shines – this is what all STE games should be like. The control system is impeccable and only the lack of a single-player mode holds it back from perfection. Quality gear."

●●●●●

Utopos is a visual treat from start to finish and take my word for it, the sound is even better. The STE at its very best.

REBOUND

TUMBLEVANE • DISK NO: GM.112 • £1.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: Second to *Space Invaders*, *Breakout* must be the most successful game concept ever devised. Countless versions have been written for the ST: *Arkanoid*, *Revenge of Doh* and *Breakanoid* to name but a few. *Rebound*, from DCS, is the latest to hit the shareware scene.

Unlike many of its stablemates, this new offering does away with blocks altogether, and instead replaces them with "buffers". One of these sits on the left, the right and the top of the screen and the aim is to bounce the ball on them as many times as possible within the time provided. Bonuses are awarded for deflecting off all three in one sweep and mind how you go, because losing a life will reduce the size of your bat! Thankfully, the flakey speech synthesiser used by previous DCS offerings has been dumped in favour of some good old-fashioned samples.

ST REVIEW COMMENT: "Admittedly, *Rebound* plays on a very tired concept, but it remains an enjoyable game nonetheless. As we've come to expect from DCS, the presentation is faultless."

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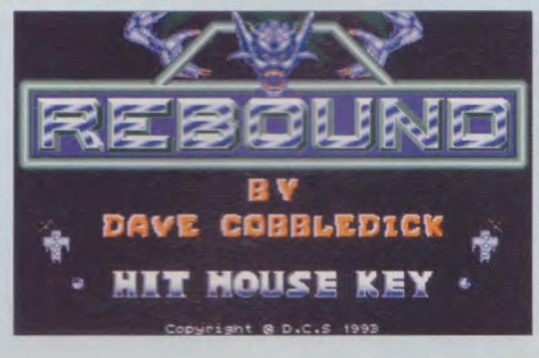


Dave Cobbledick makes a brave move away from quiz-land. The idea may be a bit jaded, but the presentation is near-as dammit perfect.

RUSH 2

ATARI ST REVIEW BUDGET BUY

LAPD • DISK NO: G.300 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: If you're sick to death of shoot-'em-ups and just can't face the thought of playing yet another arcade relic, take a look at *Rush 2* – doubtless, the most unusual game to hit the public domain for quite some time.

The gameplay resembles *Oxyd* a little, the overall idea being to collect four alphabetically-ordered beacons with your joystick-controlled marble. The trouble is that some blocks are missing from your path and need to be slid into place – enter the "shifter". In two player mode, player one controls the ball, and player two, the shifter. In single player mode, you toggle between the two using the space bar.

Each round must be completed within a strict time limit and to complicate things further, a band of aliens terrorise the play area in later levels. It sounds complicated to play, but experiment for a few minutes and all will become crystal clear.

ST REVIEW COMMENT: "There's an awful lot to *Rush 2*, but make it through the initial confusion and you'll find a corking little game. It's one of those rare titles that makes up for its lack of technical wizardry with lashings of originality."

★★★★★

Two original games in one month – it must be a record! And not only that, Rush 2 has playability to back it up.

Simply collect the letters in sequence and you're on to the next level. A tight time limit and dual controls make it anything but easy!

GRANDAD 2 – IN SEARCH OF SANDWICHES

ATARI ST REVIEW BUDGET BUY

CALEDONIA PDL • DISK NO: GM.184 & GM.185 • £4.00 • MEMORY: 1MB • SHAREWARE

IN BRIEF: To many people, *Grandad And The Quest For The Holey Vest* was one of the best adventure games ever released for the ST. Humour, playability, graphics, a smelly hero; it had them all and now Grandad is back – in search of his sandwiches!

Plenty of colourful characters line Grandad 2, giving the game a very interactive feel (and you always wondered what PD library owners got up to in their spare time!).

The aim of the game is naturally enough to find Grandad's sandwiches which he's somehow mislaid in Funland, a local theme park. As you've probably noticed from the screen shots, our hero has left his slow wheelchair and is now equipped with a turbo-charged, three-wheeled motorbike.

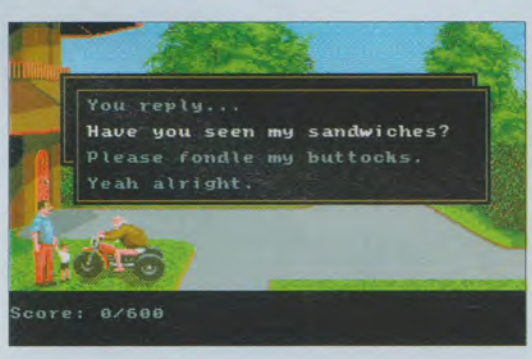
In common with *Grandad 1*, the game is split into two parts. The first, the town park, can be played unrestricted, but once you've completed this half you'll need a protection matrix from the author (costing £8) to move into Funland. Don't get the idea that you only get a small taster of the game without registering though – there are hours of play in the park alone! Far more characters fill the play area this time round and the game feels a lot more interactive than its predecessor. The author's off-beat sense of humour runs riot once more, with plenty of amusing characters popping up from time to time (such as Caledonia boss Jake Bain as a flasher in the park – allegedly!). The humour is a little adult at times, so the game might not be suitable for younger children.

One of the most annoying aspects of any adventure game is getting stuck in a no-return situation. Fortunately, this won't happen in *Grandad 2*, because a novel new system is used whereby if you do make a mistake you are magically transported back to a few seconds before the incident. This also makes it possible to sample all of the responses without fear of losing four weeks' solid play.

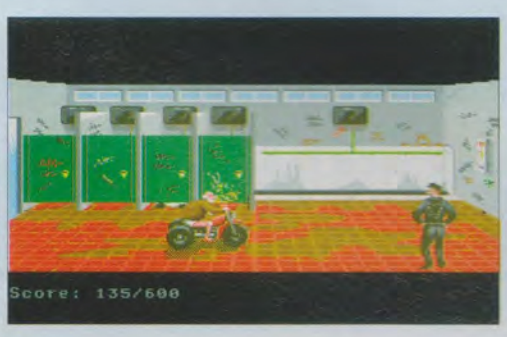
Graphically, the game is second to none as far as shareware is concerned. Some nice digitised samples (somebody shoot those poxy birds!) back it up nicely. Certainly, it's more difficult than the original, but that's no bad thing.

ST REVIEW COMMENT: "*Grandad 2* is an almost perfect adventure game. It's got just the right dose of humour combined with playability that will see you coming back again and again for more. Pure class!"

★★★★★



Getting hold of the tourist's camera is easy enough, but how do you make your escape without getting caught? (Hint: try the ladies' toilet!)



Grandad dumps his slow wheelchair in favour of a three-wheeled motorbike for the sequel. The annoying "charge-level" has also thankfully been scrapped.

Grandad 2 has it all – stunning visuals, sampled sound, rib-tickling humour, and a wickedly taxing game to back it all up!

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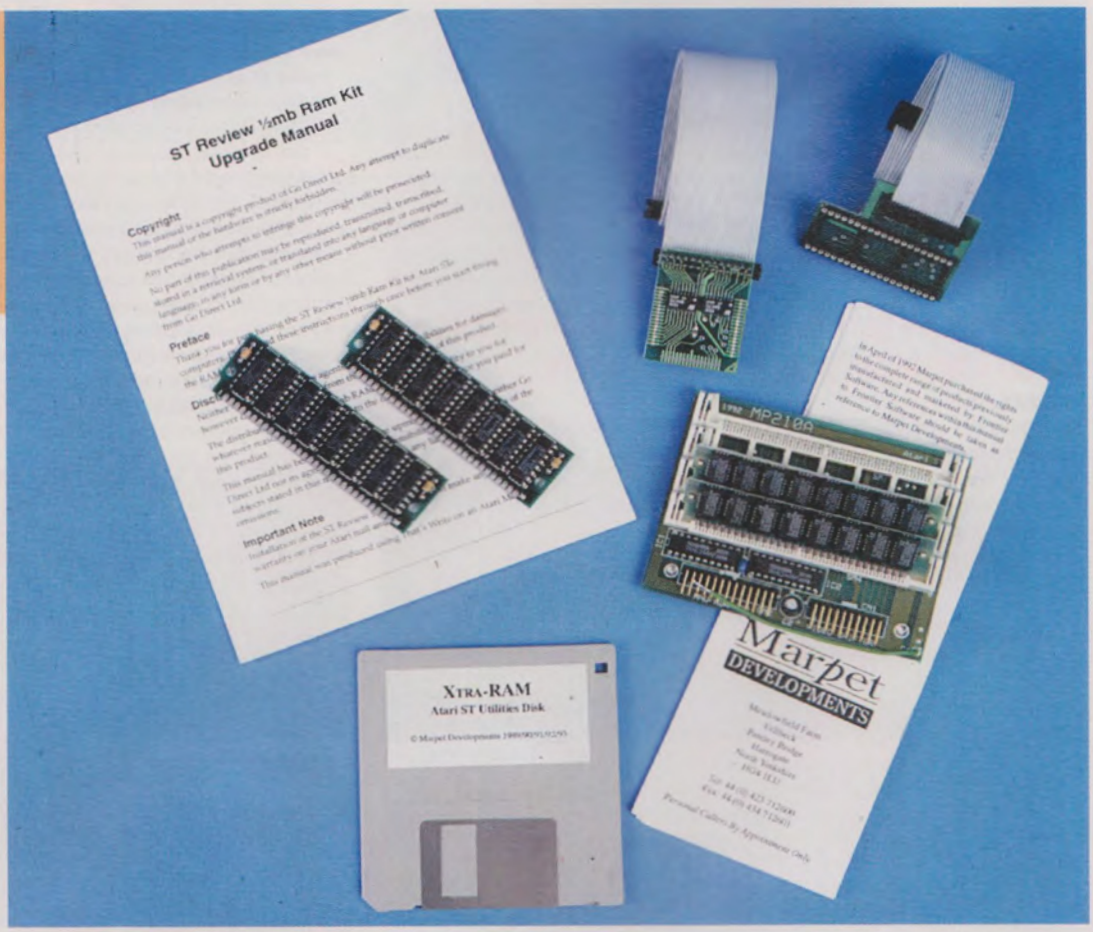

UPGRADING AN STE

A 520 STe is usually supplied with two 256K SIMMs and has sockets to plug in two more – it's that easy! A few do not have sockets in which case you will need a pair of adaptors. These may need soldering; if this is the case, we will supply the sockets at no extra cost – that's service!

A 1040 STe will usually have four 256K SIMMs. In order to upgrade you need to replace these with two or four 1MB SIMMs to give either 2 or 4 MB of memory.

UPGRADING AN STFM

In over 90% of all STFMs, the upgrade plugs straight in. There are possible problems if either the video shifter chip or the MMU chip in your computer are not in sockets.

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This month continues the Atari ST Review campaign to get every ST owner to upgrade the memory of their machine to at least 1MB and to have all those useful items – at the right price!

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VIRUSES, WHO NEEDS EM?

Apart from my job at ST Review, I run a specialist data recovery service for musicians – and thanks to viruses I'm kept very busy.

It is far too easy to be complacent when it comes to viruses, and far too many people have misconceptions about them. Are the following true or false?

• Viruses only affect people with hard disks • I only buy commercial software so I'm alright • they don't do any real damage • I always boot with the same disk so it can't happen to me.

All four of these are false – viruses can happen to anyone and can be very damaging.

What is a virus? A small program written with one purpose; to deprive you of precious data. Viruses take two basic forms. They are found either on the boot sector of a floppy or hard disk or "link" themselves to a program file.

What are the symptoms? All sorts of things start going wrong. Programs can fail, your computer can boot with bombs much like a hardware fault or your ST can start to behave strangely. For instance, the cursor might start moving the wrong way when you move the mouse, your software might start crashing or behaving strangely, or, worst of all, your disks can become corrupt.

And they spread. Apart from doing nasty things, viruses are designed to spread themselves. Once they are loaded into your computer, many of them then spread to every single disk you insert in your disk drive.

*What can you do about them? **UVK** them of course! ST Review has selected UVK for our Readers' Offers simply because it is by far and away the best ST **Virus** checker we know.*

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The ST may be a great computer but the mouse that comes with it simply is not up to scratch. The *ST Review* mouse is a major enhancement because it uses micro-switches for the buttons, making it much lighter and easier to click. Our mouse also has a much higher resolution – 280 dots per inch which means you need far less desk space and get much finer control.

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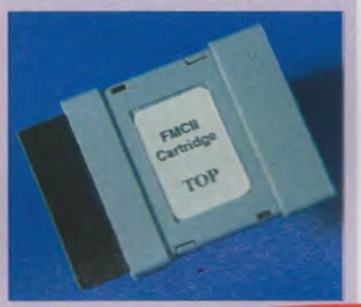

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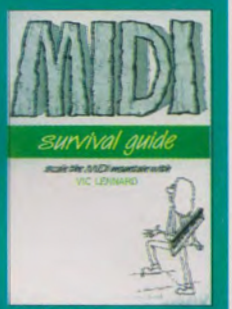

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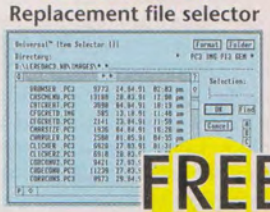

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PD ZONE

JPEG PICTURES

FLOPPYSHOP • DISK NO: PIC.3779 & 3780 • £5 • MEMORY: 1MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

IN BRIEF: This collection of over twenty pictures has been converted from Targa true-colour into the more compact JPEG format. The topics covered are varied, ranging from raytraced scenes through cars to the statutory airplanes. There are also one or two fantasy-style scenes featuring Valkyries in less than full battle dress, so it might not be a collection for younger viewers. It's evident that the pictures have been heavily compressed when viewed on a VGA monitor, but on a normal colour monitor the quality is superb.

The heavy compression used is visible on a VGA monitor, but in the main the quality is excellent.

Several utilities are supplied to convert the pics into the more usable GIF format, although you can always choose to view them directly with *GEMView 2* if you've got the time (be prepared to die in the process if you're using a standard ST!). By far the best bet if you have a Falcon is *ImageViewer*, which is reviewed in this month's Falcon section.

ST REVIEW COMMENT: "If you've got the time to convert the pictures to PhotoChrome format or have a Falcon, these disks are well worth getting hold of. They certainly beat ye olde Degas slideshow!"
★★★★

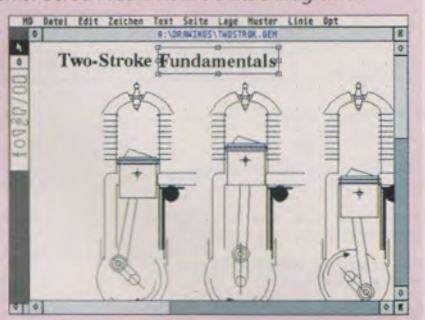
MY-DRAW

THE SHAREWARE COMPANY • DISK NO: BY NAME • £1.75 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: Bitmapped art packages are ten a penny in the public domain, but to find a fully fledged vector art program is a little more unusual. *My-Draw* is just that; it's been designed as a clone of *GEM-Draw* on the PC and features the usual range of drawing tools, plus support for GDOS or Speedo fonts and much more.

Once again, the program has its origins in Germany (have TSC got shares in foreign language dictionaries we wonder?) so it's not quite as easy to use as it might be. Mind you, the GEM interface itself is quite intuitive, so you shouldn't face too many problems. Screen redraws are a little illogical at times, but in general the program is acceptably fast.

ST REVIEW COMMENT: "*My Draw* is on a par with most other GDOS vector art packages and almost borders on DTP when combined with Speedo! It's so straightforward to use, the German language prompts shouldn't pose any problems at all."
★★★★



My-Draw happily imports Easy Draw pictures, although fonts can become a little mixed up in the process.

LINE-UP

FLOPPYSHOP • DISK NO: ART.3649C • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: If you've ever tried using VIDI-ST to grab colour pictures from a VCR, you will know what a mess they can turn out. The problem is mis-aligned RGB components and *Line-Up*, as the name suggests, is designed to reduce the problem.

Those expecting a complex interface with dozens of unpronounceable options will be pleasantly surprised; using *Line-Up* really is a doddle. The first job is to load up your Red, Green and Blue components, after which you will be transported to the alignment screen. Here you get a greyscale version of your picture with two movable bars, and it's just a case of using the cursor keys to match the bars with the picture. It's about two minutes' work and the grabs are improved tenfold.

ST REVIEW COMMENT: "If you use VIDI-ST, this program is an essential purchase. It couldn't be easier to use and the results are very impressive. Don't expect miracles, but give it a go and you might be pleasantly surprised."
★★★★

Just slide the bars into sync with the picture, slip the results through PhotoChrome and you'll have the best colour grabs on the block.

ATARI ST REVIEW BUDGET BUY

PHOTOCHROME 3

NEW AGE PDL • DISK NO: ART.139 • £1.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: When the ST was released back in 1985, low resolution with its huge range of 16 colours was considered jaw-dropping stuff. But these days 256 colours, or even true-colour is deemed the minimum for slideshows, so is it time to scrap your ST and trade-in for a Falcon?

Well, take a look at *PhotoChrome 3* and you might be able to hold off the decision for a while. This nifty little utility reads pictures in IFF, 24-bit Targa, GIF or RAW format and cons your ST into displaying them in all their glory. Several modes are possible, ranging from PCS-ST which displays only (!) 4,096 colours, to turbo-nutter PhotoChrome mode which can display an incredible 32,768 colours! Half a dozen demo pictures are included on disk to get you started.

ST REVIEW COMMENT:
"*PhotoChrome* is the best way to view pictures on your ST – there's just no way to describe the difference between sixteen dithered colours and SuperHAM! The only limitation is the 320 pixel by 200 pixel screen resolution, which can make some pictures appear a little grainy."
★★★★★

Run some HAM IFF pictures through PhotoChrome and you'll be gobsmacked.

POLYFILM

ATARI ST REVIEW BUDGET BUY

LAPD • DISK NO: A.75 • £1.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: Animation is a fascinating art, but the trouble with traditional packages is the amount of memory you need to use them. *Polyfilm* does away with this problem by using vector objects instead of the more usual flip-screen, bitmapped approach.

3D objects are created from within the supplied editor and then you need to write a small script file to animate them. The script language has been written to resemble C as closely as possible and some stunning effects can be created with a relatively short piece of code. Objects can also be light shaded to give an almost raytraced appearance to your animations and all commands are fully documented in the extensive on-disk manual.

Two file formats are used by the program: MCL, which is just the plain animation text file, and CFF which is a much faster, compiled format. You'll need the registered version to save in the latter format.

ST REVIEW COMMENT: "*PolyFilm* is quite difficult to get to grips with at first, but the results are certainly worth the effort. If you are planning on using it for video titling or something similar, an accelerated ST is recommended."

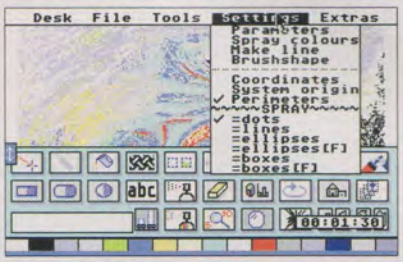
✪✪✪✪✪

And this is the result of several hours' work. At this level the program is happy to run on a standard ST, but add many more objects and things begin to slow down.

PAINTPOT

GOODMAN INTERNATIONAL • DISK NO: GD.1917 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: *Paintpot* started life as a commercial package, but as with so many other budget products has now made its way into the shareware market. It's a no-frills paint program with ease-of-use as its main attraction.

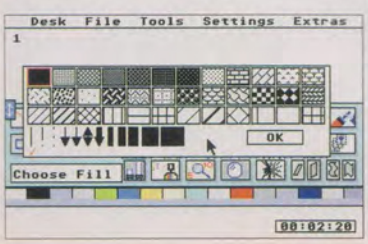


Most of the configuration options are to be found tucked tidily away in the GEM menu bar at the top of the screen.

A large control panel sits in the centre of the screen and from here you can choose all of your drawing tools, fill patterns, text styles and so on. A GEM menu bar accompanies the panel and gives you access to all of the more obscure options.

In terms of power, *Paintpot* is quite basic: there are no animation facilities as such and two work-screens are your lot. The program is compatible with the Falcon, but watch out – the file-selector can sometimes paste itself over your drawing!

ST REVIEW COMMENT: "It's not the best art package in the public domain by any means, but it runs in all three ST resolutions and has a lot going for it in the ease-of-use department. If you're serious about your art, go for *Crack Art*; if you want to dabble, *Paintpot* is ideal."



✪✪✪

Paintpot isn't outstanding in any particular area, but it's a good all-rounder and runs in all three ST resolutions without problems.

TOP TEN GRAPHICS PACKAGES

1 POLYFILM • LAPD • DISK NO: A.75 • £1.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE
A superb vector animation package, complete with built-in programming language for the ultimate level of flexibility. Includes its very own editor and three sample animations to get you off the ground. Can get a little slow on a standard ST if you use a lot of objects.

2 PHOTOCHROME 3 • NEW AGE PDL • DISK NO: ART.139 • £1.50 • MEMORY: 0.5MB • SHAREWARE
If you have any doubts about your ST's graphical competence, *PhotoChrome* is the utility to have. On the STE it can display pictures in over 32,000 colours and supports most popular graphics formats. A separate display program is included, allowing you to create your own spectacular slide-shows.

3 TEC-DRAW • FLOPPYSHOP • DISK NO: 3242 • £2.50 • MEMORY: 0.5MB • SHAREWARE
A lovely little paint package, which includes some very original tools, such as 3D shapes. It loads Degas, NeoChrome and its own TEC format and the only fly in the ointment is the lack of documentation. The interface is a joy to look at and works equally well.

4 MY-DRAW • THE SHAREWARE COMPANY • DISK NO: BY NAME • £1.75 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE
A fully-fledged vector art program which compares well with its commercial GDOS counterparts. It loads files in standard Easy Draw format and also has limited support for SpeedoGDOS. Only one file can be open at a time and the prompts are currently in German, but apart from that, it's a very good package.

5 FRACTAL LANDSCAPE • FLOPPYSHOP • DISK NO: ART.3647C • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE
Create, render and animate your very own mathematical terrains with *Fractal Landscape*. The GEM interface simplifies what is in fact a very complex process and the results are nice to look at. Ideal for designing RPG worlds.

6 META-BIT • CALEDONIA PDL • DISK NO: AG.126 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE
A useful utility to convert vector art into bitmapped pictures. Once converted, the images can be saved in IMG or PCX format for import into most applications. The resolution of the conversions is fully adjustable and once again, German language prompts are the order of the day.

7 LINE-UP • FLOPPYSHOP • DISK NO: ART.3649C • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE
Having trouble grabbing from your VCR without the picture looking like it was taken by a jelly on a washing machine? *Line-Up* may be able to help, by vertically aligning the Red, Green and Blue components of your picture. Usage is very simple and the results appear to be superb.

8 KARMA • THE SHAREWARE COMPANY • DISK NO: BY NAME • £1.75 • MEMORY: 0.5MB • FALCON-COMPATIBLE
A very well polished graphics conversion utility from Germany. It supports a superb range of formats – including TIFF, X-IMG, IFF and PCX – but unfortunately limits you to 9K files in the shareware release. May be worth a look if you can't get along with *GEMView 2*.

9 TARGA SLIDES • FLOPPYSHOP • DISK NO: PIC.3677C • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN
A PhotoChrome version of the Falcon slideshow reviewed in issue sixteen. All of the classics are here, including the "baby with soft toys" and "glass man" used by Atari in their advertising campaign. Save for the lack of overscan, the quality is almost identical to the Falcon version!

10 THE DIY POND • LAPD • DISK NO: M.143 • £1.50 • MEMORY: 0.5MB • SHAREWARE
Ever fancied designing your own pond or water garden? Well, now's your chance thanks to this disk-based DIY guide. It claims to contain all the information you need on setting up and populating your very own garden based lake.

PD ZONE

AROUND THE WORLD

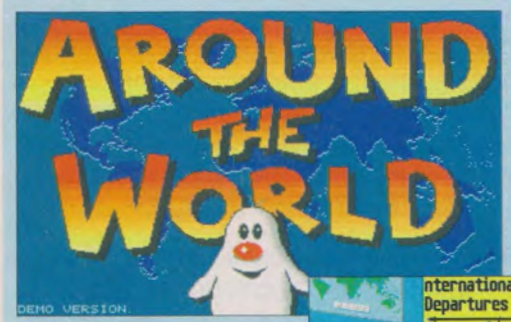
ATARI ST REVIEW BUDGET BUY

CALEDONIA PDL • DISK NO: GM.183 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE (WITH MAGIC BOOT)

IN BRIEF: Join Bosley Bird in his trip around the world, with this terrific little game from Blanchard Graphics. You start your quest at an airport in the UK and the idea is to make your way from country to country trying to find a gift left by a friend in a safety deposit box. Each country presents its own set of questions and you need to get them right before you can take off to the next.

The game was created with Talespin, but don't let that put you off, because it's so well presented you really will think the interface has been custom designed. The graphics are a work of art and digitised sound is used extensively. The shareware game only contains the first level, but cough up a fiver and you can complete your trip.

ST REVIEW COMMENT: "*Around The World* has that magical combination of playability, educational value and superb visuals, which puts it on a par with the the Fun Schools of this world. Mind you, be warned – the shareware game is quite limited."



Cop a load of those graphics! The whole game is decorated to similar standards and accompanied by a crisp line-up of sampled sound.

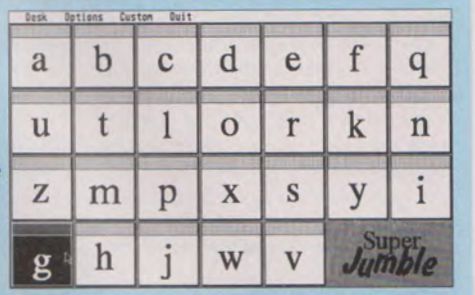
Bosley explains the plot at the beginning of the game and after that it's up to you to answer questions correctly and help him in his quest.

SUPER JUMBLE

ATARI ST REVIEW BUDGET BUY

GOODMAN INTERNATIONAL • DISK NO: GD.1955 • £2.75 • MEMORY: 1MB • SHAREWARE • FALCON-COMPATIBLE (WITH MAGIC BOOT)

IN BRIEF: *Super Jumble*, in common with *Search and Find*, is a David Becker production. The aim of this game is to rearrange the alphabet into the correct sequence after the program has done its best to jumble the letters up. Usage is easy – just click on two squares and they switch places. Once you've completed the puzzle you are given a little animation with a rating based on the number of moves taken.



The default module contains the basic lower-case alphabet, but several more modules are included on disk to add to the appeal.

Once the alphabet has been mastered, the program allows you to load a selection of modules containing other puzzles. These include the Hebrew alphabet, sign language, clocks and so on. What's more these modules are in standard Degas PI3 format, so it should be fairly easy to add your own custom designed puzzles. A few crisp sound samples add the finishing touches to a very well designed game.

ST REVIEW COMMENT: "*Super Jumble* shows a lot more imagination than *Search and Find* and is suitable for all ages thanks to its load-'n'-go modules. In addition, the rewards for success are far more entertaining."

Super Jumble can even teach you sign language with the right module (although I'd watch out where you practice some of those gestures if I were you!).

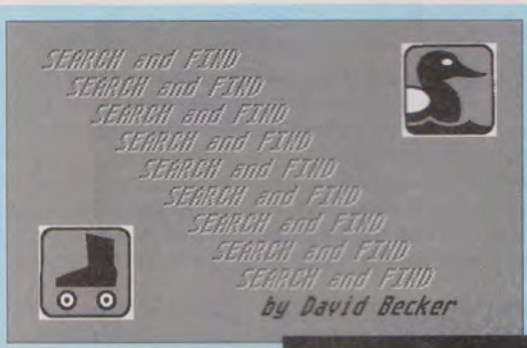
SEARCH AND FIND

GOODMAN INTERNATIONAL • DISK NO: GD.1955 • £2.75 • MEMORY: 1MB • HI-RES ONLY • FALCON-COMPATIBLE (WITH MAGIC BOOT)

IN BRIEF: *Search and Find* is an audio version of mix and match. The screen is filled with a selection of picture cards and the idea is to click the mouse on the card the computer asks for. Get it right and you'll be given some digitised congratulations; get it wrong and you'll get another go – sounds like a sure fire recipe for excitement to me!

The graphics are quite pretty considering the mono restriction, and the sound samples are very clear, although you'll have to put up with the American accent. There shouldn't be any problems with recognition though. The main problem with the game is its lack of bonuses – a digitised "well-done" just isn't enough to keep a child going for very long in my view.

ST REVIEW COMMENT: "*Search and Find* is extremely basic, but it might help young children to gain some experience with the mouse. Mind you, at that age, your child is just as likely to try and eat the mouse as learn to use it!"



It's basic in the extreme, but Search and Find does have some appeal thanks to its pleasant sound effects.

All of the icons are clearly drawn, but there's just not enough on offer in terms of incentives to continue playing.

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UTILITY Pack

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BUSINESS

BUS-02 ST Writer Elite (Good Word Pro) 'S'
This is still one of the very best WP's around written and released into the Public Domain by ATARI themselves. This vers.4 is a must

BUS-03 EZ Text+ (Working DTP demo) 'S'
Working demo of excellent DTP program (Full Version Available) see ad for ZZ Soft

BUS-06 Opus (Professional Spreadsheet) 'D'
Best S'sheet available without a mortgage!

BUS-11 Deskjet Drivers (loadsadrivers) 'S'
If you've got a Deskjet Printer and are in need of drivers, specific or general then this is the disk you're looking for

BUS-12 Fastbase (Excellent First Database) 'D'

BUS-16 Calamus Fonts (28 extra fonts) 'D'

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BUS-19 P. Press Support (Extra graphics) 'D'
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BUS-21 Add. book/Card ST/D'base +5 others 'D'

BUS-26 Organiser/S'sheet/Word pro +7 others 'D'

BUS-27 ALICE... Excellent Text Editor 'S'

BUS-28 Publishing Partner Fonts (8 + editor) 'D'

BUS-29 EZ-Label/Cardfile/Mailmerge + 8 more 'D'
Three excellent main programs: Labeller, Card File & a Mail Merge prog + Calendar Mouse Accelerator, Disk Labeller and 5 other indispensable utilities

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STE-05 Mental Hangover, Amiga Conv, 1 meg 'D'
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STE-06 STE Presentations (5 demo's) 'D'

STE-07 Fantasia (not Tos 1.62/1 meg) +3 more 'D'

STE-08 Boing STE + Mini-Movie 'D'

STE-09 Slime Balls + An Cool Demo's 'D'

STE-10 The Tobias Richter Art Show 'D'
This famous AMIGA artist comes to your ST with a fabulous STEREO soundtrack (mono on STFM's) (2 DISK SET £2.75)

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OR
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GENERAL

GEN-02 ST-Tour (Specially for beginners) 'S'

GEN-04 Your 2nd ST Manual (A MUST) 'S'
All the little things (and some not so little) that our friends at ATARI should have told you but didn't. This is the manual that should have been supplied with your computer (at least in our humble opinion).

GEN-05 Adventure Writer/Skymap + 4 more 'D'

GEN-06 Archive Suite (back-up in less space) 'S'

GEN-09 ZX-81 Emulator + lots of programs 'D'
Back to those halcyon days of the ZX-81 Emulate (if you must) this forgotten unit

GEN-12 Formfinder 2.1 (find a winner?) 'S'
If you like a flutter on the horses then maybe this program can help to make it profitable! This is a Working Demo. Full version available

GEN-16 60 assorted samples (SPL Format) 'D'

GEN-20 Firstbase DB+7 more good programs 'D'

GEN-22 E-Plan (Electronic Circuit Designer) 'S'

GEN-24 Joke Database (Laugh with us!) 'D'

GEN-25 Quartet Samples II (730k of samples) 'D'

GEN-30 Film File Enquiry 'D'
With this unusual Database you can keep track of all your favourite Films, Actors, Directors etc. Lots fo classic films inc

GEN-31 Data File (TV Titler/Asst. Chef/Paarty) 'D'
Great value on this one: A Video Titler and extensive Recipe/Instruction Database + a bevy of alchafrolic cocktails!!

GEN-34 Scumbob 'C' (language) 'D'

GEN-35 Spectrum Emulator (with programs) 'S'
Introduce your ST to that long, long ago entity, the ZX SPECTRUM complete with working progs

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DEM-102 Doctor Who Demo 'D'

DEM-88 Light Speed Demo 'D'

DEM-90 Delirious Demo (2 DISK SET £2.75)

DEM-95 Wings of Death Music Demo 'D'

DEM-97 KLF Demo (House hit + dancers) 'D'

DEM-98 Star Wars Rap 'D'

DEM-101 Spinning Dolls + Shiny Bubbles 'D'
This one takes a while to load but the end result is more than worth the wait

DEM-84 Things Not to Do (EXCELLENT) 'D'
Very Humorous, animated account of things not to do and the result if you do!

DEM-67 Fish & Chips (GET THIS ONE) 'D'
Loads of excellent demos with some very funny interludes between them

DEM-46 European Demo's (2 DISK SET £2.75)

DEM-44 Skid Row (2 DISK SET £2.75)

DEM-43 Punish Your Machine(2 DISK SET £2.75)
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DEM-75 Dark Side of the Spoon 'D'

DEM-82 Wasted Years 'D'

DEM-70 Lifes a Bitch 'D'

DEM-54 Gateway to Hexland 'D'

DEM-48 Summoning the Spawn 'D'

DEM-100 The Run (animation from T. Richter) 'D'
This one is so much better than the original AMIGA version

DEM-55 Art Machine 'D'
Sit back and enjoy this stunning artwork

ART & GRAPHICS

GRA-26 Crackart 'D'
No.1 in STR's PD Top Ten! This prog will process your pics in ways you will not believe: Curve, Twist, Wave, Tube, Palette edit, Dither, Animation and far more. Uses Degas, Neo & Tny format

GRA-24 Paintlux (full feature paint/art prog) 'D'

GRA-20 Kozmic (needs 1 Meg) 'D'
Create fantastic, colourful psychedelic patterns on your ST & save to disk

GRA-17 PAD (Mono Art program) 'D'
Absolutely the best Mono art package we've seen to date, many commercial features and the ability to hold many screens in memory (1 Meg min)

GRA-27 Mono Pictures (43 high-res pics) 'D'

GRA-10 Colourburst II (+ 5 other programs) 'S'
A very good little Art/Paint prog also on the disk: MAC to Degas converter Fine Line: art prog using Bezier/Spline

GRA-11 A.I.M. (Atari Image Processor 'D'
Exactly what it says, if you can create an image on your Atari then you can process, add or alter it with A.I.M.

GRA-14 Ani-ST 'S'
Excellent Art & Animation package that started life as a commercial art program costing £89.95!!

GRA-31 Kid Publisher & Master Doodle 'D'
A DTP package + Art/Paint program both good starting points for the kids

GRA-32 Colourspace 'S'
This is another program that started life as a commercial package now released as Shareware by Jeff Minter. Create your own colour & light show. Turn up the music, sit back and be amazed

GRA-33 Sprite Works 'D'
Art Prog geared towards creation of Sprites for use in your own programs

GRA-28 Hi-res Art 'D'
4 programs & pictures for Mono users

GRA-1 Picswitch 7.0 (needs 1 Meg!) 'D'
Converts your pics between various formats and all screen resolutions

GRA-2 Play - IT 'D'
Combine picture and sound into a story board with special scripting commands

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Converts Calamus fonts into Bitmap fonts for use with any GDOS package

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✥ ☆

TOS 2.06 Upgrade

This software switchable board comes complete with TOS 2.06 rams to enable you to switch between your original TOS and the much improved 2.6 version. Comes complete with Icon Editor and utilities.

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with 4 modules

TRAX-47 Mega Tracker (4 n/trackers) 'D'
Suit ST or STE + 6 modules

TRAX-48 STOS Tracker (for STOS users) 'D'

TRAX-37 MUG AMIG 3 'D'
5 outstanding Amiga converted mods

TRAX-45 Rave On (10 mods in Rave style) 'D'

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MIDI

MIDI-20 SYS-EX Kit (2 DISK SET £2.75)
System Exclusive Kit... if your keyboard supports (YAMAHA) Sys-Ex then this set is for you, two disks chock full of MIDI & SYSTEM EXCLUSIVE progs, utilities, accessories & tips

MIDI-19 Alchemie Jnr (good sequencer) 'S'

MIDI-17 Recording Studio Utilities 'S'
Keep track of your tracks with these exceptionally good Studio Utilities

MIDI-12 Henry Cosh Sequencer 'S'

MIDI-14 Name That Tune (111 midi files) 'S'

MIDI-01 PSS special (just for PSS k'boards) 'D'
If you own of YAMAHA's PSS series keyboards YOU NEED THIS DISK.....

MIDI-03 Create an album from 43 SNG files 'S'

MIDI-04 42 SNG files with CZ101 player 'S'

MIDI-05 to 08 Each disk has 40 SNG files 'S'

MIDI-10 CZ & DX editors & librarians 'S'

MIDI-11 Picture show with 10 midi songs 'S'

MIDI-14 Name That Tune + 111 midi files 'S'

MIDI-16 Sound Shifter... Yamaha PSS editor 'S'

MIDI-18 DX & FB01 editor & librarian 'S'

MIDI-21 Feeling Partner & EZ Track demo's 'D'
Working Demos of these two great commercial MIDI packages

MIDI-22 Super Conductor sequencer + utils 'D'

MIDI-09 32 Track Sequencer + utils 'S'

COMMS

COM-02 Galactic Empire... Get on-line game... 'S'
You'll need two ST's & null modem cable

COM-03 Vanterm 4.0 (best PD comms prog) 'S'
Still the best PD TERM program!!

COM-04 Uniterm (Excellent terminal prog) 'D'

COM-07 Freeze Dried Terminal 'D'

COM-08 View D/L files when off-line + 4 'D'

COM-05 D-Term with Z-modem module 'S'

COM-06 Mo-Term Elite (for buffs) 'S'

WARPZONE PDL

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PD ZONE

FIRST GUIDE

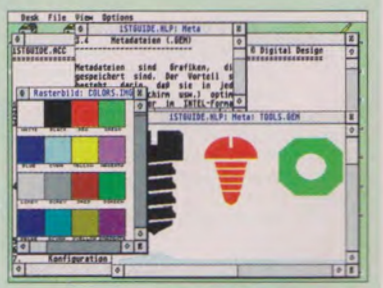
THE SHAREWARE COMPANY • DISK NO: BY NAME • £3.50 • MEMORY: 1MB • SHAREWARE • HI-RES ONLY • FALCON-COMPATIBLE

IN BRIEF: There's nothing like a hypertext help system for getting hold of information quickly. It cuts out needless scrolling completely, and any details you want are instantly available by simply clicking on a "key-word".

First Guide is a desk accessory hypertext system that not only links text, but also graphics and sound to key-words. In this respect, it's probably more closely related to hypermedia than hypertext and full use is made of the Falcon's colour graphic modes. The demo stack details usage of the package, although get those dictionaries at the ready because the whole thing is in German. On the bright side, once you've worked out how to design a stack the end user won't be faced with any foreign language prompts at all. A version for GEM on the PC is also supplied.

ST REVIEW COMMENT: "German instructions put a crimp on an almost perfect hypertext package. It would be nice to think that all future ST software could feature a *First Guide* help system – perhaps in English this time!"
★★★★

Hypertext makes a welcome appearance on the ST thanks to First Guide. It runs as a desk accessory and even supports Falcon screen modes!



Colour graphics and sampled sound effects can also be tied into stacks giving an almost hypermedia feel to the package.

VIDEO-BASE

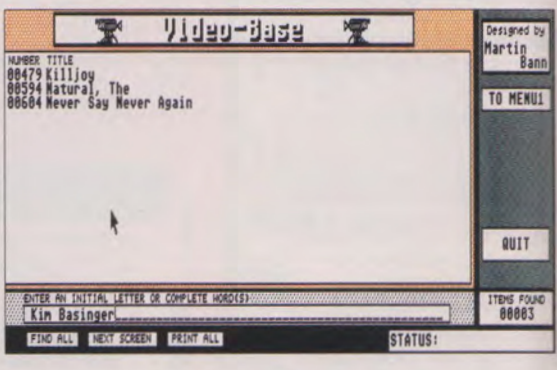
GOODMAN INTERNATIONAL • DISK NO: GD.1907 • £2.75 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: How many times have you been trying to enter a competition, but can't for the life of you get the question about who directed "Wall Street"? Well, the answer to this quandary is a video database program, which will store details of a huge range of films together with the director, stars, and its rating.

Video-base accomplishes this task nicely, allowing you to search for any details you need, by director, rating, producer, or any other field. The interface is fully GEM'd and everything is controllable through a selection of buttons. Unfortunately you can't add any new films, so you're limited to the 1,200 or so built in. Registration buys you a version which contains 3,500 entries, but it's still no replacement for the flexibility of adding your own entries – a feature offered by just about every other video database on the market. (*So who was the director of "Wall Street"... Ed*)

Hmm, I think I'll give that one a miss. Video-base's catalogue does include plenty of films made within the last century.

ST REVIEW COMMENT: "In terms of usability *Video-base* is better than your average film database, but what's the point if you can't add your own films? Couch-potatoes look no further!"
★★★



The search facilities are great, but a basically sound package is spoilt by a complete lack of editing facilities.

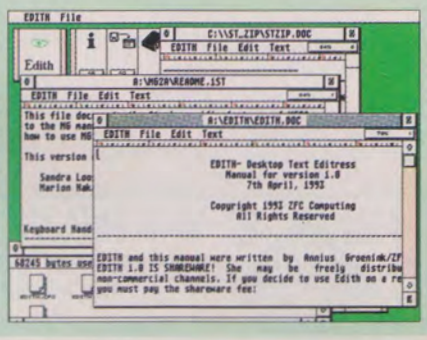
EDITH

FLOPPYSHOP • DISK NO: WRD.3727 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

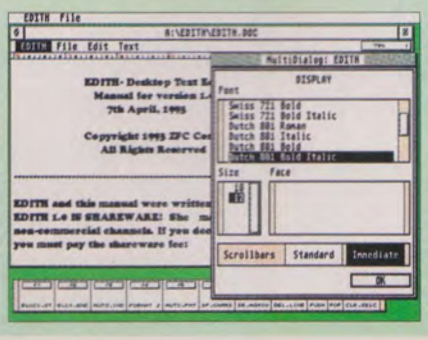
IN BRIEF: From assembly language programmer to games player, everybody needs a text editor. They make reading instruction files twenty times easier and even the most basic example is a quantum leap ahead of the inflexible desktop alternative.

The snazzily titled *Edith* is the latest editor to hit the scene and really is a step into the nineties as far as ST text crunchers are concerned. This can be seen from the superb GEM driven interface and the impressive speed at which everything is redrawn. It's even *MultiTOS* compatible and can also make use of Speedo fonts if you have any installed. Unfortunately, GDOS output isn't catered for, so the classy fonts are limited to the screen. Block handling is of the point-and-drag variety and is every bit as intuitive as the rest of the package. A winner.

ST REVIEW COMMENT: "*Edith* points the way forward for ST shareware, with its Speedo support and advanced interface. The UN*X-style "instant-response" scroll bars are a breath of fresh air and make reading on-disk manuals so much easier. Can't wait for *Edith Professional*!"
★★★★★



Edith's innovative interface features window-based menus and "instant response" scroll bars which update the screen as you move the mouse!



All Speedo fonts are available from the Display dialogue, although only in the pre-defined point sizes at the moment.

CYREL PALETTE MASTER

FLOPPYSHOP • DISK NO: UTL.3614 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-ENHANCED

IN BRIEF: The *CyRel Palette Master* is designed to put you in complete control of your ST's colour configuration. It runs in any conceivable resolution, from ST low right through to Falcon true-colour and the 24-bit modes offered by the CyRel Sunrise card. This also bodes well if you use Crazy Dots or one of the many other add-on colour cards available.

So what does it do? Well, naturally it lets you alter each individual palette entry, but that's only the beginning. Colour fades can be produced by simply selecting a start and end colour and these are fully adjustable through the Gamma Correction dialogue. Settings can be saved on the clipboard to avoid accidental alteration and any changes you're not happy with can be restored by pressing the <Undo> key. The shareware version is fully functional apart from palette saving, for which you need to register.

ST REVIEW COMMENT: "*Palette Master* is the ultimate colour configuration utility. It's doubtless going to be of more use to Falcon than ST owners, but it's still a handy sidekick to any GEM paint package."

Take complete control of your colour set-up with the CyRel Palette Master. It's happy to run in any screen resolution from mono upwards and even supports Falcon true colour!

Palette Master does it all and happily co-operates with most GEM paint packages.

STOS GRAPHIC ADVENTURE CREATOR

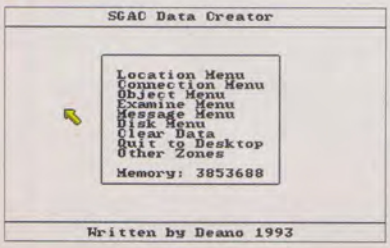
LAPD • DISK NO: L.46 • £3.00 • MEMORY: 0.5MB • LICENCEWARE

IN BRIEF: Ever fancied creating your own fantasy world in the form of a graphic adventure? Well, now's your chance to do just that with this package from LAPD.

The heart of the system is the editor, which lets you define all of your locations, objects, connections and so on. It's quite intuitive to use and the documentation is excellent in describing exactly what you need to do. The resulting adventure is saved as STOS source code for you to edit or compile.

Unlike most other PD adventure creators, *SGAC* produces games that are completely mouse controlled. You just click the mouse on-screen and choose from a selection of pre-defined options – look, examine, pick up and so on. An example adventure called *Granny's Garden* is included to show you what the system is capable of.

ST REVIEW COMMENT: "*SGAC* is a brave attempt at more interactive adventures, but the resulting interface is far more frustrating to use than any good, old-fashioned text parser. A shame, because the rest of the package shows promise."



The STOS Graphic Adventure Creator's editor is dead simple to use, but it can be a little bit on the slow side at times.

TOP TEN UTILITIES

1 EDITH • FLOPPYSHOP • DISK NO: WRD.3727 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

A text editor which borders on word processor at times. Highlights are support for *MultiTOS* and SpeedoGDOS, flexible tab settings and an interface that is second to none. Watch out for *Edith Professional*, due to be released later this year!

2 FIRST GUIDE • THE SHAREWARE COMPANY • DISK NO: BY NAME • £3.50 • MEMORY: 1MB • SHAREWARE • HI-RES ONLY • FALCON-COMPATIBLE

A much needed professional hypertext system for the ST. Combines graphics, text and sound seamlessly within a fully windowed environment and runs alongside any application as a desk accessory. Ample documentation is supplied, but unfortunately none of it is in English.

3 SILK MOUSE • THE ST CLUB • DISK NO: CMP.16 • £1.45 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

Yes it's another mouse accelerator, but this one's actually useful! Basically, its sole aim in life is to make sure your pointer moves at exactly the same speed in every screen resolution – and that extends to the new Falcon modes too. Strange how such a simple utility can make life so much easier.

4 GRAV-2 SOURCE CODE • LAPD • DISK NO: L.23 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

GRAV-2, alongside *Grandad*, was probably the shareware game of 1992. This disk contains the complete assembler source code together with most of the graphics. Also included are some text files detailing the techniques used in the writing of the game.

5 CYREL PALETTE MASTER • FLOPPYSHOP • DISK NO: UTL.3614 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-ENHANCED

A useful spin-off from the CyRel Sunrise board. This shareware utility will allow you to adjust your colour palette in any resolution on both the Falcon and ST. It's also capable of creating colour blends, rainbows and greyscales.

6 BANK ACCOUNT MANAGER 3.7 • LAPD • DISK NO: M.139 • £1.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

Manage your finances the easy way with *Bank Account Manager*. It's not the most powerful accounts program on earth by any means, but it's very intuitive and doesn't bog you down with hundreds of needless options. Half a meg is adequate to run in, but extra memory gives you a little more room to breathe.

7 MIDI DRUMMER DEMO • THE ST CLUB • DISK NO: CMP.17 • £1.45 • MEMORY: 0.5MB • BANNERWARE • FALCON-COMPATIBLE

A very powerful MIDI package designed specifically to create drum tracks. Scores can be edited as they play and the program is also capable of generating patterns for you (ping! – instant dance hit). Loading and saving is disabled in this version, but you can buy the real thing for around $40.

8 ICON JUGGLER • THE ST CLUB • DISK NO: CMP.09 • £1.45 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

Add a few extra icons to your TOS 2.06 desktop with this handy utility from the States. The interface is, naturally, fully icon driven and the editing facilities aren't bad either. Unfortunately, it doesn't do the business with Falcon colour icon files as yet.

9 CRACK LDW • THE ST CLUB • DISK NO: CMP.10 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

Using *LDW Power* but forgotten the password to an essential spreadsheet? In that case you need *Crack LDW*, which will break the protection and allow you access to all your hard work once again. Simple when you know how, innit?

10 VIDEO-BASE • GOODMAN INTERNATIONAL • DISK NO: GD.1907 • £2.75 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

A ready to run database containing a library of over 1200 films. It's very easy to use and the search facilities are blindingly fast, but unfortunately it's not possible to add your own titles to the list. Still worth a look if you're in search of a good Saturday-night movie.

New Age PDL

£1.50 EACH
Unless otherwise stated

All disks require a COLOUR system unless: 'H' – High Resolution, 'A' – Any resolution

FALCON SOFTWARE - All on HD Disks - £1.75 Each

FALC 1 - POV Raytracer, fully zipped, expands to 3 Meg.
FALC 2 - 20+ utils inc. Bootconf, Desk Copy, Gembench, DC Sea 2.0, ST Emulator
FALC 3 - Birdy 2 Animation (4 meg+), Cyrel Palette Master demo.
FALC 4 - JPEG True Colour Pictures, Jpeg Picture viewer.
FALC 5 - C56k Compiler including DSP routines. Chipmunk Basic 1.0
FALC 6 - Cebit 93, 3D TT, Paragon, Mad, Dragon, Qad3d - all demos.
FALC 7 - Digitape demo, Fortune 1.0, Desktrak, Win-Rec 1.3, Audio Fun Machine (music).
FALC 8 - Fractal DSP, Flight, Jpeg view, Fpaint, Chagall demo, Bit Camera (art).
FALC 9 - Omega 30, Gourad, Speeder, Plasma 50, Intel, Starfield, Terminal (demos).
FALC 10 - DSPS6001 Assembler, DSP Bits, ASM-CPX, DSP Tools.
FALC 11 - Hands demo - animation and music by Brainstorm. Morphing demo - 2 Meg+
FALC 12 - POV Raytraced demo - 24 bit Truecolour pics. More on Falc 13/14 (all 3 for £5).
FALC 15 - About 45 Mint and MultiTos Utilities. Colour Icons.
FALC 16 - Phaze 4 - product demos from Lexicor software. Zipped - expands to 2.5 meg.
FALC 17 - Hardchor (D2D), Audio 12, Playman, Pry Play, Cities (music)
FALC 18 - Japan Demo disk 1, XGA pictures. Disk 2 on FALC 19 (zipped).
FALC 20 - Over 1 Megabyte of DSP routines.
FALC 21 - Demo of the game Humans, disk 2 on FALC 22 (zipped, both required).
FALC 23 - TGA pictures - more high quality pictures and even more on FALC 24.
FALC 25 - Jpeg Pictures - full disk but no room for viewer program. More on 26
FALC 27 - Griffrab Demo - 2 demos with 50khz sound, True colour Gourad shading etc.
FALC 28 - Fupdate 1, Magi, Mkdisk 4.3, New ctrl, Shdriver, HDX, Gemar 1.23, Mini FS 0.55
FALC 29 - Startrek Cities - cities to play with Fortune on Falc 7.

All Falcon disks are High Density and cost £1.75 each, however for every four purchased you may choose ONE FREE! This offer ONLY applies to Falcon disks though you may choose an ST disk as your free one.

ART AND GRAPHICS

ART 1 - A disk full of 23 miscellaneous picture utilities including Viewgif 1.2.
ART 35-37 - In Bed With Madonna - over 100 pics - STE enhanced. £4.00
ART 49 - HPM Draw and Butterfly Artist - two High Res Drawing Packages. 'H'
ART 50 - Flexidump demo, Gem Show, Mgif, Plot 1.6, Top Chart, Gif Show - 'H'
ART 51 - Crackart 1.25 - The best ST art package available. 1 Meg+
ART 65 - Hendy Mandlebrot, Palette Master, Ram World, Fast Gif, Gif Colour
ART 66 - Origami Tutor, Reveur 2 - weird French slideshow.
ART 67 - Jil Cad 2, Andromeda, Columbia 2.0, Art Print 1.2 - 'H'
ART 68/69 - On-line Art Tutor - step by step tutorials on 2 disks. £3.00
ART 109 - Total Recall show - full colour Spectrum 512 pics. Exclusive to us!
ART 115 - Pixel Twins Horror Show - lots of gruesome pictures!
ART 126/127 - Terminator 2 Spectrum 512 pics. Exclusive to New Age! £3.00.
ART 128 - Gemview 2.24 - The acclaimed viewer program for many formats. 'A'
ART 137 - Basic Instinct - Near Photographic Quality pictures! State STE or STFM
ART 139 - Photochome version 3.0 - converts GIF, TGA, IFF into one of six modes.
ART 140-143 - The Chippendale Auditions - four disks of pictures of gorgeous blokes in Near Photographic Quality! STE Only - EXCLUSIVE to New Age! £5.00
ART 144-149 - Seduce! Volume 2 - the sequel to the highly successful Seduce! Six disks of lovely ladies, two versions (please state which) - one for STFM and the other for STE's takes advantage of a 32,768 colour palette! EXCLUSIVE to New Age! £7.50

DEMONSTRATIONS

DEMO 229 - All That She Wants by Ace of Base. 1 Meg+
DEMO 225 - No Limit by 2 Unlimited. 1 Meg+
DEMO 223 - Get Ready For This by 2 Unlimited. 1 Meg+
DEMO 222 - Tribal Dance - the new single from 2 Unlimited. 1Meg+
DEMO 220 - Phorever People by The Shamen. 1Meg+
DEMO 219 - Ebeneezer Goode by The Shamen. 1 Meg+
DEMO 218 - Love, Sex, Intelligence by The Shamen. 1 Meg+
DEMO 216/217 - Bass Drum by The Shamen. 1 Meg+ £3.00
DEMO 215 - NPG Mega demo
DEMO 214 - Awakening of The Gods demo
DEMO 213 - Manic Demo
DEMO 212 - Astro STE demo
DEMO 211 - X-Plotion - New STE Only demo
DEMO 208/209 - Choice of Gods demo. 2 disks £3.00
DEMO 204 - Revolution demo by Stax
DEMO 201 - Satan Megademo
DEMO 200 - Grotesque Demo - Great rave music demo + graphic effects.
DEMO 199 - Technotronic Megamix
DEMO 198 - Coma II demo by Rasterat
DEMO 197 - Bonbonne Demo
DEMO 196 - My Dying Bride - 'Erotic Literature' Thrash metal type music.
DEMO 195 - Autopsy - 'Acts of the Unspeakable' STE Only. More thrash metal.
DEMO 194 - Burning Illusion demo by the DNT Crew.
DEMO 193 - Megarave 4 by Stellar - Magic Friend by 2 Unlimited. 1 Meg +
DEMO 168 - Swiss Megademo - megademo with outstanding intro and Main Menu
DEMO 165 - Cozmic Jam - ten part STE demo, very nice
DEMO 155-156 - Snark Demo - 12 brilliant screens on 2 disks with 3D Main Menu. £3.00

POV DEMO COMPILATIONS

POV 124 - Flytech, Maths Blaster, JMP 2, JMP 6, JMP 8
POV 121 - Fusion Sound, KGB Intro, DNT, Pleasure Dome 1 & 2, Maggie 9 intro
POV 120 - Audio Artistic, Lost K, Advert, Syndicate Intro, Special FX intro, Aura Intro
POV 119 - My Socks Are My Weapons, Tea Party (1 Meg+), Extregm Party, +3 others
POV 118 - Dentro, Galton 6 Megademo, Factory is Dead, Coding for Fun, + 3 others
POV 116 - Isen Animation (1 Meg+), Digisynth music demo
POV 115 - Reanimators Music, ABC demo 7, Megatec, OVR megascreen, Similari

SOUND TRACKER MODULES (All come with player)

TRAC 104 - AWS 4, 808 State mods 1 & 2, The Look
TRAC 103 - AWS, AWS 1, AWS 2, Nose
TRAC 102 - AWS 3, Idea 2, Rave (1Meg+), Satan
TRAC 101 - Barnes, Get Into, Grand Mix, Megapart
TRAC 100 - Fast, Groove, Piano DX, Score, SL 2, Zool Rave
TRAC 99 - Charly, Last, Mafia Bass, Pandemonia, Toe Jam
TRAC 98 - ALiens, Notech 1, Notech 2, Ork, Satan
TRAC 97 - 2 Unlimited, In Yer Face, Outrun, Relax
TRAC 96 - 242 Forever, Diskbox, GC3 Remix, Pestiris, Piano, Tracdis, Welcome
TRAC 95 - FYC, Acid, Beams of Light, Come and Get Me, CRE, Dawn, Elysium
TRAC 94 - Comets, CRB 2, Gorezone, Powerlords, Red Devil
TRAC 93 - Battle, Jockrave, Neb 1993, Passion, Rhythm, Roborave, Stellar

GAMES

GAME 16 - Ship Combat, MAD, England Team Manager, Motorcycle simulator, Pulse Rider, Empire Builder, Key to Atlantis.
GAME 78 - Popeyed - a pop music quiz game with an adult theme.
GAME 83 - Grandad and the Quest for the Holey Vest - superb animated adventure. 1 Meg+
GAME 99 - Penguin - acclaimed Lemmings type puzzler. Tauris -strategy 1 Meg+
GAME 104 - Blat! - A very nice version of Tetris - STE ONLY!
GAME 107 - Tower Power - strategy game based around chess. Data disk - GAME 108.
GAME 117 - Fast Freddy - lovely platform game with superb graphics. Very addictive
GAME 126 - Hunt For Grey November - Destroy the submarines before they get you!
GAME 128 - Dungeon Lord - A rather good clone of the good old Dungeon Master. 1 Meg+
GAME 129 - Arthur of the Britons - You take control of Arthur and his armies. 1 Meg+
GAME 130 - Conquest - an amazing Populous type God game - really brilliant! 1 Meg+
GAME 131 - The Glass Buttock of Thorg - Based on 'Lords of Midnight' from the author of Grandad (Game 83). Given 'Essential Buy Award"' in Atari ST Review! 1 Meg+
GAME 132 - Psycho Pig 2. Great platform game spanning 4 scenarios and 2 disks. £3.00
GAME 134 - Kubes - nice new puzzler. Warzone demo.
C.I. 01 - Genocide - awarded 'ST Review Essential Buy' Strategy God type game with hints of Sim City and Populous. EXCLUSIVE to New Age! £3.95.
C.I. 03 - Guerroyer - Great strategy game based on 'Mega-lo-Mania'. Best Licenceware game of the year without a doubt! - ST Review. EXCLUSIVE! £2.95
OCL 1 - Dead or Alive - extremely witty adventure from the author of Genocide. £2.95
OCL 2 - Murder on the Orion Express - spoof murder mystery with great graphics. £2.95

GRANDAD II - IN SEARCH OF SANDWICHES!

YES! It's here! Grandad 2 - In Search of Sandwiches! The Sequel to the award winning Grandad and the Quest for the Holey Vest (Game 83) is even bigger and better than the original. Grandad has upgraded to a three wheeler motorbike in his latest venture. ST User said 'A totally brilliant PD wease' and we agree - the graphics are exquisite and put many commercial games to shame and of course it's hilarious too. You will need 1 megabyte of memory to ruin it and it comes on two packed disks for just £3.00.

POWERFIST LICENCEWARE - £2.95 per disk

POWER 1 - Snott 93 - previously commercial, very playable shoot em up type game.
POWER 2 - Ghalfa One - four levels of alien blasting chaos.
POWER 3 - Seven Galaxies - Extremely slick shoot em up, the best game yet.
POWER 4 - Hundhy 1066 - Go back in time with some artillery for this classic!

FREE CATALOGUE! WITH FREE SOFTWARE! FOR NEW CUSTOMERS UPON REQUEST

BUDGIE LICENCEWARE - £2.75 per disk

BU 70 - Pacman, yes another version of this classic but a very good one.
BU 71 - Dark Wars, Dungeon Master gets the cloning treatment in this one.
BU 76 - Clunk - Puzznic revisited! 50 levels of mayhem, very good.
BU 78 - Clacker - nice clone of the game Klax plus Glob, a nice flip-screen romp.
BU 83 - Cyberstorm - the best Defender clone available, really fast!
BU 89 - Horse Racing Simulation for 1 to 5 players. Buy/Sell and bet on horses.
BU 90 - Match-It - a superb Shanghi clone, wonderfully addictive.
BU 100 - Clod Hopper - lovely version of Manic Miner from the 8 bit computers
BU 104 - Jetpac - another faithful clone of a classic game from the old Speccy days.
BU 111 - International Cricket - very good Cricket simulation.
BU 113 - Football Tactician - Formerly a £20 release! Excellent!
BU 114 - Spitting Fish - childrens educational game.
BU 119 - Football Tactician - the Premier League 92/93 season.

UTILITIES AND APPLICATIONS

UTIL 3 - Almanac, Class 3.0, Tree Saver, Make money with your micro, Biomorph 'A'
UTIL 4 - DC Utilities, Mike Horwell Utilities, Norad - astromomy program, Pools 2.5 'A'
UTIL 13 - German to English Translator, DC Utilities, D Backup, MINT Operating System 'A'
UTIL 14 - Printer drivers in HEX format includes Bubblejet BJ10. + tools. 'A'
UTIL 15 - Misc utility disk including copiers, virus killers, diary, directory lister etc 'A'
UTIL 16 - Chameleon (allows 32 Acc's), Sticker 3.0 ('H'), Benchmark, Hard Up 'A'
UTIL 19 - Your Second Manual, Jokes, Znet Magazines, GDOS information 'A'
UTIL 21 - Sagrotan 4.14 + 4.17 - the very best virus killer available in the PD 'A'
UTIL 24 - The Hitchhickers Utility Disk version 2 - author of Revenge doc displayer 'A'
UTIL 31 - 70,000 word dictionary as an ASCII file, requires 1 Meg memory. 'A'
UTIL 32 - HP Chrome (prints pictures on Deskjet Colour), Elementary German 'A'
UTIL 33 - TLC Address Book, Mortgage, Bigbux, Gemini Desktop, Copy Fix. 'A'
UTIL 34 - Cheaters Digest 1.3s - cheats to over 100 games and much more. 'A'
UTIL 38 - Printer Utilities - tons of drivers, text printer, poster maker, print spooler 'A'
UTIL 40 - Various packers inc Atomik 3.5, Automation 5.0.1, Ice 2.4, Pompey 1.9
UTIL 41 - X-Words, Crossword Editor 2, Eplan ('H'), Schalt PLan ('H'), Cheats. 'A'
UTIL 42 - Intro Maker - combine graphics, sprites, scroll text and music together.
UTIL 45 - Kaos Desk 2.01, Teradesk 1.06 - both very good replacement desktops 'A'
BUSI 2 - Sheet 2.0, flexible spreadsheet, D Base One - very friendly database 'A'
BUSI 4 - Opus 2.2 - Very good spreadsheet. Requires 1 Meg of memory. 'A'
BUSI 6 - Double Sentry Accounts, everything except VAT, Address Book 'A'
WORD 4 - First Word + tools, Printer Drivers, Spell Checker, Grammar Checker demo 'A'
WORD 5 - Calamus 1.09 Demo - allows printing but no saving. 'H'
PRO 1 - Electronic Bank Statement - the sequel to Home Accounts. £2.95
PRO 8 - Cassette Printer 1.2 - Produces the labels for an Epson compatibles. £2.95
PRO 12 - Budgie's Astrology - comes complete with tutorials for the beginner. 'A' £2.95
PRO 20 - Video Master video titling package Extra fonts on PRO 23 £2.95 each

EDUCATION

EDUC 1 - Kid Music, Kid Notes, Kid Piano, Kid Puzzle, Kid Graph, Rebus Writer
EDUC 2 - Kid Grid 2, Kid Mixup, Kid Publisher, Kid Sketch, Kid Story, Kid ABC
EDUC 5 - The Wolf And The Seven Kids, Magic Speller, Computer School 1
EDUC 6 - Maths Made Easy, Kid Shapes, Kid Shapes Plus, Race Cards
EDUC 7 - Michaels Big Adventure - Colourful graphics, easy to play. Age 8+
EDUC 8 - The Search - historical adventure, Spelling Made Easy, Dot to Dot
EDUC 9 - Bodyshop, Computer School 2 & 3, Butterfly in the Park
EDUC 13-15 - Death of a President - investigation into the death of John F. Kennedy. £4.00
EDUC 16 - Franglais 1 & 2 - French Tutors, Me First 2.0, Numbers, Slimming
EDUC 17 - STOS Typing Tutor, Fun Face, Name Dropper, Pig Latin 'A'
EDUC 19 - Computer School 4-tests reflexes, memory, logic, coordination, +tons more
EDUC 20 - Easter Egg Hunt - pleasant adventure for 7-12 no violence or monsters!
EDUC 21 - GCSE Higher Maths Grade Tutor, Franglais 3 French Tutor
EDUC 22 - GCSE Chemistry Tutor - all you need for grade 'C' or above
EDUC 23-26 - CIA Word Factbook 1991 - Four disks crammed with information about the world, covers 247 nations plus weights and measures, Chemistry Referce Book. £5.00
BUGAM 98 - States & Counties -covers United Kingdom, Ireland, USA + Africa. £2.75
BUGAM 103 - Aptitudes - Seven modules tests your personality and gives report. £2.75
BUGAM 109 - Exchange Rates - well presented and easy to use. £2.75
BUPRO 18 - Fun Time 1&2 - For ages 3-6 friendly games testing many subjects. £2.95
BUPRO 26 - Early Learning Maths - Superb ex-commercial maths program. £2.95
BUPRO 27 - Early Learning Maths 2 - Even more of the above. 8 difficulty levels. £2.95
SHOE 1 - Robot Attack - Tests children on their times tables. £2.95
SHOE 3 - Picture Mix - Age 6+ the aim is to reassemble a mixed up picture. £2.95
SHOE 4 - Robot Words - A friendly hangman type game for kids. £2.95
SHOE 5 - Alphabet Mix - like Shoe 3 but with letters instead. £2.95

PROGRAMMING

LANG 1-2 - Sozobon C Compiler Release 2. Includes documentation, shell etc £3.00 'A'
LANG 3 - C source code, loads of routines includes documentation. Compiler Req. 'A'
LANG 4 - C source code, as above includes communications, games, utilities. 'A'
LANG 5-9 - GNU C++ Compiler 2.1 - Hard Disk and at least 2.5 Meg memory needed 'A'. £6.50
LANG 10 - Fast Basic Routines, includes runner program. Some require hi-res.
LANG 11 - GFA Basic programs, includes runner program. ST Basic 1 programs. Some hi-res.
LANG 13 - Professional GEM guide - 17 Chapters of tutorial with C source. 'A'
LANG 16 - STOS Tutorial and various Basic programs
LANG 20 - Source Level Debugger for GNU C Compiler. 'A'
LANG 24 - C Adventure Toolkit - the very best adventure creator available 'A'
LANG 27 - GFA Basic v 2.0, GFA Expert - nice GFA tutorial . 'A'
LANG 29 - STOS Tracker - adds a new set of STOS commands to use with Soundtracker
LANG 30 - The Lost Boys Demo Source - for the Megabang demo.
LANG 33 - Coronado Enterprises C++ Tutorial v2.00 - 12 chapters + tons of source. 'A'
LANG 34 - Pascal Compiler, includes linker, library files, shell + programs. 'A'
BUPRO 2 - 68000 Programmers library v47-hundreds of routs for writing games. £2.95
BUPRO 4 - Moving Bytes 1 - More routines for screen effects, music, scrolling etc. £2.95
BUPRO 5 - Sprites Portfolio v 2.0 - Over 500 top quality sprites in Degas format. £2.95
BUPRO 6 - Music of the Shapeshifters-20 interrupt driven tunes, many with source. £2.95
BUPRO 11 - Music of the Shapeshifters 2 - sixteen more tunes + more source. £2.95
BUPRO 16 - ST-68K Reference 3.0-includes full data on ST internals, excellent. 'A' £2.95
BUPRO 24 - Supervisors Programming Disk 1 - Loads of source etc + music. £2.95

THE BEGINNERS GUIDE TO STOS BASIC

This is a complete programming course for all ST/E's consisting of a 618 page, ring bound course manual + 2 double sided disks with over 190 programming examples! 26 Chapters will take you through step-by-step how to create shoot em up's, art programs, junior educational programs, GCSE maths programs, databases, word processors, music programs and much, much more. Only £39.95 + £3.00 postage (UK only) and if you order from us you may choose ANY THREE FREE DISKS of your choice!

MUSIC

MUSIC 1 - Noisetracker 1.5 - a popular soundtracker creator includes samples+source.
MUSIC 2 - Samples disk 1. Works with Music 1 or 21. More on disks 2-5.
MUSIC 11 - Arpeggiator, Jukebox (DMA only), MKS-50, Midi Beat, Projekt 'A'
MUSIC 12 - The Henry Cosh Sequencer - 16 voice sequencer + full manual on disk. 'A'
MUSIC 13 - Drum Patterns for Cu-Base in standard MIDI format. Music demo 'A'
MUSIC 16 - Yamaha PSS790 Editor, includes loads of sample voices. 'A'
MUSIC 17 - Casio Patch Editor, CZ101 Up/Downloader, Soundchip Music.
MUSIC 21 - Digi Composer - Full soundtracker creator with support for STE and TT.
MUSIC 22 - Alchemie Junior 2.2 - sequencer boasting real-time, multi-tasking + more. 'H'
MUSIC 23 - Sound Merlin 1.02 - powerful ex-commercial program, Mozart's Dice Waltz 'H'

CALAMUS FONTS (number of versions in brackets)

FONT 13 - Albatros, American Typewriter (10), Arnold Becklin
FONT 14 - Andromeda, Arcadia, Architecht, Auriol (6), Baker-Signet, Bauhaus (3), + 5 more
FONT 15 - Beltwe (3), Bequiat (2), Black Chancery, Bodoni (7), Border (2) + 4 more
FONT 16 - Bodoni (3), Brush Script, Bundesbahn (3), Carolina, Caslon (5) + 2 more
FONT 17 - Caslon (6), Charlemagne (2), Classica (3), Cochin (4), Cooper Black +2 more
FONT 18 - Copperplate (9), Cottonwood, Decoration (2), Dine (4), Dom, Dragon Wick
FONT 19 - Dom (5), European (4), Faustous (5), Freestyle (3), Futura (5)
FONT 20 - Futura (13), Galliard (4), Game (5), Agaramond
FONT 21 - Game, Agaramond (7), Garamond (5)
FONT 22 - Garamond (11), Gillsans (4)
FONT 23 - Gillsans (6), Goudy (7), Helvetica (4)
FONT 24 - Helvetica (2), Herculanum, Hobo, Holiday (3), Impact, Impress (3) + 8 more
FONT 25 - Kaufman (2), Kuenstler (4), Letter Gothic (4), Linotext, Lithos (5) + 4 more
FONT 26 - Math (4), Maximus, Medicine, Mesquite, Miami Night, Middleton, Minion (9)
FONT 27 - Mistral, Murial, Nupital, Ocra (2), Omnia, Optima (4), Orator (2) + 8 more
FONT 28 - Popular, Postman, Present, Reporter, Revuew, Riverside, Roost + 12 more
FONT 29 - Snell (2), Souvenier (4), Spartan (20, Stempel (6)
FONT 30 - Stempel (6), Stencil, Style, Symbol, Tekton (4), Toulouse, Trajan, Umbra
FONT 31 - Universal (15), Upper East Side, Wilhelm (2), Willow, Zaleski

New Age Public Domain Library has been supplying top quality ST/E software for the past two years. We have over 1300 disks of some of the best PD and Shareware available to suit all tastes. Also, we currently have one of the largest selections of Falcon software available and will continue to get more. Our disk based catalogue describes every single program in detail, has a beginners section and is very easy to use - it's also completely free to new customers - just ask for it, there's no need to send any disks or SAE's. If you are an existing customer and would like an update then return your disk with your order or a stamped SAE for an update only.

New Age PDL (Dept STR4) PO Box 30, Leigh-on-Sea, Essex, SS9 4AD. Tel: (0702) 526435

PD ZONE

CHROMASTUDIO MORPHING DEMO

FLOPPYSHOP • DISK NO: DEM.3781 • £2.50 • MEMORY: 2MB • PUBLIC DOMAIN • HARD DISK REQUIRED • FALCON ONLY

IN BRIEF: There can't be a single person on earth who hasn't heard of "morphing" by now. It's the process by which one picture is gradually transformed into another, and can be credited for much of the success enjoyed by films like *Terminator 2* and Michael Jackson's "Black or White" video.

Thanks to the Falcon's new true colour screen modes you can now experience the effects of morphing on your very own desktop. This short animation slowly transforms one face into another and you'd be hard pushed to tell the picture quality from the TV. The action takes place in a 240 pixel by 260 pixel window in the middle of the screen and is very smooth indeed.

The exciting part of all this is that the morphing itself was produced on a Falcon using a soon-to-be-released package called *ChromaStudio 24* – available at a realistic price from Floppyshop by the end of the year. I can't wait!

ST REVIEW COMMENT: "If you haven't seen true colour in action yet, you can't fail to be impressed with this one, although you'd have thought the programmers could have chosen some slightly more exciting subject matter."
✪✪✪✪

Watch one face slowly transform into another and gasp at the breathtaking beauty of true colour with the ChromaStudio Morphing demo.

Admittedly, it doesn't come across very well on paper, but the genuine animated article is well worth getting hold of.

THE MANDELBROT MACHINE

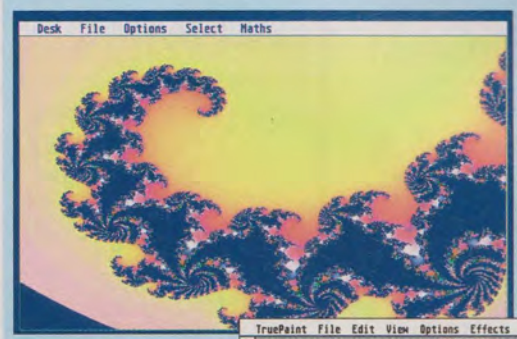
CALEDONIA PDL • DISK NO: FALCON.2 • £2.50 • MEMORY: 1MB • SHAREWARE • FALCON ONLY • NOT VGA

IN BRIEF: It had to happen didn't it? Yes, the first Falcon-only Mandelbrot generator has arrived. It runs in 256 colours, saves in standard TruePaint format and is called *The Mandelbrot Machine*.

A familiar GEM menu runs across the top of the screen and everything is easily accessible from here. GEM windows aren't used, which limits the program to its native 640 pixel by 400 pixel screen mode and 256 colours; even a VGA monitor causes it to grumble.

Generations are reasonably quick and the program is also capable of plotting the even more beautiful (to my mind) Julia set. Turn down the lights, cycle those colours and chill out. Yeah, this is what owning a Falcon is all about.

ST REVIEW COMMENT: "Cycling a 256-colour Mandelbrot picture is one experience you cannot afford to miss if you own a Falcon. In terms of features, *Mandelbrot Machine* is quite a way behind most ST generators, but if the proof is in the pudding – this is lemon meringue pie!"
✪✪✪✪



Colourful Mandelbrot generations make their debut on the Falcon thanks to The Mandelbrot Machine. Prepare for eye-stinging effects when you switch colour-cycling on!

If you've got the registered version, the resulting images can be loaded into TruePaint for some last-minute adjustments.

IMAGEVIEWER

NEW AGE PDL • DISK NO: FALC.8 • £2.00 • MEMORY: 1MB • PUBLIC DOMAIN • FALCON ONLY

IN BRIEF: There's little doubting that JPEG is the graphics format of the future. With compression ratios often reaching thirty to one, how can it fail to be? What's more, an increasing number of pictures distributed by PD libraries and bulletin boards are in this format.

Up until now, the only way to view JPEGs on the Falcon has been with *GEMView 2*, which is very slow with this particular format, often taking up to five minutes to process and display a picture! Enter *ImageViewer* to make your life just that little bit more bearable. It will load and display just about any JPEG file and does so with speed that puts *GEMView* to shame – under thirty seconds in many cases! What's more, it will use any Falcon screen mode and is quite happy to run under *MultiTOS*. Perfection.

ST REVIEW COMMENT: "The quality in 256-colour mode may not be quite up to *GEMView* standards, but the speed in which pics are processed makes up for it in every way. *MultiTOS* compatibility is also a big bonus."
✪✪✪✪

ImageViewer can be installed as an application from the desktop and automatically runs each time you click a .JPG file, although a file selector still appears.

The quality of dithering isn't quite up to GEMView standards, but the huge speed advantage more than makes up for it.

CUT OUT 'N' SEND COUPONS

Want to get hold of some of the twenty-odd programs we've just reviewed in PD Scene and PD Zone? It's easy – just fill in the relevant coupon and send it to the library...

L.A.P.D.,
P.O. Box 2,
Heanor,
Derbys,
DE75 7YP

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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- ❑ H-MEC £1.50
- ❑ RUSH 2 £1.50
- ❑ POLYFILM £1.50
- ❑ STOS GRAPHIC ADVENTURE CREATOR £1.50

Floppyshop ST,
PO Box 273,
Aberdeen,
AB9 8SJ

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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- ❑ CHROMASTUDIO MORPHING £2.50
- ❑ JPEG PICTURES £5.00
- ❑ LINE-UP £2.50
- ❑ EDITH £2.50
- ❑ CYREL PALETTE £2.50

Caledonia PDL,
250 Oldtown Rd,
Hilton,
Inverness,
IV2 4PT

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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- ❑ GRANDAD 2 – IN SEARCH OF SANDWHICHES £4.00
- ❑ UTOPOS £2.50
- ❑ AROUND THE WORLD £2.50
- ❑ MOLSYS £2.50
- ❑ GRANDAD 2 – IN SEARCH OF SANDWHICHES £4.00

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

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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- ❑ SEARCH AND FIND £2.75
- ❑ SUPER JUMBLE £2.75
- ❑ PAINTPOT £2.75
- ❑ VIDEO-BASE £2.75

Tumblevane PDL.,
6 West Road,
Emsworth,
Hampshire,
PO10 7JT

ATARI ST REVIEW

NAME.....
.....
ADDRESS.....
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- ❑ REBOUND £1.50

New Age PDL,
P.O. Box 30,
Leigh-on-Sea,
Essex,
SS9 4AD

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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- ❑ IMAGEVIEWER £2.00
- ❑ PHOTOCHROME 3 £1.50

The Shareware Co.
51 Thornleigh Rd,
Bishopston,
Bristol,
BS7 8PQ

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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- ❑ MY-DRAW £1.75
- ❑ FIRST GUIDE £3.50

Welcome to Short Cuts, the section of ST Review where we look at as many budget-priced products as we can squeeze into the pages...

SHORT CUTS

PRODUCT NAME	RATING
ATARI WORKSTATION	✪✪
AUTO MOUSE/ JOYSTICK SWITCH	✪✪✪
ZI-FI SPEAKERS	✪✪✪
VIDEO SUPREME	✪✪✪
400DPI MOUSE	✪✪✪✪

SCORING

All products in this section have a rating out of five stars. To give you an idea;

✪✪✪✪✪ = *Get it now – sell your favourite disks if you have to!*

✪✪✪✪ = *Very good – worth the money but it'll wait until pay-day.*

✪✪✪ = *Fair enough – but you could live without it.*

✪✪ = *Not really – unless it tickles your fancy.*

✪ = *Uh-uh – check out our PD instead...*

ATARI WORKSTATION

by Tony Kaye

One problem with most work areas is a lack of space. The ST's design means that you need to stack items if you want to fit everything onto a desk. Remember, you need to be able to reach all of the switches and controls as well as just finding somewhere for them to sit. Hard drives, for example, have an on/off switch and should not be placed on a carpet due to the heat generated and the lack of ventilation.

To solve this dilemma, First Computer Centre in Leeds offer the Atari Workstation, a two-piece stand designed to make the most of the space available. The stand is made of grey coloured metal and is fixed together using small plastic studs. These are adequate provided you don't plan on moving the stand too often – we moved the stand to photograph it and the clips broke! Four rubber feet are provided to protect your furniture.

The ST fits nicely under the stand with a ledge that slots into the groove above the function keys. There is a shelf above for your hard disk drive and the monitor sits nicely above that. If you don't need all that extra space, the unit can be used without the extra shelf but few people are likely to take this option.

The workstation is a nice idea, but take a look at the picture. There is a hole in the left hand side to provide access to the reset button, but it is not big enough to reach the main power switch. The only way to turn the computer on is by using the switch at the mains!

This is, at best, awkward if it is out of reach and could be dangerous if the socket is not switched. Nice idea – shame about the design...

PRODUCT:	ATARI WORKSTATION
CONTACT:	FIRST COMPUTER CENTRE
TEL:	0532 319444
PRICE:	£36.99
RATING:	✪✪

The Atari Workstation. Note the hole on the side for access to the reset switch.

AUTO MOUSE/JOYSTICK SWITCH

by Jane Plessey

There aren't too many games that require a joystick in port 0, but those that do can cause inconvenience when you need to swap. The problem is made worse when you consider the £40 cost of replacing the mouse port if you manage to damage it through removing mice and joysticks.

Adding an extension lead is essential to prevent damage to the ports, but that still leaves the inconvenience factor, especially when every time you go to use the computer, the wrong one's plugged in. There is a solution, though.

Gasteiner offer a mouse/joystick switch that plugs into the mouse port and will automatically swap between the two. There is nothing more to do. It draws its power from the port itself, so there are no messy wires or power supplies. The short lead can be placed out of sight as no access is required.

A small cartridge case contains the circuitry, with a lead of approximately 30cm coming from it. This plugs into the mouse port of your ST; the mouse and joystick both plug into the sides of the switcher. There are two LEDs on the unit; one red and one green. The mouse goes into the side with the green LED so that it is the first to be activated when the computer is switched on. A press of the fire button will activate the joystick and the left mouse button returns the control.

The switcher is a joy to use, and not just for playing games. If you use the second port for a trackball, you can have total control for DTP or any serious applications. A joystick can be plugged in if needed.

Positioning of the unit posed more problems than the actual use of it. The lead is fractionally too long to place by the side of the computer and too short to hide round the back. It is difficult to see what would make a good compromise, so it's probably just best to find a good position and bring the trusty old BluTack into play!

PRODUCT:	**AUTO MOUSE/ JOYSTICK SWITCH**
CONTACT:	**GASTEINER**
TEL:	**081-365 1151**
PRICE:	**£12.95**
RATING:	✪✪✪

A mouse/joystick port switcher is convenient and prevents costly port damage.

ZY-FI SPEAKER SYSTEM

by Tony Kaye

The STE has two sockets on the back for stereo sound. On the Falcon, a 3.5mm mini jack socket is provided. The question is; if the hi-fi is downstairs or across the room, how can you take advantage of the stereo sound from these machines?

The answer is to get a pair of Zy-Fi speakers from First Computer Centre in Leeds. These are what are known as "active speakers", that is they have an amplifier built in to reproduce sound from a computer or a portable stereo player without any additional amplification. At £36.99, there are cheaper ways of doing this.

The Argos catalogue boasts a pair of Alba speakers advertised for just £19.99, including their own little stands! However, the sound quality is not as good from the Alba units, but, as the saying goes, you get what you pay for. After a series of tests on both sets of speakers using the STE and the Falcon, for pure quality the Zy-Fi speakers came out on top. While neither set compares with the quality from a decent hi-fi system, they are a fair compromise.

The colour of the Zy-Fi speakers lets them down a little and you need a plug to connect them to the mains. Legalities apart, if you buy a new car, you don't have to pay extra for the wheels do you? You can't use an electrical appliance of any kind without a plug, so why not put one in the package? The Alba speakers have one...

For the sake of pure convenience, the Zy-Fi speakers are useful and priced within the range of the average pocket. And while the quality of sound from an STe isn't up to much, an external pair of speakers certainly enhances it. Whether the Zy-Fis do a good enough job of this is down to your ears...

PRODUCT:	**ZI-FI SPEAKER SYSTEM**
CONTACT:	**FIRST COMPUTER CENTRE**
TEL:	**0532 3194444**
PRICE:	**£36.99**
RATING:	✪✪✪

Zy-Fi speakers – nice idea, but shame about the price...

VIDEO SUPREME

by Tony Kaye

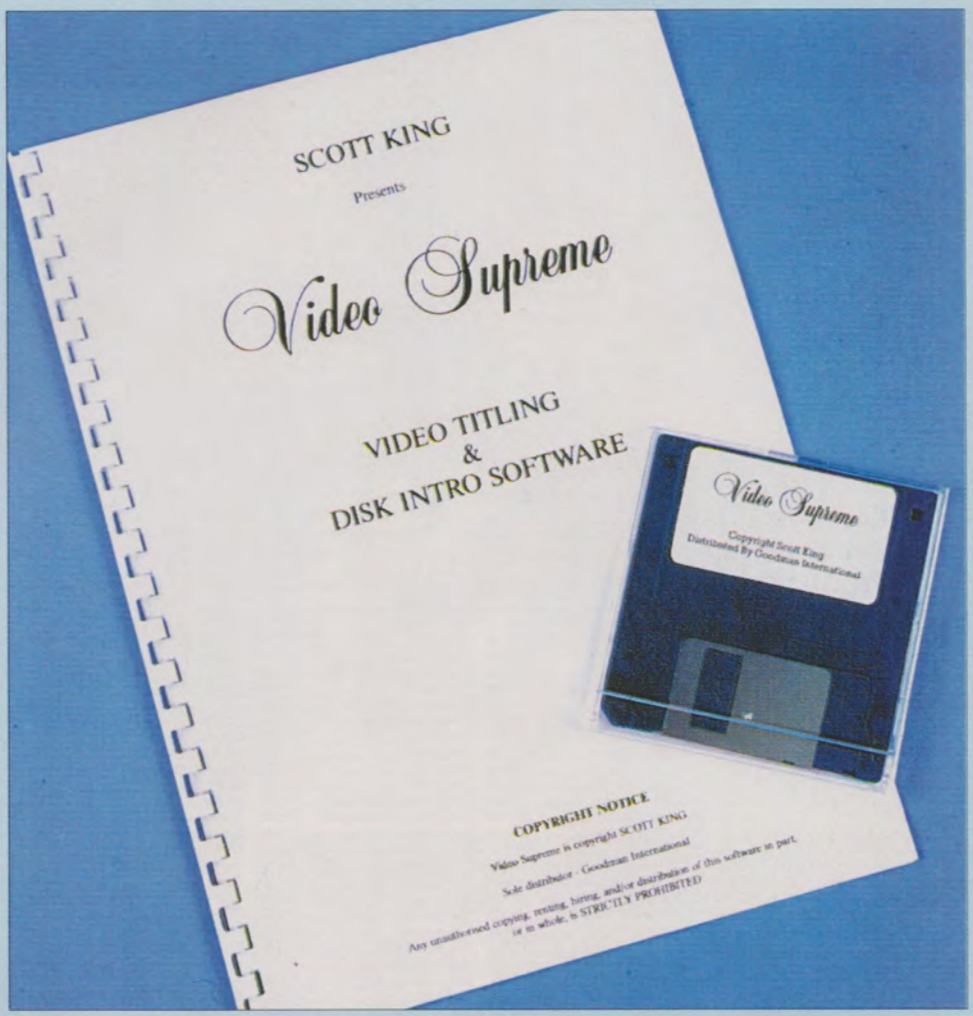
Every so often, a program comes along that is considered good enough to be sold commercially. In the opinion of Mike Goodman of Goodman International PD library, *Video Supreme* by Scott King is one such program. *STOS BASIC* has a "feel" to it. It is a rare program indeed that can shake it off. With a utility, if the interface is obviously *STOS*, this isn't a problem unless everything you do has that same trademark. Some people like the feel of the language, some don't.

There is a nice introduction sequence showing what is possible with the package. It can be used for titling your new version of *Jurassic Park*, in your programming to add score screens or titles or just to put an interesting front onto your program disks. Sound samples are supported and a variety of different noises and sound effects can be added to your work.

You can distribute your work in the form of demos and intro sequences using a program called *VSRUNNER.PRG* in an AUTO folder, but that really will limit any programmer who may wish to use the titler for their own work. The manual states that you can only use the loader if you keep the name and put it in an AUTO folder with the associated document in the root directory of that disk. This is likely to put off a lot of serious programmers who want more control over their work and can simply design their own routines.

This is a good titler for the casual user, but I don't think anyone would use it too seriously. If you like *STOS* and the "feel" it has, then you'll like *Video Supreme*. If Scott King would like to experiment a little more with the output, I can imagine version two getting a much higher score.

PRODUCT:	**VIDEO SUPREME**
CONTACT:	**GOODMAN INTERNATIONAL**
TEL:	**0782 335650**
PRICE:	**£9.95**
RATING:	★★★



Video Supreme – a good advert for STOS programming.

400 DPI MOUSE

by Tony Kaye

When Gasteiner first introduced the 400 dpi mouse it had an adaptor that went between the mouse lead and the computer to let it run with the ST. This, thankfully, has gone and the mouse is now Atari specific. Apart from making the appearance cleaner, it reduces clutter and removes another connection that could work loose and affect the operation of the beast. The unassuming white box has nothing more than "ATARI" written on it but inside is a mouse that has been thoughtfully designed. It fits in the hand nicely and glides across the mouse mat quite well.

Build quality is sound and the rollers are nylon, which helps the rodent to run cleaner for longer.

Being 400dpi, the mouse is very responsive – four times faster than the Atari mouse! For normal operation, this makes it smooth and easy to use. However, it does tend to suffer under stress. It does not like to be moved too fast and tends to skate if pushed too hard. This makes playing high speed mouse-controlled games difficult but if you want a quality mouse for serious work, this is certainly at the top of the list...

PRODUCT:	**400dpi MOUSE**
CONTACT:	**GASTEINER**
TEL:	**081-365 1151**
PRICE:	**£14.95**
RATING:	★★★★

No distinguishing features to look at, but this mouse has a 400dpi "heart"!

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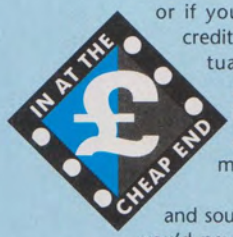
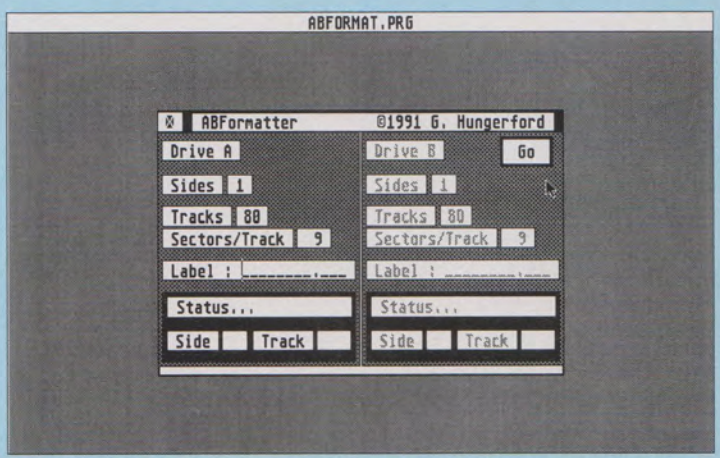
Andrew Wright looks at disks – floppy ones, hard ones and even old, scruffy ones.

DRIVING YOUR DISKS...



What's square, made of plastic and used to feed your ST? A floppy disk of course. Some of you might have been tempted to say credit card and I must say I tend to sympathise. On the other hand, if you're one of those who can't even dream of such an expensive luxury – or if you've just discovered that credit card limits run out eventually – let's look at cheap and cheerful ways of improving the life of your disks and generally managing them better.

Floppy disks are the heart and soul of your ST; without them you'd never be able to do anything except move the desktop icons around. There are two types you can buy, branded and unbranded. Personally I've never had much trouble with unbranded disks but I know other people who wouldn't trust anything without the word "Sony" written across it. Unbranded double-density disks are on sale for as little as 40p each while the branded variety are often only 25% more. I won't say you pays your money and takes your choice because I never use cliches or daft sayings but that's certainly the way the cookie crumbles...



ABFormatter can format disks in two drives at once.

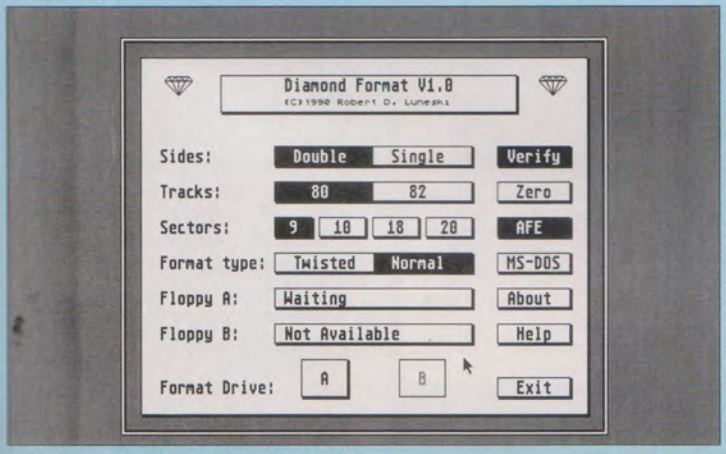
READY, STEADY, FORMAT...

Before you can use a floppy disk, it has to be formatted. If you're wondering why, it's mainly because disk manufacturers don't make them for one particular computer – the same disks can be used in Macs, PCs, Amigas and Acorns each with a slightly different data arrangement.

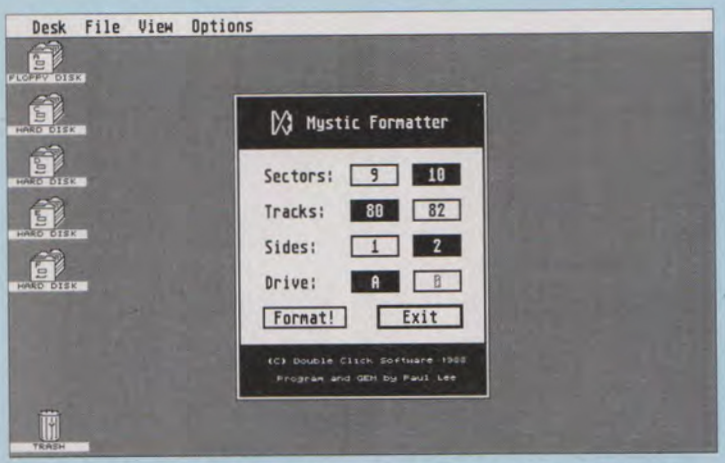
Naturally, you can format disks from the GEM desktop but you're only offered the standard 80 track and nine sector layout. Most people opt for a wider variety of options by using a dedicated disk formatting program. These offer all sorts of weird and wonderful formats such as the Twister format (where sectors aren't laid out sequentially, theoretically improving access times as the head doesn't have to work so hard) and fast headers.

Perhaps the best formatter is *Diamond Format* from Oregon Research Associates, the developers of products such as *Diamond Edge* and *Diamond Back*. It is a shareware product that offers options for 80 or 82 tracks, 9, 10, 18 or 20 sectors (for high density disks) and compatibility with *Apple File Exchange* and MS-DOS. It can zero a disk (erase the FAT and root directory without actually formatting the disk) and even add MS-DOS boot sectors to existing Atari-formatted disks. *Diamond Format* comes as both a program and an accessory and it works very well.

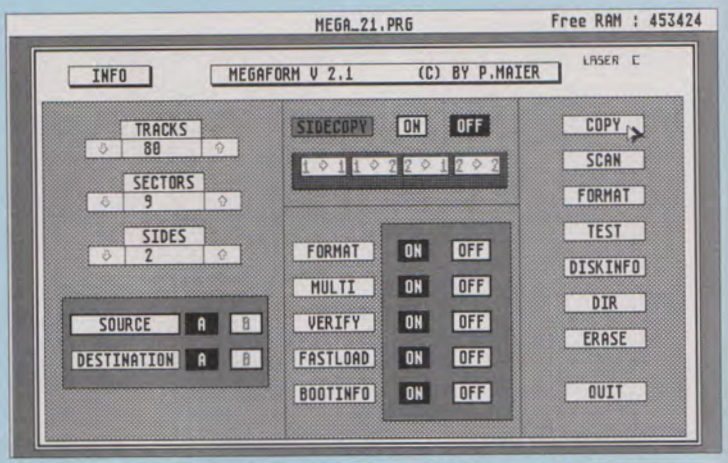
As multi-tasking is all the rage at the moment, you might be surprised to know there are two "multi-tasking" disk formatters available (particularly as *MultiTOS* still can't format a disk in the background). The



Diamond Format – options galore.



The Mystic formatter – works away merrily in the background.



Megaform 2.1 – formats and unformats disks as well as copying.

ABFormatter is a shareware program that will format disks in both drives A and B simultaneously, even if they are completely different types!

The other is the *Mystic* desk accessory from the now defunct Double Click Software that lets you format disks entirely in the background while you get on with something else. It is a shareware program and it works extremely well – there is no noticeable system slowdown at all as the disk is being formatted. Obviously you can't use the drive at the same time but you can get on writing a letter or whatever while formatting a pile of disks. Formats supported include 80 or 82 tracks and nine or 10 sectors.

COPY CATS

Copying disks is always associated with software piracy but the vast majority of law abiding users copy disks nearly every day. Every time I get a program for review or just a few PD disks, the first thing I do is make backup copies of them – just in case the gremlins strike. It's a sensible precaution based on the conviction that disaster always strikes the day before the review deadline or whenever you really need to use what's on the disk.

Virtually all commercial applications allow you to make at least one backup copy for your own personal use, provided you don't distribute them to friends, of course. Frankly, though, if I'd paid several hundred pounds for a major program like *Calamus SL*, I'd make more than one backup! Games can't usually be copied as some sophisticated protection is invariably used on the disks – usually concealed tracks or sectors containing validation codes.

There are special copier programs distributed by various pirate organisations and some will copy and distribute game disks, depending on the type of protection, but if you expect me to tell you about them, forget it. I'm sure most *ST Review* readers are honest upright citizens but there are some misguided people out there, some of whom might just be able to read...

There are plenty of copiers available and many play a dual role in that they can format disks too. Best of the bunch has to be *Fastcopy Professional* but it's outside our £20 limit for programs in this budget series, so second choice must be *Fastcopy III*, an earlier version that is public domain and costs nothing. It works either as a GEM program or a desk accessory and features a superb user interface with graphical selection of options or keyboard shortcuts. It also includes a simple virus detector and allows the drive step rate to be changed.

Virtually any disk format can be copied or produced by selecting the required parameters from the main screen. Multiple copies are supported and there is a special option called Soft Format which will simply clear the FATs and root directory so that, to all intents and purposes, the disk looks blank and newly formatted. It only takes seconds too, which makes it very useful.

When copying disks, you can specify whether to format the destination disk or just the tracks that need it and you can also change a disk's format in the process by copying, for example, a single-sided 80 track disk to a double-sided 82 track disk, complete with data. If you don't already have a copy, it is well worth getting hold of.

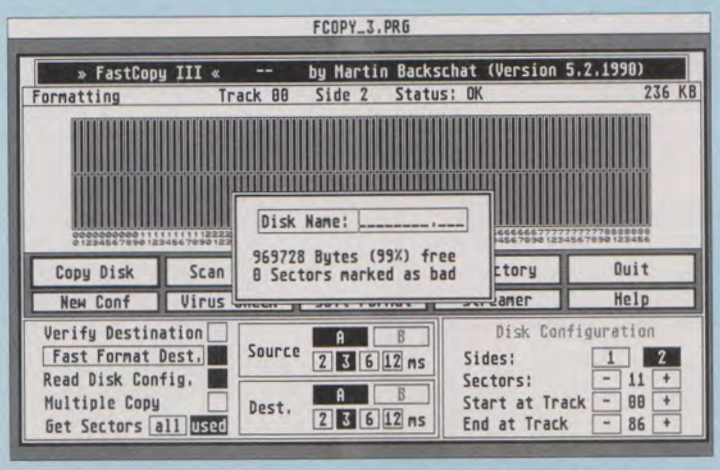
Another good program is *Megaform 2.1*. Although mainly a disk formatter with the unusual ability to actually "unformat" a disk, it has copy options too. If you can stand the irritating noises and beeps it makes, it's a good utility to have around.

FILE FILING

Once you've had a few years' experience formatting and copying disks, just managing them starts becoming a real headache. Most users will have fairly large collections of disks and once you get into three figures, finding that elusive utility becomes increasingly difficult.

One way to keep control is to use a disk cataloguing program designed specially for the task. The most widely used is *STDCAT* which I've just found out is now up to version 5.0b – and I've been using version 4.0 for years! It is a freeware program that asks you to feed in your floppies one at a time until you've gone through your whole collection. It will work on any ST/STE in medium or high resolutions, so it will suit both floppy and hard drive users.

You can change the disk volume names if required and add 33 character comments to remind you of the contents that are displayed in a separate window. You can even add comments on individual files. Searching routines let you rummage for particular character strings in



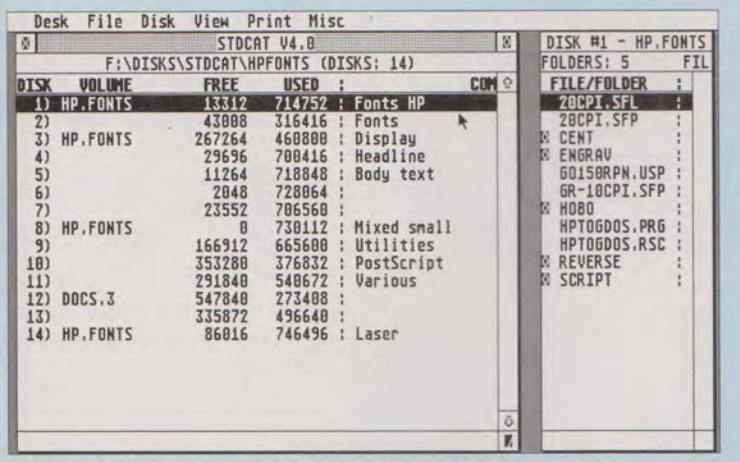
Fastcopy 3 – nobody was more surprised than I was when it formatted this disk but it didn't actually work!

WHAT'S ON THE DISK?

Standard ST disks, the 720 kilobyte variety, are formatted with 80 tracks, each comprising nine sectors holding 512 bytes of information. This provides a maximum storage capacity of 737,280 bytes but some of the space is used for a boot sector and to store details about the disk itself while another two kilobytes is wasted by a silly TOS bug that seems to have been cured on the Falcon's TOS 4.0x (I won't bother counting the number of TOS versions it took to fix it!).

High density disks are formatted in much the same way but have 18 sectors instead of nine and a storage capacity of 1,456,640 bytes. One way ST users without high density drives can increase the capacity of their disks is to use what are known as extended formats. Unlike the PC and Mac, the ST is quite flexible in how it reads and writes floppy disks – there can actually be more than 80 tracks and nine sectors on a disk. I've seen drives capable of formatting disks with 86 tracks and 11 sectors for a staggering 972,288 bytes of data storage!

Although most drives are less capable, many are capable of 82 tracks and 11 sectors (915,968 bytes free) while virtually all drives can format 80 tracks and an extra tenth sector to give 812,032 bytes free. As this represents nearly 12% more free space, it is well worth doing. Note that all these figures are provided by *Fastcopy Pro* which utilises the FATs and directories very efficiently – other formatting programs show slightly less free space.



STDCAT is the best way of tracking files. This is v4 – v5 is apparently much improved!

comments, disk volumes, filenames or folder names.

You can save the information as a single large catalogue or break each group of disks into individual catalogues. Printout options are very flexible and as the output is ASCII based, it will work with most printers. *STDCAT* makes it very easy to track down a file without having to examine a couple of hundred disks but it really only saves time if you keep your collection in good order and you've got a lot of disks. Otherwise, unless you're totally chaotic, you've usually got a rough idea of which disk a file is on.

Direct Drive 1.1 is a similar program that supports hard drives too. If you have an immense number of data files on both hard and floppy disks, this a useful program to use. It reads the directories of all the disks and lets you view, sort, search and save the information, add comments or print out a label with the name and contents. It looks good but when reading a large 45 MB partition on a 1 MB machine, it crashed. Whether this is due to not supporting partitions over 16 MB or because there were too many files in the partition, I couldn't say...

STICKY SITUATIONS

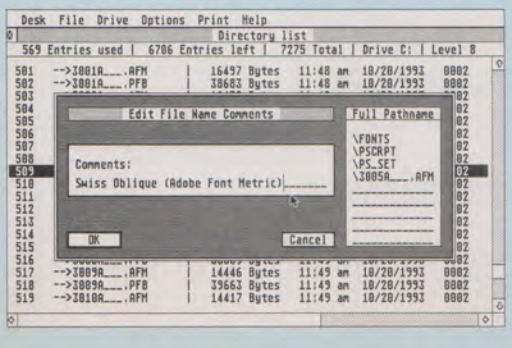
One thing is sure, all the filing programs in the world won't help if your disks don't have some means of identification.

Modern technology has come up with an exciting new development in the form of stick-on paper labels (though I realise this may not be the first time some of you have heard of them). What most people haven't realised is that there are several PD and shareware programs dedicated to printing the contents of disks on these labels.

DKLabel is a public domain utility all the way from Australia and it works a treat. It reads the names of all the files on a disk and uses this information to print a label which can then be stuck to the disk. Up to 54 file or folder names can be squeezed on a 54mm by 70mm label (the type that don't fold over the top of the disk). The program has a comfortable Zest interface and the labels are displayed in WYSIWYG form on the screen. It needs a high resolution monitor but works on any ST/STE.

Note that I've said the top of the disk. I've heard loads of daft arguments about which way you should store floppy disks. Disk manufacturers originally intended that the metal shield be placed upwards so that dirt in the bottom of the disk box doesn't get onto the sensitive disk surface itself. Most disk labels are designed this way but as far as I'm concerned (and a straw poll of fellow disk owners backs me up) there's no point in having colour coded labels and named disks if they all look the same.

Placing the metal shield on the bottom means you can quickly flick through a collection and in seven years the minimal number of failed disks I've had seems to indicate that this common sense approach works. Fill the mailbag up if you must...

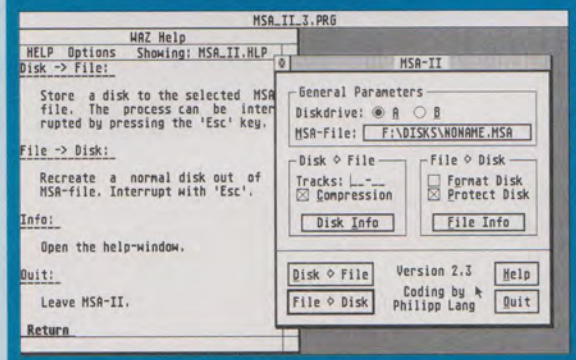


Direct Drive is nicely GEM'd and easy to use.

DISK – FILE – DISK

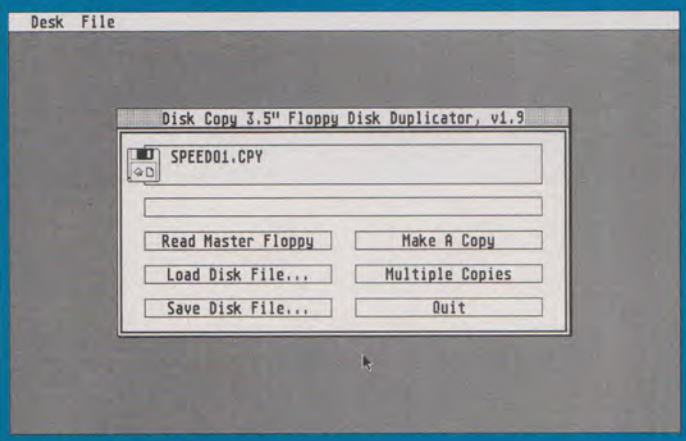
There are other ways of looking after disks too. Quite often you'll need to treat disks as disks rather than a collection of individual files. A PD game disk might have a special boot sector that loads the main program or you may want to include a hidden serial number on the boot sector of a disk containing your own program, for example. If you then file copy them to your hard drive and try and compress them prior to transmission via modem for any reason, the resulting collection of files won't have all the information.

The answer is a program like *Magic Shadow*, version 2 of which has recently appeared. It can store complete disks in one file, or just certain tracks, and it can compress the data too, achieving a claimed 30% to 60% compression. This makes it handy for tidying up disk collections or backing up groups of disks.



Magic Shadow 2 – with interesting on-line help.

***Diskcopy* is another interesting program that works in the same way as the *Magic Shadow Archiver*. It doesn't compress the files at all and it seem to be slightly faster but it does need at least 1 MB. As an example of its use, I managed to copy the three Speedo distribution disks into three files of 700K or so and then used *STZIP* to compress them to a single file of around 900K – just about small enough to put on a single high density disk and a much more space efficient way of backing up the three disk set.**



Diskcopy in action.

WHERE TO GET THEM FROM...

***ABFormatter*: From Compuserve BBS**
***Diamond Format*: UTI.251**
***Direct Drive*: UTI.239**
***Diskcopy*: UTI.224**
***DK Label*: UTI.273**
***Fastcopy III*: UTI.251**
***Magic Shadow Archiver 2*: From Compuserve BBS**
***Megaform 2.1*: UTI.252**
***Mystic Formatter*: UTI.252**
***STDCAT v5.0b*: UTI.240**

This month's collection comes largely from The ST Club on 0602 410241. All the files can be made available in the *STREVIEW* conference on CIX – just log on and ask!

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Family Roots is an invaluable aid to both professional and amateur genealogists. It is designed around an integrated workbench which allows you to create your family tree graphically on the screen by linking directly between the individuals. The powerful database can be viewed instantly at the click of a mouse button. The search function enables fast cross referencing and multiple scanning.

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Stone Cold Sober

Stone Cold Sober is a graphic adventure for the Atari ST, STE, TT and Falcon. It runs on colour or mono displays (without the location graphics in mono) and is ideally suited to the novice adventurer. As the name suggests, you start your quest in a pub. Your journey will take many weeks to complete and will involve a considerable amount of thought and a lot of luck. There's an element of the supernatural in this one so beware! The program is entirely mouse driven and involves almost no keyboard input at all. Stone Cold Sober was written by Simon Brown, one of the best adventure game authors of recent years and it promises to keep you glued to your screen for weeks (months perhaps!) To order your copy of Stone Cold Sober, send a cheque or postal order for £9.95 to the address below. UK postage free, please add £1.00 for Europe or £2 for the rest of the world.

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A GEM OF AN IDEA

Last month's tutorial resulted in the start of a paint program. Ofir Gal now looks at using GEM to make improvements...

At the end of the last tutorial, we had a working version of a rather limited paint program, capable of loading an image, editing and even saving it back to disk by using basic colour palette routines along with some GEMDOS file handling techniques. Before taking this further, an examination of some GEMDOS file handling routines is in order.

THE DISK OPERATING SYSTEM

Closely modelled on MS-DOS, GEMDOS (Graphical Environment Manager's Disk Operating System) is the fundamental block of the operating system consisting of various routines that handle far more than just disk access. GEMDOS is capable of keyboard input, printer/modem input and output, memory management and program execution. Whenever you double-click on a program icon on the desktop, it is GEMDOS that loads and runs the program.

BASIC supports various high level file management calls like *BLOAD* and *PRINT #* which we have used before. These provide ways of producing formatted output, but using GEMDOS directly gives access to the heart of the operating system.

OPEN AND SHUT

The file handling routines are most important to the paint program. Before a file can be accessed it must be opened using *FNfopen* which takes two parameters. The first is the file name; the second, the file access mode. Passing the value 0 enables reading but disables writing to a file. The value 1 gives write only while 2 allows both reading and writing. Use modes 1 and 2 only if you need to write, otherwise use mode 0 which is much safer.

The function returns a value called the file handle. This is a sort of ID number that can be used to access the file, the limit being 256 files open at any one time. This is useful for spreadsheet and database programs that may need to access several files at the same time.

It is possible for *FNfopen* to fail in which case the function will return a negative number.

There can be many reasons for this, the most likely being that *FNfopen* has failed to find the file. Instead of returning the handle for the file, the function will return the value -33. Various other errors are possible such as "disk full" or "write protected" when trying to open a file in write mode or even some physical disk damage. Table 1 lists all GEMDOS error codes and their meaning.

When a file is first opened, the file position pointer is placed at the beginning of the file and is updated concerning the number of bytes read. If a program reads 100 bytes, the next time it goes to read from the file, GEMDOS will automatically start to read from byte 101, so a file may be read in chunks if necessary. This technique was used last month to first read the file header and then the actual image data.

A program must close a file if it does not intend to access it any more. Leaving files open without reason is bad practice – if a program terminates leaving files open, GEMDOS may get confused and start corrupting data on the disk...

Closing a file is simply a case of calling another GEMDOS function called *FNfclose*. This function takes one parameter, the file handle returned by *FNfopen*. Like *FNfopen*, *FNfclose* may return an error number although this is very unlikely.

LEARN TO READ

It is extremely easy to damage data on disks while learning how to use GEMDOS. To be on the safe side, always use a disk that contains no important data. Another useful tip is to create a small RAMDisk and do all the experimentation here – safe and much faster too.

Reading a file is performed by calling *FNfread&*. You will notice that this function has the long sign since it may return values higher than 32,767. *FNfread&* takes three parameters; the file handle returned from *FNfopen*, the number of bytes to read and the address of a buffer which is used to store the read data. There are several ways of creating a buffer in BASIC, the

```
LISTING 1

DEFINT a-z
LIBRARY "gemdos"

DIM a(511)
                                        'create a buffer
add&=VARPTR(a(0))                       'get buffer
address

fhandle=FNfopen("A:\AFILE.TXT",0)       'open for read
IF fhandle<0 THEN                       'if error
  PRINT "GEMDOS ERROR"+STR$(fhandle)    'let user know
ELSE
                                        'otherwise
  junk&=FNfread&(fhandle,1024,add&)     'read 1kbyte
  junk=FNfclose(fhandle)
END IF
```

```
LISTING 2

DEFINT a-z
LIBRARY "gemdos"

DIM a(7)                                'a 16 byte buffer
add&=VARPTR(a(0))

fhandle=FNfopen("A:\AFILE.TXT",0)       'open for read
IF fhandle<0 THEN                       'if error
  PRINT "GEMDOS ERROR "+STR$(fhandle)   'let user know
ELSE
                                        'otherwise
  fpos&=FNfseek&(-16,fhandle,2)         'move backwards
  junk&=FNfread&(fhandle,16,add&)       'read 1kbyte
  junk=FNfclose(fhandle)
END IF
```

simplest being to *DIM*ension an array of integers. The address of the array can be obtained with *VARPTR*.

FNfread& either returns the number of bytes read, or a GEMDOS error code. Listing 1 shows how to open, read and close a file while checking for errors. Note that an array starts at index zero so 511 actually contains 512*2 = 1024 bytes.

The file position pointer is updated with every *FNfread&* call so that the next read will start where the file was left, unless it is closed and re-opened. GEMDOS takes care of the file position so it is even possible to read a file a byte at a time if needed. There may be a situation where you have to move along a file and only read specific sections. GEMDOS provides a way of moving around a file without having to read it at all...

SEEK AND FIND

You can move around a file by reading and throwing away unwanted portions, but this is slow. *FNfseek&* provides a much faster and more flexible way of navigating your way through a file.

This function takes three parameters; the number of bytes to move, the obligatory file handle and the seek mode.

Three modes are possible. Mode 0 always starts from the beginning of the file, Mode 1 seeks from the current file position and Mode 2 from the end of the file. *FNfseek&* returns the new file position or a GEMDOS error. A typical seek error is -64, a range error that occurs when trying to move to byte 501 in a 500 byte file!

It is important to remember that the file position is updated so that any *FNfread&* and *FNfwrite&* calls will start from that position.

Interestingly, *FNfseek&* can take negative values allowing you to move backwards, or even the value 0, which does not do anything but is still useful for finding out where you are in a file. One trick is to seek 0 bytes from the end of a file which returns its length.

The program in Listing 2 demonstrates the use of *FNfseek&* to read the last 16 bytes in a file.

WRITING TO A FILE

Writing data into a file is straight forward. *FNfwrite&* works exactly like *FNfread&* and takes the same parameters.

It simply copies the contents of a buffer into a file. Normally, a file has, achieved by calling *FNfcreate* which takes two parameters; the file name and the file attributes. Creating a file with any attribute value except 0 can be dangerous for your data unless you know what you're doing. You have been warned!

The example in Listing 3 creates a file and writes some text into it. As can be seen from the example, *FNfcreate* returns a file handle or an error code, just like *FNfopen*. The program uses two BASIC functions which you may not have seen previously. *LEN* obtains the length of a string while *SADD* is used to get the memory address of a string, similar to *VARPTR* with numeric variables and arrays.

USER DEFINED FUNCTIONS

Like BASIC and TOS functions, user-defined functions are used to return a value. All the GEMDOS calls covered this month are functions, because they always return a value. But what use is there for the user-defined variety?

Typically, a function can be called to perform a calculation that occurs many times. For instance, you may need to find if a number is odd or even several times in a program. Instead of writing the code to work that out each time, it's much simpler to write a function that determines this and returns 1 if a number is even or 0 otherwise.

A function is similar to a sub-routine and takes parameters by value. This means that while the function may manipulate the value of the parameters inside the function, they will remain unaltered outside of it.

Listing 4 demonstrates how to define a function and how to call it. Note that a function must be declared before you can call it, so it's best to put all the functions at the very top of a program, before the main program code.

HOW LONG?

How about finding the length of a file? This may seem trivial at first but there's more to it. In principle all one has to do is to call *FNfseek&* in mode 2 seeking 0 bytes as suggested earlier. This will return the file length in bytes.

This will also have the side-effect of moving the file position pointer to the end of the file so losing track of where it was.

The solution is to first call *FNfseek&* in mode 1, seeking 0 bytes at the current position, wherever it may be. *FNfseek&* then returns the file position, which can be stored in a temporary variable.

Next the file length can be obtained as before. To return the file position pointer to its original position, call *FNfseek&* in mode 1, seeking the number of bytes returned from the first call. Confused? Check listing 5 and you won't be...

Note that the function name has the long sign (&) because it may return a long if a file is large enough. Another important point is that the function assumes that the file is already open.

Functions should be treated like sub-routines – variables should be declared STATIC, SHARED or LOCAL as necessary. Since a function returns a value, it can be used in *PRINT* statements and expressions. Listing 6 shows how this may be implemented.

OTHER GEMDOS CALLS

Other useful GEMDOS functions are *FNfdelete* which, as the name suggests, deletes a file, the name of which is the only parameter this function requires. As usual, the function returns a negative error code if it fails.

FNfrename is another call you may need. It takes two parameters; the current name of the file and the new name. *FNdcreate* creates a folder as specified in the single parameter it takes.

```
err_code=FNdcreate("C:\TEST")
```

```
LISTING 3

DEFINT a-z
LIBRARY "gemdos"

a$="Atari ST Review"

fhandle=FNfcreate("AFILE.TXT",0)        'create a file
IF fhandle<0 THEN
                                        'if failed
  PRINT "GEMDOS ERROR "+STR$(fhandle)
ELSE
  count=LEN(a$)
                                        'find length
  add&=SADD(a$)
                                        'find address
  junk&=FNfwrite&(fhandle,count,add&)   'write
  junk=FNfclose(fhandle)
                                        'close
END IF
```

```
LISTING 4

DEFINT a-z

DEF FNeven(number)
STATIC tmp
IF number MOD 2=0 THEN
  tmp=1
ELSE
  tmp=0
END IF
FNeven=tmp
END DEF

INPUT "Enter a number";a
IF FNeven(a) THEN
  PRINT "This is an even number"
ELSE
  PRINT "This is an odd number"
END IF
```

```
Desk  File  Search  Options  Program
                    D:\HBASIC.131\LOF.BAS
Line:    1 Col:    23 Mem:9481
DEFINT a-z
LIBRARY "gemdos"

DEF FNlof0(fhandle)                 'define function to return
STATIC orig_pos0  ,junk0            'the length of a file
orig_pos0=FNfseek0(0,fhandle,1)     'get current file position
FNlof0=FNfseek0(0,fhandle,2)        'seek from end of file
junk0=FNfseek0(orig_pos0,fhandle,0) 'restore file position
END DEF                             'end of definition


DO
   INPUT "Enter file name";fi$
   IF fi$="" THEN STOP
   fhandle=FNfopen(fi$,2)
   PRINT fi$+" is"+STR$(FNlof0(fhandle))+" bytes long"
   junk=FNfclose(fhandle)
LOOP
```

```
Enter file name? HBASIC.PRG
HBASIC.PRG is 76312 bytes long
Enter file name? HBASIC.LIB
HBASIC.LIB is 66490 bytes long
Enter file name? C:\XCONTROL.ACC
C:\XCONTROL.ACC is 44685 bytes long
Enter file name? C:\AUTO\NVDI.PRG
C:\AUTO\NVDI.PRG is 29848 bytes long
Enter file name?
```

Typical results obtained from running listing 5 – enter a file name and immediately check the length of the file.

LISTING 5

```
DEFINT a-z
LIBRARY "gemdos"

DEF FNlof&(fhandle)                     'define function
                                        'to return
STATIC orig_pos& ,junk&                 'the length of
                                        'a file
orig_pos&=FNfseek&(0,fhandle,1)         'get current file
                                        'position
FNlof&=FNfseek&(0,fhandle,2)            'seek from end
                                        'of file
junk&=FNfseek&(orig_pos&,fhandle,0)     'restore file
                                        'position
END DEF                                 'end of definition

fhandle=FNfopen("AFILE.TXT",2)
PRINT FNlof&(fhandle)
junk=FNfclose(fhandle)
```

will create a folder called TEST on drive C. If it fails, the error code will be stored in the variable *err_code*.

SUMMARY

Armed with this knowledge of the disk operating system, next month we will go back to the paint program and see how these functions can be used to make life a lot easier when handling image files. Until then keep the letters coming in or email me at ogal@cix.compulink.co.uk.

LISTING 6

```
'an example routine that checks if there is
'enough memory to load a whole file into RAM

DEFINT a-z
LIBRARY "gemdos"

DEF FNtoo_big(fhandle)
STATIC tmp
tmp=FRE("")                         'check free memory
IF tmp>FNlof&(fhandle) THEN
  FNtoo_big=0
ELSE
  FNtoo_big=1
END IF
END FUNCTION

fhandle=FNfopen("ABIGFILE.TXT",0)
IF FNtoo_big THEN
  PRINT "Not enough memory to load file"
ELSE
  CALL load_file
END IF
junk=FNfclose(fhandle)
```

TABLE 1 – GEMDOS ERRORS

0	OK
1	Fundamental error
2	Drive not ready
3	Unknown command
4	CRC error
5	Bad request
6	Seek error
7	Unknown media
8	Sector not found
9	No paper in printer
10	Write fault
11	Read fault
12	General error
13	Disk is write protected
14	Media change
15	Unknown device
16	Bad sectors on format
17	Insert other disk
32	Invalid function
33	File not found
34	Path not found
35	Too many open files
36	Access denied
37	Insufficient memory
40	Invalid memory address
46	Invalid drive
49	No more files
50	Disk full
64	Range error
65	Internal error
66	Invalid program format
67	Setblock failure

NEW COMMANDS

***FNfseek&(bytes&, handle, mode)*: This GEMDOS call is used to move along a file on disk. Mode can be 0 to seek from start of file, 1 to seek from current position and 2 to seek from end of file. The function returns the resulting file position or an error code.**

***FNfcreate(filename$, attributes)*: This function creates a file with specified attributes. Returns 0 if successful or a negative error code.**

***LEN*: A BASIC function that returns the number of characters in a string.**

***SADD*: Returns the memory location of a string. Note that strings can move around in memory.**

***DEF FN*: Used to define a user function. Functions must be declared before they are used. A function must return a value.**

***FNfrename(oldname$, newname$)*: This GEMDOS function renames a file. It returns 0 on success or an error code on failure.**

***FNdcreate(foldername$)*: A GEMDOS function that creates a folder.**

***FNfdelete(filename$)*: This function deletes a file. Like other GEMDOS calls, it returns 0 on success or a negative error code otherwise.**

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DELETING

At the end of the last tutorial, we parted with a challenge: how to alter the snooker score program so that it prints its results in reverse order. This shouldn't have presented too many difficulties for you. The part of the program that controls the printing is the **for** loop line:

```
for (f=0; f<=15; f=f+1)
```

We can alter this so that the loop counts down from 15 to 0:

```
for (f=15; f>=0; f=f-1)
```

Putting this line into the program gives the required result. To do this, edit *MAXBREAK.C*, then recompile and link it. On running the program, the printout should be in reverse.

WRITING IN SHORTHAND

We can make this line a little more compact. Since programmers often want to do things like "add 5 to a variable, and store the result back into that variable", C provides shorthand forms for writing this quickly.

Taking the example above, to add 5 to a variable called "total", we might write:

```
total = total + 5;
```

The shorthand form of this is:

```
total += 5;
```

The two lines of code do the same thing, it's just that the second version is shorter to type! There are also shorthand forms for the other common arithmetic operations. In our **for** line, we could use this shorthand to replace *f=f-1* with *f-=1*.

In fact, there is an even more compact way of writing this statement. Since adding or subtracting one from a variable is a particularly common operation, there are a couple of extra-shorthand ways of writing such code. Adding one to a variable (also known as incrementing the variable) is written:

```
total++
```

As you can probably guess, subtracting one from, or decrementing, our variable looks like:

```
total--
```

You'll quickly get used to these different ways of writing the same operation. The increment and decrement operators are very commonly used in **for** loop control lines. Applying these new features of C to our snooker program, we can write the modified **for** loop line as:

```
for (f=15; f>=0; f--)
```

which is how an experienced C programmer might have written it in the first place!

UNKNOTTING STRINGS

That's more than enough arithmetic for one session. For the majority of this tutorial we'll be looking at text and how to manipulate it.

Take a look at the listing, which is on the cover disk as *DELETE1.C*. This is the first draft of a simple program that should evolve into a useful little utility over the next couple of tutorials.

The program is designed to get a filename from the user, and then delete the file. This in itself isn't very useful, as it would be quicker for you to simply drag the unwanted file to the trash can, but it will do as a starting point. Starting from the top of the listing, the first few lines should be familiar to you – there are several multi-line comments, a **#include** line to get one of the library header files, and a declaration for the one function defined by the program, **main()**.

The keyword "void" is used in the declaration to say that **main()** is a function which does not have any input variables, and does not return any results. Here's a question for you: how do you think we should declare a function that takes two integer inputs, but has no result value? The answer will be in the next article.

Moving on into the body of the function, we see that it declares two variables.

One of these is an integer called "result"; the second is an array of 128 characters called "pathname". Now is probably a good time to look at the boxes that tell you more about arrays in C, and how string variables work.

Having struggled through those details, the rest of the program should seem straightforward! The next couple of lines print some text on the screen using **printf()**, a library function that you already know about. The "\033" in the first line of text needs a little explanation. In the last tutorial, we found out how to print characters that we couldn't type from the keyboard, like tab and newline, using character pairs like "\n" and "\t".

In fact, there is a more general way to get at such characters. Any character can be used by writing a backslash followed by the ASCII code in base 8 (octal).

This strange method is a hangover from the days when C was invented, when octal was a popular

ARRAYS

Just like BASIC, C supports array variables for the processing of lists of data. An array declaration looks like a normal variable declaration, except that it is followed by a number in square brackets indicating how many elements the array is to contain. This is similar to the DIM statement in BASIC.

As an example, think about an array of 20 numbers, which is to be filled with the first 20 multiples of 11. The C code to do this is quite simple (note that this is only a fragment – you can't run it directly, because it's not part of a function):

```
int f, list[20];

for (f=0; f<19; f++)
list[f] = 11 * (f + 1);
```

The first line defines a normal integer variable "f", and an array of 20 integers, called "list". In C the numbering of the elements in an array starts from 0, so in this example, we have 20 integers in "list", numbered 0 to 19. This is different to most BASICs, which begin numbering from 1, so be careful !

The final two lines make up a for loop, something you should be quite familiar with by now. Notice we've used the increment operator to add one to "f" on each pass round the loop. The brackets on the last line are necessary because multiplication is done before addition.

MISSED THE SEPTEMBER ISSUE COVER DISK WITH PROSPERO C?

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FILES

In this month's C tutorial, Jon Ellis continues to explore the basics of the language with strings and arrays.

way of representing numbers. "\033" represents a single character, ASCII 27, which is ESCAPE. Another character that must be represented in this way is the null used to terminate strings, which is written as "\000", or more commonly, "\0". When the first **printf()** line is run, it prints ESCAPE, followed by a capital E to the ST screen, which causes the ST to clear the text screen. The rest of the text is then displayed normally.

After printing the text, the program uses another ANSI library function, **gets()**, to read a line of text from the user, and to put it into our character array, "pathname". The text is checked to see that it is not an empty string, by looking at the first character in the array. Note the use of single quote marks: double quotes are used to demarcate a text string, such as those in the **printf()** lines. Single quotes surround a single character, in this case the null character, "\0". It's obvious really – it wouldn't make sense to compare a whole string with a single element in a character array.

If the first character in the string is the null-terminator, an error message is printed, because files cannot have empty filenames! Control then moves past the **else** keyword and its block of lines in curly brackets, to the last **printf()** line. If the filename is not

HOW STRINGS ARE STORED

One of the differences between C and other high-level languages like BASIC, is that C expects the programmer to have an appreciation of how variables are stored in memory. This makes it very easy to write C programs that interface to assembly language for time-critical code like animation.

In C, there is no such variable type as a string. Instead, C provides a type called "char", which is short for character. "char" variables can hold a single character, and take up one byte in memory. Given this, to make a variable capable of holding a string of text, we just define a variable that is an array of characters.

There's a problem here. To define an array we need to know its size in advance, yet we might want to store different length strings in our variable. How can we get around this difficulty? The answer is that we must make the array big enough to hold the largest string. However, if we do this, how does C know how much of the array we are using at any given moment? The method that C uses is to put a special marker character at the end of the string. This terminator character has the ASCII code 0, and is known as a *null*. In books on C, you will often see the phrase "null-terminated string", referring to this strategy.

Putting this theory into practice, to store the string *ST Review*, we would need to define an array of 10 chars (the text is 9 letters long, and we need one more space for the null terminator). This would be stored in memory like this:

	S	T		R	e	v	i	e	w	\0
Array Element	0	1	2	3	4	5	6	7	8	9

If, at a later stage, we wanted to store some different text in the same variable, let's say *CIX*, the memory would look like this:

	C	I	X	\0	e	v	i	e	w	\0
Array Element	0	1	2	3	4	5	6	7	8	9

If a string is empty, the first element of the array will contain the null terminator. It's common to see code checking for empty strings, rather like this:

```
if (text[0] == '\0')
  printf("String is empty\n");
```

which can be translated into BASIC as:

```
IF TEXT$ = "" THEN PRINT "String is empty"
```

Notice the double equals sign in the C code. In C, a double sign is used to test for equality, and a single sign is used to assign values to variables. Forgetting the double sign in if statements is one of the easiest mistakes to make.

```
/*
** Simple program to delete a file, illustrating
** the basics of string input.
**
** by Jon Ellis, 21 July 1993 ST Review 18
*/


/*
** Include library file declarations...
*/


#include <stdio.h>        /* ANSI standard IO functions */

/*
** Declare the functions defined in the program...
*/

void main(void);

/*
** The program starts here...
*/

void main(void)

{
    int result;
    char pathname[128];

    printf("\033EFile Deleter version 1\n\n");
    printf("Enter name of file to be deleted: ");
    gets(pathname);
    if (pathname[0] == '\0')
       printf("Can't delete a file with no name !\n");
    else
       {
       result = remove(pathname);
       if (result != 0)
          printf("Failed to delete file - wrong name ?\n");
       else
          printf("File deleted OK\n");
       }
    printf("Press RETURN to exit: ");
    getchar();
}
```

WHAT'S IN A NAME?

We've been using variables in C without worrying too much about the rules that define what is a legal name for a variable. To put the record straight, here are the most important rules:

- **Names are made up of letters and numbers. In C, the underscore, "_", is treated as a letter. This is useful, because it looks enough like a space to make writing meaningful variable names easy.**
- **In theory, names can be as long as you like. In practice, very long variable names quickly become a real pain to type.**
- **Names cannot begin with a number.**
- **A name cannot be the same as a C keyword, like if or for, etc.**
- **Upper case and lower case are treated separately, so one variable called "total" is not the same as another called "TOTAL", or a third called "TOtaL".**

The same rules apply to function names. Don't try to use the same name for a function and a variable, as this is likely to cause confusion, both for the compiler, when it tries to figure out what you mean, and for you, when the compiler gives some almost incomprehensible error message.

On top of these rules, which the compiler will enforce, here are some more informal suggestions that will make your programs easier to read and understand:

- **Try to give your variables meaningful names. Single letter variable names are best used only for loop control variables or temporary working variables.**
- **Don't begin names with an underscore – many function libraries use such names for their internal variables.**
- **Don't use variable or function names consisting of upper-case letters only. It's customary to reserve such names for user-defined variable types and #define constants (more about these in later tutorials).**

empty, control passes to the **else** block of statements. Another ANSI library function, **remove()** is called to delete the file from the disk.

This function returns a result of 0 if the operation succeeded, or some other number if not. The program checks the result, and prints an appropriate message, before ending. The line:

```
if (result != 0)
```

is a test for result not equal to zero. In BASIC this would be written IF RESULT <> 0. Using the C workbench, compile and link the program, and then test it. Be careful though, as it will cheerfully delete any file you ask it to, including your most important word-processor files and programming masterpieces...

In this tutorial you've seen how to use arrays in C, and how these can be used to process text strings.

Next time, we'll improve our file deletion program so that it can deal with many files at once, and learn about more features at the same time.

NEW LIBRARY FUNCTIONS

gets(text); Waits for a line of input from the keyboard and copies it into the character array given as the input argument (here called "text"). It does not check that there is enough space to fit in all the data – it's up to you to make the array big enough to cope in all normal circumstances!
gets() null-terminates the text, so that it can be processed by other C functions.
remove(filename); Attempts to delete the disk file whose name is in the character array given as the input argument. The function returns 0 if the deletion was done, or something else if not (maybe the disk was write-protected, or the file did not exist?).

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GM 86: Plop + 4 more. Reviewed issue 15.
GM 87: Bar Games. Pool, Poker, Darts, etc.
GM 88: Hunt for Grey November. Good sub hunt game.
GM 95: Arthur of the Britons. A great RPG (1 Meg).
GM 97: Fatemaster. See review issue 14.
GM 109: Colour Clash.
GM 111: The Glass Buttock of Tharg. Reviewed issue 13.
GM 112: Rebound. A new D. Cobbledick classic.
GM 113: Mrs Munchie & Galaxians. Great Pac Clone+.
GM 114: Course Angler. Fishing Sim.
GM 117: Grandad 2 (2 disks) 1 Meg.

ADVENTURES

ADV 28: A Night on the Town.
ADV 31: Susan. Risque adventure.
ADV 32: Christian Adventure.
ADV 35: Deena. Risque adventure.
ADV 40: Grandad and the Quest. The best.
ADV 41: Windfall, a Jason Drew adventure.
ADV 50: Black Dawn. A graphic adventure.
ADV 51: TROS. A new role playing game.

UTILITIES

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UTA 34: Database Master 1.
UTA 36: Data Editor (1 Meg). Data into graphs.
UTA 38: Five Databases. One of them will do it!
UTA 46: Inventory Pro.
UTA 48: Sagrotam. Virus killer.
UTA 49: Accountability.
UTA 52: Food/wine menu maker.
UTA 53: German Translate.
UTA 56: HP Deskjet utilities & drivers.
PRG 8: GFA Expert.
MISC 1: Generation Gap. Family tree.
MISC 2: Poolwise V3.8. Try for a fortune.

MUSIC & MIDI

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MUM 19: Tri-sound sequencer.
MUM 24: Alchime Jr. Multi-tasking sequencer.
MUM 45: PSS Utilities (disks for 680/780/790).
MUM 53: Riff, Backing track creator (1 meg).
MUM 54: K1<>K4, sample converter, 1 Meg.
MUM 55: Yamaha SY22 editor 1 Meg mono.
MUM 56: Guitar Professional, learn those chords.
MUM 57: Final score. Score writer, mono.

DTP & WP

WPD 1: ST Writer Elite & Spell Checker.
WPD 8 to 10: Calamus fonts.
WPD 14: Calamus Manual. Handy tips.
WPD 15: 1st Word Utilities.
WPD 19: Printing Press (1Meg).
WPD 20: Printing Press extras.
WPD 23: DB Writer, Hi res WP package.
WPD 24: DB Writer support disk.

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AAG 5: Crackart V1.0, with ENGLISH doc (1 Meg).
AAG 21: Picture Converters.
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AAG 30: Metafile pictures (Mono)
AAG 31: Metafile format objects.
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AAG 38: Crackart V1.36 (1Meg).
AAG 39: Atari Image Manager, NEW VERSION.

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STRONG

PART TWO: PRINT STYLES AND FONTS

Having shown you the intricacies of page layout, Tony Kaye looks at how to enhance your documents using different print styles and fonts...

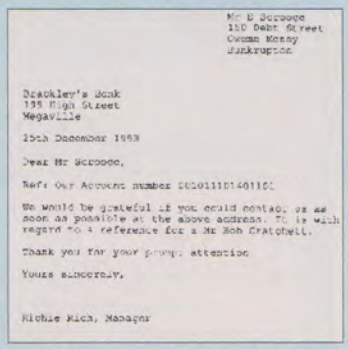
In days gone by, typewriters were invariably used for sending letters. These produced a professional looking document (figure 1) and were mainly owned by businesses.

A private individual wanting to send a letter wrote it by hand, for even if they had access to a typewriter, the chances were they didn't know how to use it.

Then came the computer. This didn't solve the problem immediately, but companies started to send letters to people, many of whom hadn't even seen a typewriter, using a new system with a computer and printer.

The casual user could now go to work and deal with their mail by chatting up the secretary or fumbling along the keyboard themselves in their lunch break.

Today, the computer and printer revolution has happened. Virtually every home in the land has a computer of some sort and more and more people have "serious computers", hard disk drives and printers. Everyone who has such a package has a word processor that can be used to create letters and documents with little operational skill. But, mistakes are still made...



Mr D Scrooge
150 Debt Street
Owemm Money
Bankruptcon

Drabkley's Bank
195 High Street
Megaville

25th December 1993

Dear Mr Scrooge,

Ref: Our Account number 0010111010401101

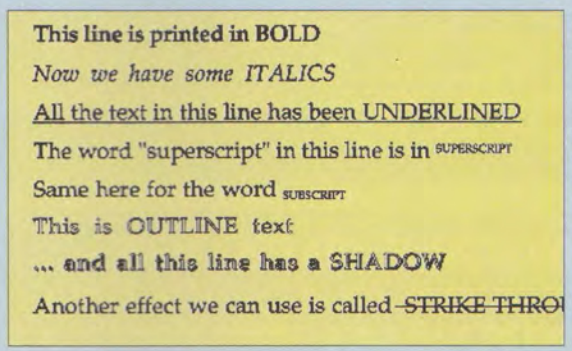
We would be grateful if you could contact us as soon as possible at the above address. It is with regard to a reference for a Mr Bob Cratchett.

Thank you for your prompt attention

Yours sincerely,

Richie Rich, Manager

Figure 1: This is how all letters used to look. Boring, isn't it?



This line is printed in BOLD

Now we have some ITALICS

All the text in this line has been UNDERLINED

The word "superscript" in this line is in SUPERSCRIPT

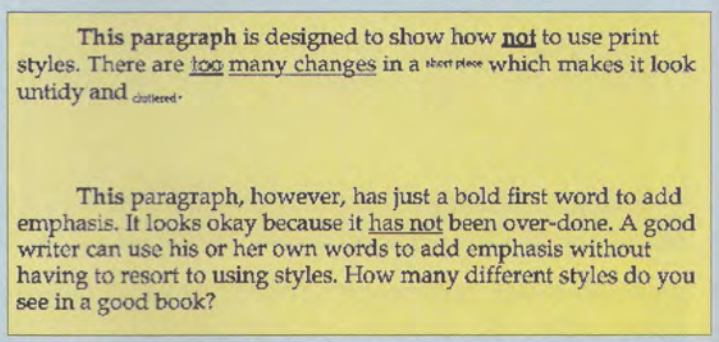
Same here for the word SUBSCRIPT

This is OUTLINE text

... and all this line has a SHADOW

Another effect we can use is called ~~STRIKE THRO~~

Figure 2: Not all of the styles are available from each package, but most of them can be used.



This paragraph is designed to show how not to use print styles. There are too many changes in a short piece which makes it look untidy and cluttered.

This paragraph, however, has just a bold first word to add emphasis. It looks okay because it has not been over-done. A good writer can use his or her own words to add emphasis without having to resort to using styles. How many different styles do you see in a good book?

Figure 3: Look at these two paragraphs and decide for yourself which one looks better...

STYLES AND FONTS

One of the beauties of using a word processor is not being limited to the same style of printing. It is nice to tailor a letter to suit whoever is receiving it. It is very rare these days to get mail in the style of a typewriter from anyone using a word processor.

Whichever word processing package you are using, you will probably have a choice of fonts and print styles. These vary from package to package. *1st Word Plus*, for example, is limited in choice to the default printer font with four choices of pitch, whereas *That's Write* can hold up to 20 fonts in memory and more can be added by removing others. Both change the appearance of the characters you are typing, so what's the difference?

A **font** is a complete character set with each letter designed to create an overall effect for that font. For example, the font used for *ST Review*'s main text that you are reading now is called Stone Sans while the headline is **Futura Bold**.

Strictly speaking, each style of text is called a font and the overall collection of sizes in a given style is called the **typeface**.

But as sizes can be easily modified by computer, the two expressions have become more or less interchangeable. Within the font, we can add the print styles like bold, italics, shadow, subscript, superscript, strike-through outline, and underline as in figure 2.

The different styles are there for a variety of reasons, but should not be over-used.

A letter with too much variation looks untidy and very unprofessional. Take a look at figure 3.

SERIF AND SANS SERIF

A font can be designed with or without serifs, hence the terms **serif** and **sans serif**. These are the little tails found in the formation of the letters with the examples below showing the difference between the two.

The two letter "T"s on the next page are both the same point size but because the structure varies, the right-hand letter is physically larger.

The two fonts used are Times (left) and Helvetica. Figure 4 shows this in the context of a paragraph.

WHAT'S THE POINT?

I've been using the term **point sizes** above. DTP packages and some word processors use the point system to describe the size of a font. The point is a standard term used in printing and dates back to when printers used lead and typesetting was all achieved by hand. There are a lot of terms from this time that are still in use today.

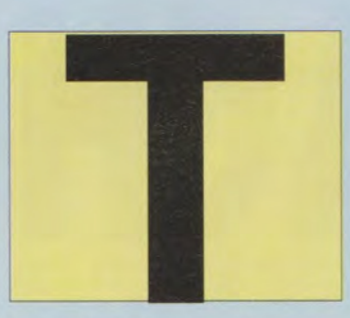
There are 72 points to an inch, so

FONT STRUCTURES

A font's structure gives it character. The height of the letter from the baseline on which it sits to the waistline is called the x-height. This is because the letter x is used to measure it. Within the total height of the letter, the x-height can vary quite considerably, making quite a difference to the size. Look at the three examples below – they are actually all in the same point size.

All three words are described as having the same point size but, as you can see, they vary quite considerably.

WORDS



18 point text would be a quarter of an inch in height, for example. This is the font size, not the letter size; see figure 5 for how the size is broken down.

MIX AND MATCH

When using fonts, don't get carried away. It's all too easy to use a lot of different fonts and styles in your document. Instead of looking good, it just looks messy.

There are no hard and fast rules as to how many fonts can be used on a page before it becomes a jumble.

Look at the two letters to the bank in figures 6 and 7, both created with *That's Write 2* and printed on an Epson Stylus 800 printer, and decide for yourself which one is most likely to get the loan!

...AND FINALLY

Using fonts and print styles can add a lot of character to your work, but the only way to find out is by making mistakes.

The golden rule is "less is more". You can make your letters more interesting by adding just the right amount of emphasis in the right place, but don't overdo it. Try to match the font to the receiver of the letter and don't be afraid to experiment with different styles.

For example, a personal letter to a friend looks good in a script font, whereas a professional finish is more likely to be obtained from a more staid font like Times or Schoolbook.

JARGON JOGGER

Ascender – The rise in certain letters above the x-height (see below) in lower case is called the ascender as in the letters l. d, t, f, h and b.
Descender – The opposite of Ascender. Dropping letters such as y, g, p, q and j have a descender.
Font – A collection of letters in a particular style, such as Times, Helvetica or Stone.
Point Size – The size of a letter is measured in points. There are 72 points to the inch.
Typeface – A font only describes one size of a particular style. A collection of different sizes is called a typeface.
Serif – A font that has small tails on the letters is described as serif, for example, Times. For an example of a serif style, look at a picture caption on this page.
Sans Serif – This is the opposite of Serif. The body text and headlines on this page are Sans Serif fonts.
Style – Adding features to enhance the text within a font uses a particular style such as Bold or *Italics*.
x-height – The height of the text without ascenders or descenders is called the x-height. This is because x is the letter used for consistent measurement.

This is written in 14 pt Helvetica font. As you can see, it is large, although the point size is the same as before. This is because the structure of the font is different to that of Stone or Times. Note that the letters are straight with no tails. This is known as a Sans Serif font.

This paragraph is 14pt Times font. As you can see, it looks smaller than the one above, although the point size is identical. You can get more words on the page with Times and it is quite easy on the eye to read. There are about the same number of words in each paragraph.

Figure 4: The font size is the same for both sets of text but the top one looks physically larger.

Figure 5: The point size is slightly larger than the full height of the letter.

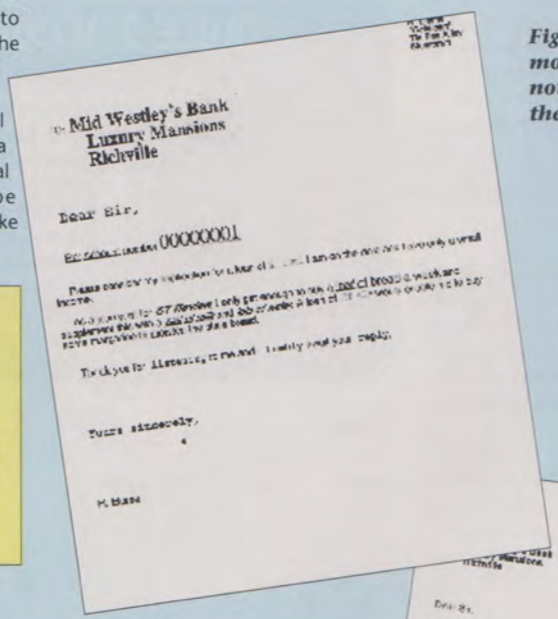


Figure 6: This looks more like a ransom note than a letter to the bank manager!

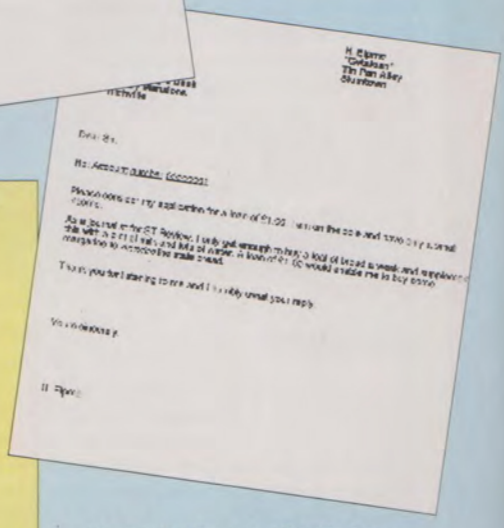


Figure 7: The use of style has been minimised and only applied for effect. Results are a lot more professional.

COMMS COACHING

Fed up of trying to make sense of your modem manual? Graeme Rutt becomes a man of letters... and numbers!

In my previous tutorial articles I found myself constantly referring you back to your modem manual. To make up for this, the next few Comms Coaching articles will explain modems, modem standards and modem command sets.

Most modems follow the Hayes command set – text-based commands that control aspects of your modem. If your modem conforms to the Hayes set of commands then this series of articles is for you.

SPEED

Common speeds are 2,400, 9,600 and 14,400 bits per second (bps). These are the rates at which your modem sends information. How does this relate to the real world? A bit is the smallest unit of data a computer stores and eight bits make a byte. Enough information can be stored in a byte to make up a single ASCII character. Modem transmissions slap an extra bit onto the beginning and end of the character so to convert bps into characters per second (CPS), divide the bps figure by ten.

To work out the time it will take to send a file at a particular speed, divide the file size by the CPS. Table 1 shows various speeds and the time taken in seconds. These are the optimum times; in practice, transfer is invariably slower.

This isn't true if your modem has either MNP or V.42bis stamped on its box. These offer error correction and data compression, so changing the effective speed of your modem. On a noisy line, data is re-sent and if your data is of a suitable type, it can be compressed and so sent faster. On a 14,400 bps connection you should look for 1,600-1,700 CPS for pre-compressed data and upwards of 3,000 CPS for other data (a text file, for instance).

STANDARDS

The comms world has almost been as fortunate as the MIDI world, in that a single central standard has been chosen for the methods by which modems transmit data. This is mainly due to the CCITT, the institute that defines the "V" standards. These denote the different speeds at which a modem can send data. The V conventions consist of the letter V itself, followed by a number and then possibly by the word "bis". Table 2 lists the most popular conventions.

As mentioned above, V.42 and V.42bis aren't the only error correction/data compression protocols. There is also MNP (Microcom Networking Protocol) which is more commonly used but slightly less intelligent. MNP comes in a number of flavours – from number 1 to number 10 – but only two are in common use: MNP4 for error correction and MNP5 for data compression.

Unfortunately, MNP5 will attempt to compress any data it sends so wasting time on files that are already compressed. V.42bis recognises compressed data and doesn't spend time trying to compress it further. Which you use depends very much on the on-line system you're calling – if your favourite BBS doesn't have V.42bis then you won't be able to use it no matter what modem you have!

Luckily, modern modems handle these things transparently – you don't have to get involved with choosing the correct speed, error correction or data compression protocols. When one modem dials another, they have a chat – a handshake – and decide on the best speed and protocol that the two modems can handle.

Problems can occur, but these are normally by judicious use of the modem's Hayes commands which will be looked at next issue. Until then – see you on-line.

If you have any problems with comms, you can get in touch with me via modem by E-mailing "sabbath@cix.compulink.co.uk".

TABLE 1: FILE TRANSFER TIMES

file size	2400 bps	9600 bps	14400 bps
10Kb	42	10	7
100Kb	417	104	69
1Mb	4167	1042	694

(times in seconds rounded to the nearest whole number)

TABLE 2: V CONVENTIONS

V.21	standard defined by the CCITT for transferring information at 300 bps
V.22	for 1200 bps
V.22bis	for 2400 bps
V.23	for 1200/75 split rate
V.29	for 4800 bps
V.32	for 9600 bps
V.32bis	for 14400 bps
V.42	an error correction protocol
V.42bis	a data compression protocol

Receiving a .LZH file using V.42bis at 14,400 – not a bad speed at all!

JARGON JOGGER

Hayes – the US modem manufacturer that invented a set of commands for controlling their machines.
ASCII character – a standard text character or control code, given a value between 0 and 127.
MNP – Microcom Networking Protocol, a standard designed to allow varying levels of modem connection between different modems. Each level – or class – is downwardly compatible with any other.
Error Correction – a method allowing "safe" data transmissions. If data is sent incorrectly, the receiving modem requests that the data is re-sent. Data is sent in blocks with numbers that are mathematically connected to the data in that block.
Data Compression – data is compressed by a modem just before being sent and then decompressed by the receiving modem. This effectively results in faster transmission speeds.

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Access

ASK THE EXPERTS

Another month, another mailbag! We're back once again to answer your questions...

MEGA HASSLES

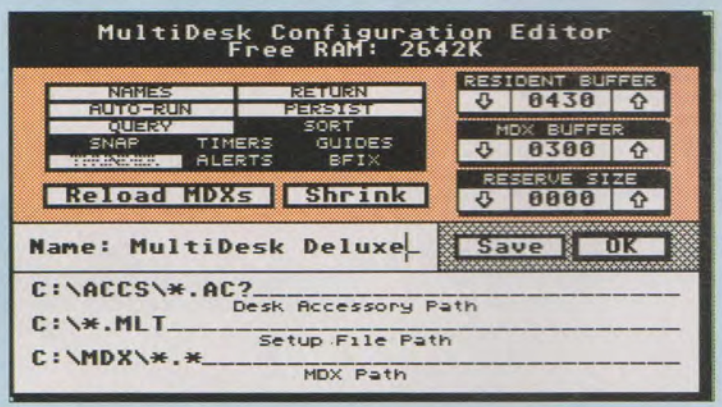
I have recently upgraded to a MegaSTE and I am experiencing a couple of minor problems which you might be able to solve.

1. When using *Easy Draw* and *VIP Professional*, a single click on the scroll bars seems to be interpreted as a double click. I have tried the programs running at 8MHz with the blitter turned off but the problem still persists. All of my other programs work correctly.

2. After backing up the hard drive using *Vault*, the text in the menus appears to be double size on returning to the desktop. A warm reset cures the problem.

3. Could you also explain the procedure to be followed if for any reason the computer fails to boot from drive C? The software was supplied by Gasteiner.

R G Tapster, Middlesborough, Cleveland



BFIX from the configuration menu in Multidesk is for curing the double click problem in TOS.

The problem with the double movement is very annoying. It is a bug in TOS that first appeared in version 1.6x and is still evident. There are several "fixes" available from the public domain that will cure it. Some programs even have the fix built-in, like Multidesk Deluxe from Codehead.

Another minor bug in TOS that has been there since the beginning is the "40 folder bug". When you have opened or closed a total of 40 folders, the display is affected and you need to reboot the computer.

Most hard disk utility packages carry a program called FOLDxxx.PRG or another method of adding extra folders to increase the limit. They all use memory, but should help get

PROGRAMMING PROBLEMS

TO PROGRAM OR NOT TO PROGRAM?

Can you help me? I've been an *ST Review* reader for as long as I have owned my 520STE – since last November. I find your magazine by far superior to the other two top mags and your disks are second to none.

I haven't, however, written in to praise you. I do have a query and some praise for another company as well. First of all the praise is for two lads: Martyn and Dave at Tumblevane PD library. I telephoned Tumblevane, spoke to Martyn and found him to be everything that his ad stands for. I got a fast and friendly service and an excellent PD library disk to view at my leisure.

He answered my queries about PD that I'm sure a lot of other readers are dying to ask, and even sent me *Crack Art* (an excellent program) without any cash up front – now that's trust. Well done lads, you really deserve to go far.

Now to my problem. Since I've had my STE I've been hooked. I've upgraded to one megabyte on the advice of your mag and am now studying BASIC Programming with I.C.S. (International Correspondence School). Also I've bought various programs like *SEUCK* (Shoot 'Em Up Construction Kit) and *3D Construction Kit*. Now what I want to know is can programs like *SEUCK* be used to develop quality and playable games. I have tried and successfully made several games with *SEUCK*, but when I compare them to programs on a commercial level, there just doesn't seem to be any comparison. Is it just me being impatient and needing more practice? Or am I using programs that kids would use and not programmers?

Can you recommend a program for me to buy? Or is there a language that I should be learning in order to write good programs? I want to be able to make shoot 'em up and platform games.

One last thing. I am interested in correspondence with other ST users, clubs or user groups. Once again thanks for a great mag – don't change it, like some would have. I will buy every copy if needs be to keep it at the high quality standard it is!

Victor Wright, Birmingham

More deserved praise. Well, done, Tumblevane.

The programs you mention are good for getting people interested in programming, which is not easy. Commercial games are written by programmers who would create their own code to complete routines rather than using someone else's solutions. They write using 68000 machine code or C which are both faster than BASIC for most applications. Languages like STOS BASIC are fine for learning the processes involved, but you really need to progress to a faster language for commercial games purposes.

We printed a list of user groups in the February issue of Atari ST Review (Issue 10) and you can get a copy from our back issues department. The nearest group to you is the Bloxwich Computer Club, Edward Hunt, 29 Station Street, Bloxwich, Walsall WS3 2PD.

For information about user groups in other areas of the country, contact the Association of Atari User Groups, 45 Coleburn Road, Lakenham, Norwich NR1 2NZ. TK

PACKED WITH PROBLEMS

I am a keen programmer in most languages and on two programs I have seen lately, the usual name of the program at the top is replaced with something like:

ATOMIK v3.5 by ALTAIR MAX

Is it a programming language and if so where can I get hold of it?

Thank you so much for your *Write On* program, I have just bought a Canon BJ10SX and output is just perfect! But even though I am pretty fast on the two fingered stab approach at typing, I would like to learn how to type properly. Can you recommend a good typing tutor in the public domain?

Kenny Hutchings, Dorset

Atomik is not a language, but a packing program to fit more data onto a standard disk. It's in the public domain and the latest version (3.6) is available from the ST Club, 2 Broadway, Nottingham, NG1 1PS. Tel: 0602 410241. The disk you want is catalogue number UTI232.

There is no real substitute for a good book or, even better, evening classes to learn to type properly. Failing that, there are a few PD typing tutors. The ST Club offer such tutors on disks WPR34 and WPR79. TK

round the problem. Just replace the "xxx" in the program name with the number of extra folders (50 or 100 should be enough) and place it in the AUTO folder on drive C. If you don't have the program, your favourite PD library will have it on a utility disk.

If your computer won't boot from the hard drive, place the utilities disk in the floppy drive and boot with that. Open the window and find the driver program SDDRIVER.PRG. Running this should then give you access to the hard drive to reformat or add a new boot driver from within the SDMANAGE program. TK

YET ANOTHER TIMEWORKS PROBLEM

I know it is now over 6 months since you gave away *Timeworks* on your splendid magazine's cover disks, but I have a problem which has only just recently become apparent.

When I first received issue seven of *Atari ST Review*, I immediately ran the installation program, configuring it for my system at that time, which was a two megabyte 1040 STE, twin 720K floppy drives, a 9-pin dot matrix (Epson compatible) printer, and a hi-res mono monitor. All worked perfectly well, but the only thing letting me down was my ancient Brother M1009 printer, which was just not up to the job.

In June of this year I purchased a HP DeskJet 510 inkjet printer, (which I used to print this letter using *Write On* given away in issue 13), and attempted to reinstall *Timeworks* for my new printer (using the LaserJet Plus driver as recommended by Philip Byford in Issue 9).

The problem is that all goes well during the installation process until I run the font-width program at the end.

The program pauses to ask if I am installing a Postscript laser printer, to which I click on "no" and the computer immediately locks up, leaving no option but to switch off or reset. Please help me as I am pulling my hair out!

Phillip Hills, Whitwick, Leicestershire

The Timeworks program has caused a few setup problems over the last year. The symptoms you describe are a result of GDOS not being resident when you run the FONTWID.APP program.

Place the Startup disk in drive A. When you switch the computer on and the desktop appears, swap the disk for the Fonts disk. Now run the program and all will be fine.

Incidentally, the upgrade offer for Timeworks II is still available. Contact GST Software on 0480 496575 if you now want to step up to the later version. TK.

THE MYTHICAL CHANNEL FILTER

I have a problem with a Yamaha DD12 Drum Kit. I want it to only receive on MIDI Channel 10, but according to Yamaha's Mr Miller in their service department, it can't be done without a MIDI Channel Filter.

My local music shops are not coming up with such a device or indeed where I can get one from. So my question is, does the lesser spotted Channel Filter exist? If so where does it live and do they hibernate for winter?

I am currently running (don't hold your breath, it's nothing spectacular), *Steinberg Pro24 vIII* (which is more that enough for what I need), a Casio HT700 (which is definitely showing its age, but we're in love), a Yamaha PSS51 and the infamous DD12 which wants to play all and sundry, making it virtually useless in a system without a channel filter, which then makes it expensive!

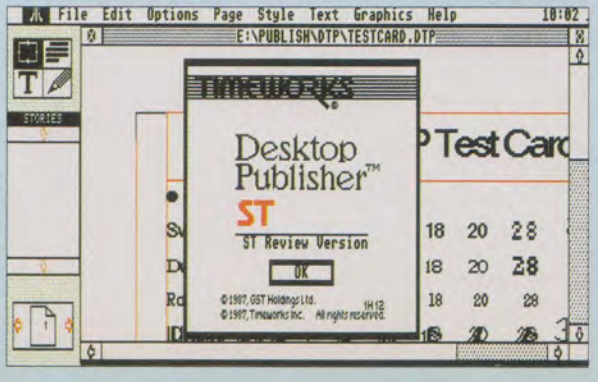
It took me one letter, two phone calls and 8 weeks to get a response from Yamaha. I'm hoping that you improve a little on that.

On to a more cheerful note. I want to thank you for the feature on MIDI Thru Boxes that you ran in issue 6 (October). I didn't buy one as I didn't know the address for Philip Rees and again the local shops are oblivious to such an item. So I made my own for less than £5 It's far more versatile than the Thru system and quite happily runs my three MIDI instruments, or if I want, just one or two without the need to have all the units switched on and the best part is that I haven't used batteries or mains power. So I'm not using up a valuable plug socket or having to mess around with batteries. Thank you for your time.

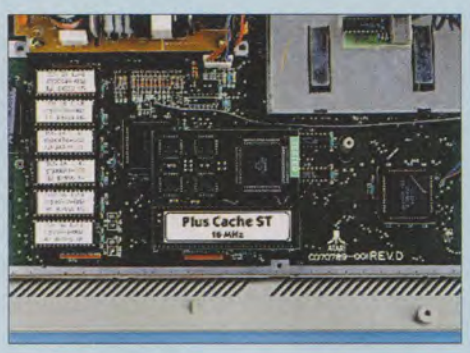
Brian Halhead, Telford, Shropshire

Yamaha's comment is indeed correct – you do need a MIDI filter, but such items are not cheap. The Anatek Pocket Filter will let you filter out all MIDI data on all channels apart from channel 10. Best of all, it powers via the MIDI cable and so has no batteries to run out. Price? A rather steep £99. For more information, call MCM on 071-723 7221.

I'm rather intrigued about the MIDI Thru box without batteries or mains. I have a distinct feeling that you've simply spliced together two or three cables much the same way as you would with audio leads. While this will work, it reduces the level of MIDI signal proportionately and unless you use short cables, you'll find that data starts to get corrupted. You usually know that this is happening because notes sound and then refuse to shut off. Still, if it works for your system, good luck to you. VL



You can only get this far when the program is not properly installed.



Plus Cache 16 is an easier upgrade path than trying to replace the 68000 with a 68010.

68010 REPLACEMENT?

I am writing to you in need of some technical assistance.

I have been an Atari user for about 5 years now. I have 2 STs, a 1Meg that my son uses for playing games on although it has recently been superseded by a Mega Drive, and I have a 4 Meg ST, mono monitor and 120 Meg hard drive. I also have a PC, but I still tend to use my ST a lot more than the PC. My problem is one of the lack of speed on the ST. After using the PC, it really comes across. To combat this problem, I bought, second-hand, a new processor chip, a 68010 made by Motorola. The gentleman I purchased it from said that it was a direct replacement for the 68000 chip.

When I rang up Motorola to ask if this was the case, the young gentleman I spoke to was as much help as a poke in the eye with a blunt stick. Basically, he said that it was a direct replacement for the 68000, the only difference being that it was able to use "virtual memory" and that it did run at a faster speed of about 10 MHz as opposed to the 8MHz of the 68000.

When questioned further as to whether I would have to change any other components or add other components or whether it was possible to piggy-back the two chips and add a switch in case of an incompatibility problems, I'm afraid he was of no use what so ever. In fact, he actually admitted to reading what information he had about the 68010 from a manual.

If you or any of your colleagues know of anyone who has had to replace these chips or if you have any information about the procedure, would be grateful of your assistance.

The only help that I have had is from a young man at Ladbrokes in Preston. He said that he thought it was possible to replace the chip and that he had thought he had read an article in ST Applications about someone doing exactly that. Unfortunately, I do not have the address of ST Applications, so this may also be of use to me. Thanking you in anticipation of some advice.

Trevor Rogensky, Skelmersdale, Lancs.

The information you have been given, whilst not being totally wrong, is misleading. The 68010 IS a direct replacement for the 68000, but not in the ST. It has extra calls and different addresses that could cause your software to crash. The speed increase it would give are really not worth the effort.

A far better option would be to go for the Plus Cache 16 MHz accelerator from the Atari Workshop, 17-19 Blackwater Street, East Dulwich, London SE22 8RS. Tel: 081-693 1919. This will cost £129 plus fitting and will give a much better speed increase. TK.

LETTERS

Your letters continue to flood in – and so they should! If you have a comment to make, drop a line to me, Vic Lennard, and you could find a £25 cheque in the post for your troubles...

GOT SOMETHING TO SAY?

***ST Review* is your magazine and putting pen to paper gives you direct contact with us. As editor, I read every letter that you send and carefully select the ones for publication. If you want to complain, fine – but mindless insults will not find their way into Letters...**

It may simply be that you have a constructive criticism about an article in *ST Review*, or that one of our columnists has inflamed you with his honesty. Whatever the reason, drop a line to me, Vic Lennard, at:
Points Of View,
Atari ST Review,
Europa House,
Adlington Park,
Macclesfield, SK10 4NP.

Please do not send stamped-addressed envelopes as personal replies will not be entered into. All mail received is considered for publication unless otherwise stated and we reserve the right to edit letters where necessary without altering the context.

COMPANY COMPLAINT

I read with some interest your article regarding the comparison of MIDI song files from various companies that specialise in this field. I applaud the concept of such a review, which has been long overdue in our opinion, but found this article to be fundamentally flawed as it was based too much around subjective and personal tastes.

One misguided comment, "some songs simply have too many instruments", was such a silly remark from a person of Mr Lennard's musical background who should have known better. The MIDI songs files we produce are transcriptions as opposed to mere arrangements. We try, within the limits of 24-note polyphony, to reproduce an authentic reproduction of the original song. We endeavour to use the same instruments as used on the record and make no apologies whatsoever regarding our effort in reproducing, in full, the most accurate transcriptions available.

Other oversights by Mr Lennard included no reference to the fact that we used Registered and Non Registered Parameter numbers to create such effects as Wha Wha Guitar ("Hang on in there Baby"), detuned and panned snare effects ("Rhythm is a Dancer") and careful use of System Exclusive to enable us to simultaneously use two different types of drum kits ("Achy Breaky Heart").

Little or scant reference was made to the two different types of lyric files that are standard with all "Hands On" MIDI files and were on the demonstration disk. Both files (.WDS and .LYC) are standard ASCII files which can be read from any WP/DTP package that supports ASCII or indeed directly from the desktop. The .WDS files are the lyrics to each song with the corresponding sequencer bar numbers included, used mainly for rehearsal purposes whilst the LYC files have these removed for clarity.

Each song is normally supplied with 6 different types of files. Indeed separate drum MIDI files are supplied as standard so that non GS users can easily modify the drum and percussion parts to suit other equipment. All of these aspects were ignored and the whole "thrust" of the article seemed to be based on feel.

Another phase used in the article, "it's clear that they (Heavenly Music) have been programmed by a performing musician" implied that data supplied from other companies was not. If being two years as a principal Flute and Tenor Sax on HMY Britannia and performing live for members of the royal family and heads of state of other countries does not qualify for a "performing musician", I don't know what does!

Finally and with regard to "feel", we have the greatest respect for Joe and Pauly at Heavenly Music, as both musicians and good friends, and we agree that their MIDI files are very good and their rhythm patterns superb, however a review of this nature should encapsulate ALL aspects of MIDI files and it was a real shame that Mr Lennard did not construct his article in a more objective manner.

Dave Clackett, Managing Director, Hands On Midi Software Ltd

You seem to have missed the point of my review which was based solely on the demo package that you, and the other libraries in question, send out to the public. Do the recipients care about System Exclusive data and Registered Parameter Numbers? I doubt whether more than a small proportion of them even have the faintest idea what such data is let alone what it does! My judgements were made in the best way possible – by listening to the files. While additional documentation is to be applauded, no amount of extra information can make up for poor sounding song files. So given the constraint of space, I concentrated primarily on what the files sounded like.

In my opinion, the general reverb level on your files was too high. I have since found out that this is a trick of yours to make the demo files sound impressive, but how would a member of the public know this? They wouldn't. With too high a level of reverb, the songs start to sound muddled and the only way to compensate for this is to remove some of the instrumentation, hence my comments.

To ensure that your files are accurate renditions, you error correct the timing and loudnesses of notes to a high degree. The down side of this is that the songs then lack that personal touch, awkwardly referred to as "feel". As Heavenly Music do not error correct files in such a manner, their songs sound as if they are being played by a live musician.

Perhaps I am wrong – and don't forget my comment at the end of the article that prompted readers to order the demo packages and judge for themselves. Maybe someone else would like to comment on how they found the various demos.

The Atari Falcon – one impressive competition prize...

COMPETITION ON CALL

Hot on the heels of a recent competition fiasco where you forgot to include one of the answers in the accompanying article and felt compelled not only to extend the deadline but also to effectively exclude the offending question much to the annoyance of people like myself who had the initiative to look elsewhere for the answer, you have now introduced the great social disease of the nineties to your competitions – the entry by telephone that "should cost no more than £1 at cheap rate"

(although you do cast some doubt about this at the bottom of the page). Aren't you limiting how many of your readership will enter with this policy? The magazine already sets you back £3.50 which is a substantial chunk of any kid's pocket money. And how about one entry per person? Or one entry form for all competitions in one issue?

On a more positive note, at least you have upped the quality of the dreaded blue pages even if they do include "Learn the Lingo" for the nth time.

Steven Paul Martin, Mount Vernon, Glasgow

"Hot on the heels... "? The mistake you mention actually occurred in issue nine, some nine months ago! At least we were honest enough to admit that an error had been made and found an acceptable work-around.

There are various reasons why we use a telephone call-in for a competition. The main one is to make it easy for you to enter – it's far more convenient to simply pick up the telephone than to write to us.

While £3.50 is a substantial chunk of a child's pocket money, what do you call £3,000, the value of our main prize in the "Win a Falcon" competition? A competition such as ours is probably the only chance that many readers have of owning an expensive Atari computer system.

Do we rake in the money from such a competition? Well, how do you think we put together such an expensive array of prizes? Some were donated, but the main items were purchased. In this way, we were able to offer you a set of prizes that you could otherwise dream of – and a total of 17 of you were winners. Watch this space for the next blockbuster!

And as for "Learn The Lingo", consider it terminated... for the moment.

POWER TO THE PEOPLE!

£25 ST-AR LETTER

We all know that Atari are a bit lacking in ideas to promote the ST, so I would like to see all ST'ers do their "bit" to show off their favourite computer to all their friends and possible buyers.

How many times have you been shopping in Dixons or other such shops and seen an Amiga showing off to all assembled its graphics, and an Atari showing off its desktop? Well we could all do something about that couldn't we? Ask to see some programs working and ask questions like "why don't you do more to sell the machine?" If that fails, wait until the assistant has gone off and slip a disk with a few demos on it in the disk drive. There is that demo I have showing the hardware scrolling on the STE that you could put in the Auto folder and then reset the machine using the Control-Alternate-Delete option. There must be a number of other demos that can be used. Also get that colour slide show that you have always promised to create and show that off too.

I use my STE for desktop publishing but I only have a 9-pin DMP. Is there someone in East Sussex or Kent that could help with quality printouts from *Timeworks*? I just cannot afford a Postscript printer! I would also like to start or join a local Atari user group. If anyone is interested please contact me on 0424 222407.

Chris Miles, East Sussex

I've heard of some manic ideas before, but this one takes the biscuit. I like it! Of course, you've missed the two most popular states to find an ST in – turned off or with the dreaded "insert a disk in drive A" dialogue box sitting in the middle of the screen.

Part of the ST's problem is the lack of colour when compared side-by-side with an Amiga. However, ST Review readers have the perfect solution to this in the form of a cover disk program given away with issue 15 called Speed Of Light. We even included some superb 256-colour pictures – remember that stunning face of a Cheetah? Now that would look good on an ST screen in a shop...

Now that's what I call an impressive pic...

FALCON FROGGER

I was happy to see a part of my childhood come flooding back in your July issue when, on the cover disk, I spotted *Frogger*. Ah sweet memories... and Falcon-compatible too. A dream come true. In my capacity as lowly and underpaid writer, I get very little chance to "play" on the rather beautiful games that the graphics department hog all day, but, after much grovelling and boot licking, I was allowed entry to the inner sanctum of the Falcon030 users desk where my little heart almost stopped with excitement, my little sweaty fingers clutched the cover disk in the anticipation of watching my frog get splattered all over the motorway or eaten by the crocodile, inches from safety. I begrudgingly handed over the disk to Jared the Graphic Designer and he proceeded to load it. I am now at the point of suicide. It bombed out! Crashed! It wouldn't load!

What's going on ? It said in the magazine that *Frogger* was Falcon-compatible. I am devastated, distraught, demoralised and lots of other depressive words beginning with D...

Morton Smith, Nightfall Games

I had a couple of telephone calls from people who tried to run Frogger on a Falcon without success and this was confusing to say the least.

We at ST Review spend a great deal of time working on the programs for our cover disk and if we state that a program is Falcon-compatible, that means that we have happily had it up and running on a Falcon!

I tried to run Frogger on my Falcon at home and guess what? It bombed! Yet back in the office it worked perfectly. Different auto programs or desk accessories? No. Different video mode? No. Different version of TOS? Yes...

The Falcon in the office has TOS 4.02 while my personal machine has TOS 4.01. Having ruled out any other possibility, it appears that Frogger will not run on the earlier version of TOS.

And how do you get the latest version? Contact Compo Software on 0480 891819 for an appointment to have your Falcon upgraded to TOS 4.04.

The cost is £35 inclusive of VAT and overnight return carrier. This is the official Atari upgrade scheme and has no adverse effect on your warranty.

Frogger from our issue 15 cover disk – Falcon-compatible or not?

UP FOR GRABS

I have been reading *ST Review* since day one. During that time, I have acquired every issue from 1 to 10. Unfortunately, I no longer possess an Atari and am therefore in a position to offload my small but, I am sure you will agree, valuable collection. I have single copies of issues 4, 5, 6, 8 and 9, two copies of issue 7 and three copies of issue 3.

I am not looking to rip anyone off and ask only £4.60 per copy inclusive of postage. I am sure you will agree that with the cover disks (which are all intact) this is a fair price. The magazines are in mint condition as they have just been stored in a drawer after being read. If you are interested, please call me on 0733 348457 after 6pm only.

Ian Phillips, Peterborough

Seems a fair enough price to me – any takers, especially for issue 7 which had Timeworks on the cover disks...

I've only got one question to ask – which computer do you have now?

A.W.F. PDL

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Protext 6 - *A Winning Performance*

Some highlights of Protext 6

Styles

Styles let you make flexible use of printer fonts and effects. You can change a font throughout a document with a single operation.

Document Layout

An easy to use dialogue lets you lay out your page precisely as you want using inches or cm for the page length, margins and tabs.

Graphics

Graphic images may be imported into a Protext document. Supports IMG, PCX, GIF and IFF. You can select any resolution and scale the image. Dot matrix, inkjet and laser printers.

Printers

Protext's unrivalled understanding of printers gives you the highest quality printing at the highest possible speed. Using a printer's built in fonts enables Protext to print pages in seconds rather than the minutes taken by some programs.

Protext is still the fastest

- Fastest at editing.
- Fastest at spell checking.
- Fastest at printing.

Protext still has the best printer support

- Hundreds of printers supported
- PostScript driver included ***NEW***
- Scalable font support ***NEW***
- Colour printing ***NEW***
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Protext still has the most advanced features including:

- Styles ***NEW***
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- Spelling checker
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- Hyphenation
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