ATARI ST REVIEW

108 PAGES!

NO LIMITS
CREATE INCREDIBLE PICTURES ON YOUR ST!

EXCLUSIVE DATABASE
VALUED AT £100!

60 ESSENTIAL UTILITIES
FOR YOUR ST!

ATARI ST REVIEW   Issue 20   EXCLUSIVE

Easy Base

A full, commercial database! Easy-to-use, card index-style screens with a powerful text editor and impressive search, replace and calculate facilities. Requires 1Mb of RAM. Mono emulator included.

PLUS THREE MORE EXCLUSIVES!

DigiTape – record direct-to-disk with this superb Falcon demo.
Dark Pearl – another stunning game from the USA.
GemBench – the ultimate system analyser. MultiTOS-compatible.

SIX NEW IMAGE PACKAGES REVIEWED

9 770965 778016

CONTENTS

COVER FEATURE
PAGE 16
NO LIMITS...

ST SOURCE

... the source of all information! This is where you'll find our short reviews, the best tutorials, your opinions in our Letters pages and answers to your questions...

All about TIFFs and GIFs – see page 84.

FEATURES

Raystart on test – see page 26.

Into the darkroom – page 30.

Review of Atari Works – page 36.

INFORMAL
Read all about it...

BUY TWO FROM ISHAR, ISHAR II AND TRANSARCTICA FOR JUST £22.99! SEE PAGE 59

SCREEN SCENE
Relax and enjoy!

Can Percy beat Thomas? Find out on page 58.

He's back! Curly returns in One Step Beyond on page 60.

ON THIS MONTH'S COVERDISK

EASYBASE...
... an excellent, easy-to-use database. Card index-style makes for a highly visual program.

Runs as a desk accessory or stand-alone program with up to 1,000 fields per program. Features a superb text and template editor and an impressive search, replace and calculate facility

Turn to page 10 for the first of our tutorials...

Plus see page 12 for:
Dark Pearl – exclusive US game!
DigiTape – exclusive Falcon demo!
GEMBench – ultimate system checker!

PLAYING WITH WORDS

When was the last time you saw the word "exclusive" used in the headline of an article? Perhaps on the front cover of the daily paper you read this morning. But have you ever stopped to wonder just how "exclusive" some articles really are?

ST magazines occasionally get a story that none of the other publications has been able to cover and any editor worth his or her salt is aware of how powerful the word "exclusive" is. However, there is little point claiming, for instance, to have an exclusive preview of the Jaguar console when all ST titles were invited to Atari on the same day!

Here at ST Review, we get two kinds of exclusive. The first is when we receive a news item on the day before going to press and know that no other ST magazine can get it into print before us. Is this really an exclusive? Not in the true sense of the word, but we tend to mark such a news piece accordingly. The second kind is far more difficult to obtain. We spend much time scouring the market for that magical product preview, and good results require us to have our finger on the pulse of the industry. In this respect, this issue of ST Review is special. We have exclusive previews of Geneva, ChromaStudio-24, HiSoft's TrueImage and Titan Designs' Hyperion, not to mention the first printed screenshots of Mag!X and DA's Picture. Perhaps we should have emblazoned the word "exclusive" across all of these pages, but that would have been out of keeping with the ethos of ST Review.

Does this issue feel a little heavier than normal? It certainly should – we've given you 108 pages this month, all in full colour, with twelve major product reviews and previews. Then there's the superb database program on our coverdisk and our excellent software utilities booklet. And as Christmas is approaching, there are a couple of great offers – check out our brand new book list and the Daze games offer.

Next month is also going to be a stormer, with a usable version of Timeworks 2 on the double cover disks along with some of the best shareware and PD currently available. There will also be the Atari ST Review industry awards and a great competition with over £500 worth of prizes. So do yourself a big favour – take a close look at our subscriptions on pages 52 and 53 or place an order with your local newsagent...
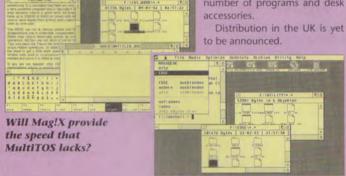
Vic Lennard
Editor

IT'S A KIND OF MAG!X

Following the emergence of *Geneva* (see preview on page 14), another multi-tasking system for the ST is about to appear. *Mag!X* has been created by Andreas Kromke, of *EOS* fame, and the Behne brothers who are well known for the *NVDI* screen accelerator. Based on EOS, *Mag!X* completely replaces the computer's operating system with a true preemptive multi-tasking system.

The system is reported to be faster than the single TOS that exists in the ST's ROM. Very fast disk drive access is achieved by replacing GEMDOS, and the substitute for the AES improves the drawing of windows, dialogue boxes and menus. It comes with its own desktop, a program that can run TOS and TTP programs in a window, and several utilities to customise the setup. It can also run an unlimited number of programs and desk accessories.

Distribution in the UK is yet to be announced.

Will Mag!X provide the speed that MultiTOS lacks?

SPACE SAVING HARD DRIVE

System Solutions have just announced a brand new range of SCSI hard drives. The aptly named "MiniS" measure just 21cm by 15cm by 6cm and are designed to stand horizontally or vertically with the assistance of the special feet provided.

The announced ST prices are very competitive: £299 for 105Mb, £359 for 170Mb and £399 for 245Mb, inclusive of VAT and a special adaptor cable for direct connection to an ST. Look out for a full review in next month's issue.

For Falcon prices and other capacities, call System Solutions on 081-693 3355.

The all-new System Solutions MiniS hard drive.

IN THE PICTURE
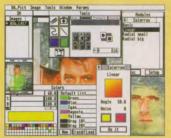
Digital Arts are about to release *DA's Picture*, a professional retouching program. Co-written by the Jochen Riekhos, the programmer behind *Retouche Professional*, *DA's Picture* is being simultaneously developed for both the Atari and Acorn platforms.

The list of features is formidable and includes a 24-bit floating colour palette and 8-bit masking allied with an easy-to-use interface. The selection of tools is equally impressive; pencil, airbrush, chalk, stamp, finger, water, knife, paintpot, copy pen, magic wand to name a few. Zooming up to 1,600 percent is also supported.

A filter library is included as are modules for working in greyscale, RGB, CMYK or HSB. An innovative Image Manager shows a thumbnail preview of files when there is insufficient memory for loading, and a selection of vector tools are incorporated. Proposed price is £149.

Version two of *DA's Vector* is also close to completion. Animation has been vastly improved; the camera to follow any vector line, and a selection of lenses can now be placed in front of the camera to create special effects. Other new features include EPS export, colour graduation, on-line tutorial and an enhanced multicopy facility. More details from CGS on 081-679 7307

DA's Picture – from the same author as Retouche Professional.

JAGUAR™ XMAS CRACKER!

Atari's forthcoming Jaguar seems to have the backing of several of the major players in the software industry. To date, twenty top firms have signed licensing agreements with Atari to publish games for its 64-bit super console and more are expected to follow. The current line up consists of Anco, Beyond, Dimension Technologies, Eurosoft, High Voltage, Krisalis, Loriciel, Maxis, Microids, Midnight Software, Ocean, Rebellion, Retour 2048, Silmarils, Telegames, Tiertex, Titus, Tradewest, Trimark Interactive and US Gold.

Sam Tramiel, President of Atari Corporation, said recently that, "The technological prowess of our developers coupled with Atari's aggressive marketing and comprehensive developer support programs will create a new industry standard for multimedia performance". Atari expect to have ten games ready in time for the machine's imminent release in the States. These include *Alien vs Predator, European Soccer Challenge* and *Tiny Toon Adventures*. Contrary to previous reports, the Jaguar will make its debut in the UK before Christmas. Atari UK have confirmed to *ST Review* that the Jaguar will appear in small quantities through independent retailers in the last week of November or first week of December and will be readily available in reasonable numbers during the first quarter of 1994. The Jaguar is expected to sell for about £200 in the UK, subject to currency fluctuations.

Sam Tramiel, President of Atari Corporation expects the Jaguar to "create a new industry standard for multimedia performance".

Tiny Toon Adventures – expected to be ready for the Jaguar's launch in the States.

COME AND SEE THE SHOW!

The Christmas International Computer Show takes place on the weekend of the 19-21 November in Hall 1 of the Wembley Exhibition Centre. The show is intended to reflect the exciting changes in the growing market of Home and Small Business computers and provides visitors with the unique opportunity of viewing the latest products and purchasing them in time for Christmas.

The show will focus on business, education, music, entertainment and multimedia, so providing a comprehensive guide to all areas of computing. Tickets are priced at £7 on the door or £6 in advance via the ticket hotline on 0726 68020. For further information, contact Westminster Exhibitions on 0222 512128.

STAR LASER PRICES TUMBLE

Star Micronics recently announced a new pricing structure for its LS-5 series of laser printers. The range was launched in January 1993 and comprises of three models, all of which print at a resolution of 600 dots per inch, have large buffers fitted as standard (expandable to 8 megabytes) and a print speed of 5 pages per minute.

The entry level LS-5 retails at £609, with the LS-5 EX at £699 and the top of the range LS-5 TT (pictured here) at £999. Star's Marketing Manager said, "By introducing a realistic recommended retail pricing structure to our LS-5 family, we are bringing sanity to the laser printer market". For more details on the LS-5 range, contact Star Micronics on 0494 471111.

New prices for the Star LS-5 series of laser printers.

NEWS

TITAN'S LATEST DESIGNS

Thought!, from Titan Designs, is described as an "ideas processor" and is essentially a shell that can be adapted to manage almost any task. Primarily aimed at programmers, Thought! could be used as a diary, address book or even a filing system. It is GEM-based and fully compatible with MultiTOS and SpeedoGDOS.

A Thought! Structure comprises a number of Symbols (boxes with labels) placed on screen and linked to each other in a similar fashion to a flow chart. Each Symbol can call up any of ten programs associated with it, each of which can be linked to individual files.

Typical uses of Thought! would be to organise your working day by means of a Structure so that each time you complete a task, the next program needed to process the resulting data is loaded up. As a programmer's tool, each Symbol could point to a different routine of the program and these could be called up whenever needed. Thought! normally retails for £69.95 but is available at the introductory price of £49.95 until the end of December. For further details, contact Titan Designs Ltd on 021-414 1630.

Thought! – a rather interesting concept.

IN BRIEF

- Educational software house, Lander Software, have recently launched "The Lander Budget Range" at £9.99. The range comprises five of Lander's older but better known titles: *Hooray For Henrietta, Henrietta's Book Of Spells, Count and Add, Mix and Match* and *Spellbound*.

- National & Provincial Building Society have reported that a number of cheques stolen from them are being used fraudulently to obtain computer hardware and software. The batch numbers run from 433401 to 433800, feature the distinctive N&P Bee Logo and are drawn on the Midland Bank in Burnley.

- Terry Valeski, formerly Chief Executive of Intellivision, has joined Atari and is to head up the US sales and marketing team in charge of Jaguar, reporting directly to Sam Tramiel. Tramiel said, "We are very pleased that Terry has joined Atari. His experience is invaluable to us." Valeski commented, "You can expect to see some major shifts in the way Atari markets."

- Despite rumours to the contrary, Atari are sticking firmly behind their hand-held games console, the Lynx. Virgin, HMV and others have dropped the machine from their line up, with Dixons reducing it to £34.99, less than half its official RRP. Dixons are selling Lynx software for as little as £9.99. Atari expect the Lynx to be revitalised when the Jaguar arrives in decent numbers early next year.

- Radio One's Simon Mayo is to host his mid-morning show from the Future Entertainment Show on the opening day. The programme runs from 9am to 12.30pm and will be broadcast from Radio One's Roadshow vehicle. The Roadshow vehicle will remain for the duration of the show and on the remaining three days, visitors will have the chance to win Radio One goodies in a series of showcases presented by DJ Neale James. The Future Entertainment Show runs from 11th to 14th November at the Grand Hall, Olympia, London.

BOOST YOUR MEMORY FOR UNDER £50!

Silica Systems have recently announced the availability of the ActionSoft Falcon RAM upgrade board. It replaces the memory board fitted to your Falcon and allows you to upgrade to either 4 or 14 megabytes using industry standard 32-bit SIMMs. A Silica spokesperson said, "There are an increasing number of serious applications for the Falcon which require large RAM capacities. This new ActionSoft RAM upgrade has been launched to allow users to add memory to their Falcons with the minimum of fuss and cost".

The unpopulated board costs £49.95 and can be supplied with SIMMs fitted. The price of SIMMs is variable at the moment due to the current instability of the semi-conductor market. Silica will quote their current prices on request. Contact Silica Systems on 081-309 1111.

Upgrade your Falcon to either 4 or 14 megabytes with the ActionSoft board.

COMPACT LASER FROM XEROX

The Xerox 4011 is a compact, eight page per minute laser printer, fitted with three megabytes of RAM as standard. This can easily be upgraded to five megabytes without the need for a service call. Built-in emulations include HP Laserjet III, HPGL 7475A, Epson FX80, Diablo 630 and IBM ProPrinter II, with PostScript available as an optional extra. With a resolution of 300 dots per inch, the 4011 can also print edge to edge.

List price is £1,375 and this includes a one year on-site warranty. Contact your nearest Rank Xerox stockist for more details.

New eight page per minute laser from Xerox.

System Solutions

World Record
68000 CPU running at 36MHz

Two new Accelerators are now available for the MegaST and ST(FM) computers. Performance and price are sensational. The T28 with a 28MHz clock is 3.5 times faster and the T36 with a 36MHz clock is 4.5 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 the 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 dream come true for all those who want more speed at an affordable price. Until 31st December 1993 we include free installation or a copy of NVDI.

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

High Density

elCo doubles Disk space to 1.44Mb!
★ Automatic floppy disk detection
★ Compatible with your floppy disks
★ Software is included. (ACC and CPX)
Kit price still only £79.95 inc VAT

High Res Monitors

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

"Essential Buy, 90%"
ST Review, May 93
without audio
SM14 £149.95
with audio
SM14s £169.95

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:
105Mb Quantum
SCSI Drive
with ICD Link
£369 inc.VAT

Falcon SCSI Hard Drives
Ideal for hard-disk recording
1000Mb, 10ms, 5 yr warranty - £1099
340Mb plug-in-and-go - £569
For other capacities please phone.

MiniS

Introducing MiniS, the small SCSI hard Disk System at affordable prices for all computers with SCSI connections. Ideal for portability and limited space. A complete system for all STFM, STe, TT and Falcon computers.

★ Quiet fan   ★ Dual SCSI port
★ Device Number Switch
★ Internal Power Supply
★ Small (2.5x6x8.5in) (WxHxD)
★ Smart and tough plastic case

MiniS	ST(FM/e)	TT/Falcon
105Mb	£299	£259
170Mb	£359	£329
240MB	£399	£359
340Mb	£549	£499
1000Mb	£1049	£999

All Prices include VAT

Repairs & Upgrades

All repairs are carried out by qualified personnel. If you would like a quote, 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

The Falcon Column

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

Now in Stock
Falcon030 Starter Pack:
4mb, 14" Mono Monitor & BlowUP **£889**

BlowUP 030   the Display Expander
Using Software and/or Hardware the display expands up to 400%. Virtual screens up to 8000% are also possible.
BlowUP 030 – Software   **£15.00**
up to 880x608 53/101Hz
BlowUP 030 – Hard 1   **£49.95**
Exellent for Multiscan's (1024x768)
BlowUP 030 – Hard 2   **£69.95**
VGA and other fixed frequency monitors.

falconWING   SIMM memory board
Accepts 4x 1mb or 4mb SIMM,
falconWING – 0mb   **£49.95**
falconWING – 14mb   **£699**
Ask for a trade-in deal on your old memory.
Falcon Tower   **£179.95**
Integrates the system, space for extra hard drives, separate or replacement keyboard. Phone for the Tower Fact Sheet and price list. DIY or ask for a quote on ready-to-run fitted systems.

We are now dealers for **Steinberg**

Cubase Audio for the Falcon 030 is now up and running in the Showroom.

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 SpeedoGDOScompatible.
"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

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

GETTING TO

Easy Base

Another ST Review exclusive – EasyBase! Joe Connor sets you off on the right track...

Databases are an essential way of life. How many times have you written down someone's telephone number on a scrap of paper only to lose it? Or forgotten the details of a product you were interested in? A database can solve such problems.

Setting up a database isn't as exciting as getting to grips with the latest game or your favourite program, so you're going to like *EasyBase*. It's quick to set up and easy to learn – two advantages over its heavyweight competitors.

CREATING YOUR FIRST DATABASE

EasyBase consists of two main elements: the main screen, which accesses all the database functions, and the editor screen which handles everything else. The icons at the bottom of the screen display help prompts at the top right, and the Status window is constantly updated as new functions are activated. Dialogue box buttons can also be selected by holding down the <Alternate> key and pressing the small character displayed at the top

left of most buttons.

One of the tasks a database program should be able to perform with ease is an electronic card index, so let's take this as an example and step through the various stages.

Run *EasyBase*, select "Cancel" at the File Selector and the *EasyBase* screen appears (figure 1). Select the **F4 Options** icon and the **Options** dialogue box appears (figure 2). Select **Edit Mask** to bring up the Text editor.

Enter each field title, followed by a colon and a space character. The colon denotes the preceding text as a field and the space character makes the **List** window easier to read. Press <Return> to complete each line and the cursor jumps to the next field. If you copy the field format in figure 3, you will be able to merge your records with the sample *CONTACTS.EB*. Exit the editor when you have finished by clicking on the right-most icon.

Click on the *F2 Records* icon and select **F4 Create new record(s)**. The editor re-appears with an empty record ready to fill in. Use any of the editor functions to complete the fields – the <Return> key jumps between fields. Be careful not to overwrite or change any of the fields or you'll end up in a mess!

Use the F10 function key to add another empty record and when you've finished entering data, close the editor. The Status window updates to take account of your new records. Select the **F1 Database** icon then **F4 Save** database option to bring up

GETTING STARTED

● Use *STRBAKUP.PRG* to copy the cover disk and then delete everything apart from the DATA and CONVERT folders, EASYBASE.PRG, EASYBASE.CFG, CONFIG.PRG and README.TXT to create a working disk.

● Run *CONFIG.PRG* to set the path and database limits – the defaults are fine for most users.

● *EasyBase* can be installed as a stand-alone application or a desk accessory. To load *EasyBase* as an accessory, rename *EASYBASE.PRG* to *EASYBASE.ACC* and move it to the root directory of your boot disk or partition. This month's tutorial is based on the .PRG version.

Figure 3: Entering fields in the List window.

the File Selector and save your database with a name of your choosing.

THE LIST WINDOW

Click on the **List** window and New List button to update the record list. Each line is a single record: double-click on any record to display it in the text editor. Multiple records can be loaded into the editor. Use the mouse and <Shift> key to highlight the desired records followed by the **F5 Editor** icon. Highlighted records can be dragged to the **F5 Editor**, **F9 Trashcan** and, after creating a Report Form template, the **F3 Report** icon.

The List window display format is controlled using a List template available from the Extras drop-down menu. Enter the fields to display surrounded by square brackets [] and select the Use List template button to format the List window. Figure 4 shows the before and after effect of using a List template.

The **F8 Sort** icon provides all the usual options (figure 5). The **Unsort** option will get you out of trouble, so go ahead and play. To save the record list in a revised order, simply save the database.

COMMAND LINE

Hey, don't panic, it's not that bad! Load in the sample database, *CONTACTS.EB*, from the DATA folder. This contains a database of companies offering Atari related services and we'll use it to demonstrate the power of the command line.

The basic *EasyBase* commands are found in the **F6 Standard** command pop-up menu (figure 6). Set FIND as the active command and the icon changes to reflect the command function.

Let's suppose we're interested in buying some software. Using the command line we can find the likely
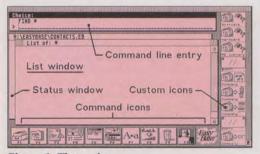
Figure 1: The main EasyBase screen.

Figure 2: The F4 Options icon brings up the Options dialogue box.

Figure 4: The before and after effect of using a List template.

FIRST BASE...

Sort database

Order: ○ Forwards   ○ Backwards
Sort by:
○ Text   ○ Number   ○ Date
○ Similarity with: _____
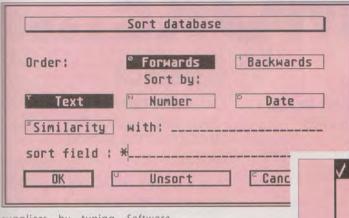sort field : *_____

OK   Unsort   Canc

Figure 5: EasyBase offers a host of sort options.

✓ F1 Standard: FIND
  F2 Standard: COUNT
  F3 Standard: EDIT
  F4 Standard: REPORT
  F5 Standard: SELECT

Figure 6: The basic commands are found in the F6 Standard pop-up menu.

suppliers by typing *Software* <Return>. Notice your entry is repeated just above the Command line – FIND is added automatically because it's the active command. The Status window updates and all the records containing the word *Software* are displayed in the List window.

It is possible to keep command lines by simply dragging the line over an empty custom icon panel on the right. A suitable icon is generated with your text displayed underneath.

Custom icons can be re-loaded into the command line with a single click, or run directly with a double-click. To remove such icons, drag them to the Trashcan. Custom icons are saved along with each database file so it's worth creating some useful icons. Experiment with the other commands as you can always restore the List window to all records by entering FIND * – this is a useful icon to create for starters!

GENERATING A REPORT

This is one of the most powerful features of *EasyBase*. A report combines data from records and merges them into a document. Any text file can be loaded and used as the basis for a report form.

In our example, we created a simple Mail Merge report. The example report is saved along with the records inside *CONTACTS.EB,* so load this database if you haven't done so already. Select the **F3 Report**

If you are working with a TV or colour monitor, boot up with the EasyBase cover disk. A mono emulator is embedded in the boot block of the disk and will automatically be loaded. For more information about this, see page 12.

form icon followed by **F2 Standard** report to direct the output to the screen. From the same pop-up menu, select the **F7 Edit** report form option; the text editor containing the report form is displayed (figure 7).

Text surrounded by square brackets represents fields and must contain a valid title. When the report is output, the data from each of the specified fields and record(s) is inserted into the report.

Try this for yourself. Close the text editor, highlight a couple of entries in the List window and drag them onto

Figure 7: The F7 Edit report form option brings up the text editor.

the **F3 Report** form icon. Sit back and relax as each of your selected records is output to the screen.

You've probably noticed that *EasyBase* can also output to a

X: 21   Y: 16

✓ F1 Standard report to printer
  F2 Standard report to screen
  F3 Standard report to file
  F4 Standard report to keyboard
  F5 Standard report using XAcc
                                    -Edit report form-
[Company]
[Street]
[Town]
[Postcode]
                F7 Edit report form
                F8 Load report form
                F9 Save report form
Dear [Contact] F10 Filler & special characters

I understand you provide [Services] for Atari users.
Could you please send me further details of your products for the
Atari range.

Regards

An Atari enthusiast!█

printer. It's possible to make custom printer drivers, but you'll need the manual for details of all the options. However, you should be able to direct plain text output to your printer without problems.

To output each report on a separate sheet of paper, add a form feed character at the end of the Report Form. Press <Alternate> + A followed by <Alternate> + L and a Form Feed character should appear.

NOW IT'S YOUR TURN...

Most of the main features have been briefly covered so now it's up to you to create some useful databases. If you want to get to grips with your printer or use the myriad Report Form and Calculation options, it may be worth taking advantage of the *ST Review* special offer and getting hold of the manual...

Next month we'll look at file conversion, using the calculator, working with the desk accessory and generally getting the best out of *EasyBase*...

USING THE EDITOR

The *EasyBase* editor is a powerful text editor in its own right. There are lots of key commands – press the <Help> key to display them. The icons perform the major functions which are, from left to right: four *Block* icons (start, end, cut, paste), three *Search* icons (search, search again, search and replace), two *Page* icons (back a page, forward a page) and three *Exit* icons (exit and lose changes, exit and select changes, exit and save changes).

HELP

BLOCK		FILE		TEXT		CURSOR	
^B Start		^L Load		S^D Delete		Arrow One char	
^K End		^S Save		^T Convert tabs		^Arrow One page	
^I Insert				^Q Quit		C/Home Start/End	
^H Hide		SEARCH		S^D Delete & quit		^G Goto line	
^D Delete		^F Find		^O Output		TAB Tabulator	
^M Move		S^F Again				^T Set Tabs	
^C Cut		^R Replace					
^P Paste				MOUSE			
S^O Output		LINE		L Define block			
S^S Save		^Y Delete		L Set cursor			
S^L Load		^DEL Delete		R Cut block			
				R Paste block			

Easy Base

OK

X: 11   Y: 16   Position: 850   Asc: 13   one record.
If you have EasyBase installed as an Accessory it makes a handy on-line
jotter pad to save notes for later attention. Alternatively you can
call EasyBase and use the editor to read on disk Documentation without
leaving the Application you are running.
To create an empty jotter pad select the New record option. Add some lines using the Control N combination and
away you go.

To load any ASCII text file use the F1 Database icon and from the
pop-up select the F7 Append text file as Database option to load the
file. The file appears as a single line in the List window and you can
load it into the editor by dragging it to the F5 Editor icon.

To Save a file exit the editor using the right-most icon and use the F1
Database icon and from the pop-up select the F8 Save Database as text
file option.█

...AND THERE'S MORE...

A fast mono emulator, the latest version of GEMBench, a cracking game from the USA and more...

MONOPACK

UTILITY • PD BY HANS HÄRRÖD • COLOUR MONITOR

No it's not a virus, it's a super small mono emulator...

The boot sector of this month's cover disk has an embedded mono emulator so that you can run *EasyBase* on a colour monitor. The folder NC_MONO contains the documentation and the program creator, but the actual emulator is written into the boot sector, which is why UVK believes it is suspect – it is NOT a virus! Holding down either <shift> key, <control> or <caps lock> disables it at boot up.

There's even an STE version that takes advantage of the Blitter chip!

STRBAKUP

DISK BACKUP • EXCLUSIVE UTILITY BY OFIR GAL • MEDIUM/ HIGH RES

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

Run the program and 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.

DARK PEARL

EXCLUSIVE GAME BY DAVE MUNSIE • JOYSTICK • LOW RESOLUTION

The Munsie-man strikes again with another classic.

Another challenging arcade-style puzzle game from Dave that will keep you up at night.

The game involves moving the Dark Pearl from one end of the vertically scrolling field to the other. The reward? Big bonus points! There are seven screens to a level and ten levels to complete. You can practice on any level you want to, but you must start from the beginning for your score to count.

Time for a bounce but try to avoid an early bath...

GEMBENCH

EXCLUSIVE UTILITY BY OFIR GAL • MED/HIGH RESOLUTION • SELF-EXTRACTING ARCHIVE

WARNING! Do not try to run this program from the cover disk or a back up. Copy the file GEMBENCH.TOS onto a blank formatted disk before running and it will create a folder called GEMBENCH, containing all the relevant files. You can then delete the original .TOS program.

Open the folder and run the *GEMBench* program. This is the latest version and it runs on the ST/TT/Falcon/Gemulator and is *MultiTOS* compatible. *GemBench* is one of the best shareware programs on the ST and worth paying the £5 shareware fee for...

IF YOU HAVE PROBLEMS WITH YOUR COVER DISKS...

DON'T PANIC!

In the unlikely event that your cover disk won't load or gives you any other problems at all, remove any peripherals and try again. To restart your computer, SWITCH IT OFF for at least 20 seconds to clear all traces of resident programs 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. PC Wise can be contacted by telephone on 0685 350505 between 10.30 and 12.30 on weekdays.

An exclusive for all you Falcon fans – a usable demo of DigiTape!

LET'S GET DIGITAL!

DigiTape really shows off the audio power of the Falcon. The demo is capable of recording up to 20 seconds of digital audio direct to disk with mixing facilities and digital effects. It uses a friendly GEM interface with all the familiar menus and dialogue boxes. *DigiTape* will run in most Falcon resolutions although 16-colour mode is recommended.

MAKING THE RIGHT CONNECTIONS

To record, you can simply plug a microphone into the appropriate socket on the rear of the Falcon or even connect a CD player or Walkman. The latter requires a stereo mini-jack cable: one end plugs into the headphone socket of the Walkman, the other into the microphone input of the Falcon. It's best to set the level to minimum on the Walkman and then increase it gradually. Finally, plug stereo headphones into the headphone socket of the Falcon.

GETTING STARTED

DigiTape requires the **AHDI 6.03** hard disk driver to be installed – if a different driver such as the ICD one is found, *DigiTape* will not run correctly and will display an alert. Digital audio samples can take up considerable disk space so ensure there is enough space on one of your hard disk partitions.

Load *DigiTape*. An alert is displayed with the file selector prompting for a tape file. Since this is the first time you have run *DigiTape*, you will not have any such files, so
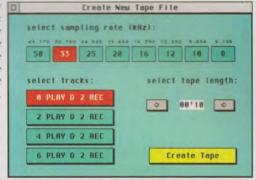
simply select **Cancel**.

The first step is to create a new tape file. Select the appropriate menu item from the **File** menu and *DigiTape* will display the file selector. Give the file a name – all *DigiTape* files must have the name extension of ".DGT". Next, select the sampling rate and tape length you require. A sampling rate of 25 or 33kHz is sufficient for most purposes. When finished, click on **Create Tape**.

ONE-TWO TESTING...

Recording is performed from the **Record Tape** dialogue (figure 1). Select **Record** from the **Tape** menu and the dialogue opens. Start your Walkman or CD player and adjust the input levels for the two tracks. The "Two Finger Action" button can be used to link the two faders making this a little easier. As a rule of thumb, set the level as high as possible without entering the red beam in the level display (figure 2). You may also adjust the Line Out level which has no effect on the recording but allows you to control the monitor level. Start recording by pressing the **Record** button.

Click on the **Monitor Record Tracks** to hear the results of the recording – rewind the tape and press **Play**. If the recording is in

Figure 1: The New Tape dialogue box is where you define the sampling rate and length of the recording. For the demo, select 0 Play & 2 Rec.

stereo, pan the tracks left and right to monitor in stereo.

FIX THE MIX...

DigiTape features a sophisticated mixer with several built-in effect modules. To activate this, close the **Record** dialogue and select the **Mixer & Effects** menu item which reveals the mixer and effects section.

As before, adjust the level for each track and pan accordingly. The buttons marked 1 and 2 next to the faders can be used to mute each track if required. To the right are seven unused mixer channels – *DigiTape* lets you configure each individual channel.

To activate one of the effect modules click on the **Select** button in one of the unused channels. Use the

pop-up menu to select and install an internal module. This will display another menu – select the Flanger module from here which will now appear in the chosen channel. In addition, each track will have a small fader and button added to it (figure 3). The button is used to activate the effect for that channel which means that each channel has individual effect control, adding to the versatility of the program. Next push the small fader up and you should be able to hear the flanger in action!

The flanger module has its own volume control as well as several effect parameters that you can use to fine-tune the sound. To get drastic results, increase the **Depth** parameter to maximum. You can now use the same method to install more effects – play and enjoy!

Figure 2: The record section consists of familiar tape controls and faders. When recording, you should always avoid clipping which is indicated by red beams in the level display.

Figure 3: DigiTape has a fully configurable mixer section. Each channel may be used to monitor tape tracks or to control an effect module. Here, two tracks and two effect modules are installed.

Geneva

A SWITCH IN TIME

Although Atari has MultiTOS, Gribnif is now offering us Geneva. What's the difference? Ofir Gal checks out the newcomer...

The arrival of *MultiTOS* has awakened ST owners and programmers to the power and possibilities of multi-tasking. While Atari were busy finalising *MultiTOS*, the Gribnif team, famous for products like *NeoDesk* were quietly working on their own multi-tasking operating system – *Geneva*.

WHAT IS GENEVA?

Geneva replaces the AES, which is responsible for managing menus, dialogue boxes and windows. The standard AES is loaded automatically at power up and is the main stumbling block in providing any sort of multi-tasking facility. Even *MultiTOS* replaces the AES, among other things.

The result of this is that you are able to load any number of programs and desk accessories, and switch from one to the other at will. Applications such as hard disk backup utilities can work in the background instead of taking over the system as they normally do.

There are several differences between *Geneva* and *MultiTOS*. First, *Geneva* does not use *MiNT* (the basis of *MultiTOS*), which means that many of the special program communication facilities of *MiNT* are not present. Secondly, *Geneva* cannot multi-task TOS programs and does not feature adaptive prioritisation – all programs carry an equal weighting. To compensate for these shortcomings, *Geneva* offers many improvements over the standard AES.

In particular, it is very fast – the speed loss under *Geneva* is barely noticeable, so it is certainly usable on

a standard ST. Also, *Geneva* does not require as much memory as *MultiTOS* and incorporates a special single-tasking mode, allowing programs that misbehave under full multi-tasking status to run flawlessly.

HOW DOES IT WORK?

Geneva is run from the Auto folder at boot time. As the Atari desktop does not understand the concept of multi-tasking, it is prevented from loading and *Geneva* offers to load *NeoDesk* instead. In fact, it is possible to run *Geneva* without a desktop at all.

Once loaded, *Geneva* displays a small menu bar that enables you to run any program via the enhanced file selector. Like *MultiTOS*, any loaded program installs a menu entry under the Desk menu, so all available programs and desk accessories can be found here.

An application can be activated by either selecting its menu entry, in a similar way to a desk accessory, or by clicking over one of its windows. Alternatively, pressing <alternate>+ <tab> cycles you through all applications. A program may also be assigned a key combination that calls it up it at any time.
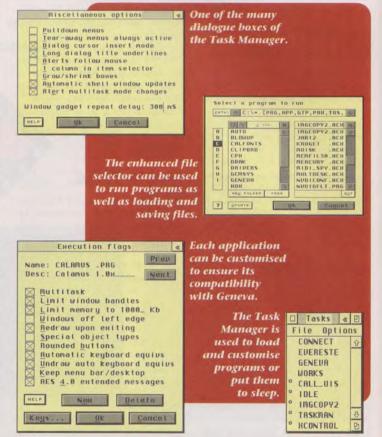
Programs can be put to "sleep" so removing the program and its windows from view. A program is woken by clicking on its menu entry; this returns it to exactly the same state it was in before it was put to sleep.

EXTRA FEATURES

In addition to multi-tasking, *Geneva* adds many new and useful features to windows, menus and dialogue boxes. Windows have an extra gadget that is used

One of the many dialogue boxes of the Task Manager.

The enhanced file selector can be used to run programs as well as loading and saving files.

Each application can be customised to ensure its compatibility with Geneva.

The Task Manager is used to load and customise programs or put them to sleep.

to put them to the bottom of the "pile". It is also possible to interact with background windows by holding down the right mouse button and clicking with the left.
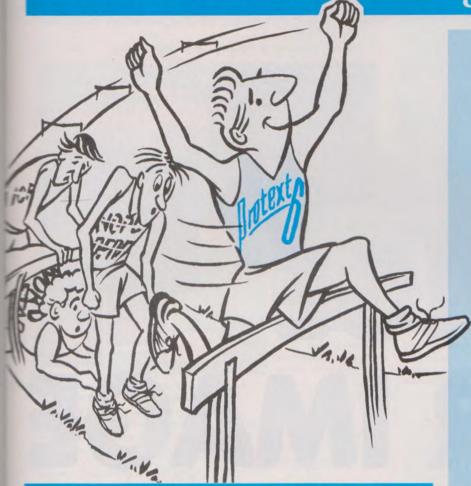
Text fields in dialogue boxes have many added features such as the ability to move the cursor to any text position via the mouse. All buttons have keyboard shortcuts which are indicated with an underscore; the <undo> key

doubles as a Cancel button for most dialogue boxes. *Geneva* even includes a powerful file selector with search facilities and the ability to use wildcards.

A rather useful feature is the ability to "tear" off menus from the menu bar of any application. The resulting menu is given its own little window which can be accessed even if the program it belongs to is hidden under other programs.

Geneva is capable of running several programs and desk accessories at the same time. The menu shown at the bottom right was "torn" off the Desk menu.

MEMORY AND DISK SPACE

Geneva requires very little memory – around 200 kilobytes to run and slightly more disk space. Theoretically, it is possible to run *Geneva* on a 1040 ST, but there will be very little memory left for the actual applications. To get the best out of *Geneva*, a system with at least 2Mb of RAM and a hard disk is recommended. Falcon and TT owners can also use virtual RAM managers like *Outside* to access a virtually unlimited number of applications. In terms of speed, however, *Geneva* is fast enough to be usable on a standard 8MHz ST.

Chagall is a handy image editing program with good filtering and some superb creative tools.

IMAGE TRICKERY

The estate agents' firm of Readem & Weep wants to sell you this des. res. with lovely coastal views and all that. The only thing is, they'd rather you didn't know about the lighthouse. With a few swift mouse strokes the lighthouse is no more!

This was processed in *TrueImage* by cutting away the lighthouse and carefully replacing it with some coastline copied from the extreme right of the picture. The finishing touches were carried out using editing tools such as airbrush and stamp which copies one area of image to another repeatedly.

CHANGE YOUR IMAGE

I mage processing is often seen as something of a black art but this is about to change. Greyscale image processing software has been around for a while and though limited to black and white, programs like *Retouche* and *TouchUp* are very good at their job. Now, with colour hand scanners on the horizon and Kodak's PhotoCD technology starting to make an impact, converting colour photos into digitised

form is getting easier all the time and colour based programs like *Studio Photo* and *TrueImage* are starting to appear at affordable prices.

So what can it do for you? Unless you happen to be the next David Bailey, most photographs are some way from being perfect. Many are simply under-or over-exposed, or just blurred through involuntary camera

Maurice Collins brushes up on his image with a look at processing and retouching on the ST.

movement. But, a good percentage will suffer the strange syndrome where inanimate objects appear in the most unlikely

places – like lamp posts that weren't in sight have a peculiar habit of moving twenty yards up the street and positioning themselves just behind the subject of the photograph. While this sort of thing is fine for the family albums, it can look rather amateurish in a desktop published newsletter.

AFTER THE EVENT...

To get round these problems, there are two main techniques: image processing and image retouching. There's a fine line between them but processing tends to mean applying global changes to an image – like increasing the contrast or brightness – while retouching implies more specific editing such as removing those wandering lamp posts. Perhaps the best known example of retouching is the disappearance of ex-President Gorbachev's famous birthmark from official photographs while some would say the Loch Ness monster photographs are early example of the same art, even if

BRIGHT AND BREEZY

We've all looked at family photo albums, squinting in vain at the photos that look as though they were taken around midnight and making suitably appreciative noises about the quality...

But what if you are given such a print to use in a newsletter or leaflet? Obviously there are brightness and contrast controls on most hand and flatbed scanners but this means repeatedly scanning until you get it right. With image processing software, you can lighten or darken images on screen until you get the best you can, and sharpen the image slightly until all the features are clear.

This picture was scanned from a very dark original but a

couple of minutes in *Retouche*, soon to be renamed *DA's Picture*, and the contrast and brightness are just about right. It's amazing how much detail the scanner actually recorded!

ALL CHANGE

Some people don't like red cars. Perhaps it's because they attract bulls – more likely because they attract police cars! With a bit of experience and a little experimenta-tion, you can mask off any area of an image and alter only the hue, changing the colours realistically without affecting the shadows and textures in the object.

This colour change was carried out with *Studio Photo*. Although it doesn't allow masking as such, parts of an image can be copied to a new window, worked on and then pasted back again, which is the technique that was used here. Notice that not all the colours have changed and that you couldn't achieve this affect with a fill tool in a standard paint package.
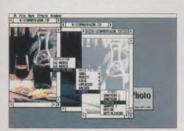
This section of an image is being cut out in TrueImage for use as a graphic – programs like DA's Layout (previously Didot Professional) will import TIFF files and let them be used as objects alongside text and vector graphics.

they were done using a brush rather than a mouse.

The object of image processing and retouching is to alter the image, so making it suitable for whatever purpose it is needed for. This can include sharpening or blurring an image, changing the brightness or contrast and even halftoning for reproduction using DTP. Many of the pictures you see in *ST Review* are optimised in this way, sometimes from very poor originals. At the other end of the scale are the special effects filters that can be used creatively in logos or graphic design and seen in a wide range of adverts and other sales material.

Retouching doesn't always concern the removal of unwanted effects. Using good software, it is perfectly feasible to fake photographs – newspapers often carry clever fakes of people, who've never

This full colour image is being posterised and turned into a greyscale for use as a background to a leaflet.
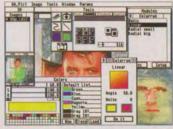
met, shaking hands or embracing to illustrate articles or make a point. This is where the fun comes in, of course, and it's where most home users are likely to gain the greatest amusement and pleasure with the family snaps!

TOOLS FOR THE JOB

The current rash of image processing packages all have a slightly different approach. Top of the heap is *Retouche Professional CD*, a truly

Retouche Professional CD was the first professional image processing package on the Atari platform.

professional program that is capable of just about anything, though its main strength is in outputting images as high quality halftones. The next stage is likely to be *DA's Picture*,

DA's Picture – coming soon...

which promises to be an even more powerful package for creative design. If *DA's Vector* is anything to go by, this will be one to watch out for.

At a budget level, *TrueImage* is probably the nearest thing to a professional retouching program as it has reasonably good masking facilities. Masking is critical for cutting and pasting irregular shapes from images to create photo montages, a series of pictures carefully superimposed on each other. Using a mask, you can isolate a face or another non-uniform shape and apply filters or special effects just to that area. This means you can alter the colours or the brightness of the masked off area without affecting the rest. *Studio Photo*, another contender, has slight-ly better filtering and special effects but no proper masking.

FILTERS AND SPECIAL EFFECTS

Most image processing programs have dozens of special effects filters but it can be hard to work out what to do with them. In fact, you are only limited by your imagination but here's a typical example of some fun with filters.

The starting point is a scanned greyscale image

of a coin. The head is cut out and the hole filled with solid grey to match the surrounding area. Next we take a scanned head and shoulders image and apply *TrueImage*'s emboss filter, cutting away an oval section of the image and pasting it semi-transparently on top of the coin. Nothing to it!

STEP BY STEP

Take a coin...

...then take a little boy...

...a quick bit of filtering...

...and mix them together.

TrueImage

Andrew Wright takes a sneak look at the follow-up to TruePaint – HiSoft's TrueImage.

THE TRUE PICTURE...

True to form, HiSoft's new image processing package, *TrueImage*, is shaping up rather nicely. HiSoft gave us a beta version of to put under the microscope and the results certainly look encouraging – very few image processing and editing programs can offer such sophisticated facilities, even at a professional level. And while there are still bugs to be ironed out and features to be implemented, we were able to get a pretty good idea of just what *TrueImage* will have to offer.

TrueImage has a slightly more sophisticated interface than *TruePaint* with a floating toolbox containing fourteen icons plus a colour bar showing the currently selected colour. Several images can be
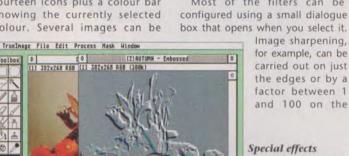
opened at once, each in its own GEM window, but this very much depends on the amount of memory in your computer, especially in true colour mode.

The GEM menu bar at the top conceals a wealth of features and functions in its nested sub-menus and resulting dialogues, most of which are already implemented. The list includes image enhancement filters, special effects, masking and editing facilities. There are also options for dithering and converting images, and varying the palette.

Most of the filters can be configured using a small dialogue box that opens when you select it. Image sharpening, for example, can be carried out on just the edges or by a factor between 1 and 100 on the

Special effects galore in TrueImage – with an Undo feature if it all goes horribly wrong!

whole image or a masked area. The opposite, blur, works in much the same way. Contrast and brightness are equally flexible and there is the added benefit of a preview mode before you make the change. Images can also be flipped or rotated in 90 degree increments, or rescaled by size or resolution, making it a valuable tool for DTP work – it worked particularly well with a .PI1, Degas low resolution image, which it scaled up to 640 by 400 pixels with remarkable accuracy and minimum aliasing.

The special effects filters are good fun and can provide some spectacular transformations. The emboss filter, which creates a pseudo-3D effect, has no less than three different parameters to experiment with and the others,

The dithering and halftone effects will be particularly good for DTP.

The zoom function is extremely flexible.

including mosaic, remove background and diffuse have user-definable options too. For poor quality images there is a despeckle (noise removal) filter that removes single extraneous black or white pixels caused by dirt on the scanner plate or whatever.

The editing tools include the standard ones associated with bitmap art packages – paintbrush, pencil, airbrush, area fill, eraser, stamp and finger/smudge. All of them can have various sizes and degrees of opacity, letting you touch up and edit images to get the effect you need.

The beta version of *TrueImage* was supplied with EFMS modules for importing and exporting Art Director, Doodle, IMG, ImageLab, JPEG, MTV Raytracer, Prism Paint and TIFF formats. Import-only formats include Degas, GIF, two varieties of IFF, Kodak PhotoCD, PCX, Neochrome, Spectrum 512, Tiny and Targa.

If HiSoft's reputation and *TruePaint* are anything to go by, the finished product will have an excellent manual and a good number of sample images to get you started. While *TrueImage* will undoubtedly appeal to a wide audience as well as serious users, it is likely to be Falcon owners or those ST owners with colour graphics cards that get the most from it. And it will cost between £50 and £60...

MASKING

Perhaps the most powerful feature of *TrueImage* is the masking that lets you protect part of an image from certain effects, or apply effects to a small part of an image. Masks also let you define and cut irregular shapes from images, including faces and features, and paste them into another. In this way you can build up photomontages – pictures made up of several separate images superimposed on top of each other.

TrueImage will include straight edged and curved masks as well as a "magic wand" that will automatically draw a mask around an area of a certain colour. You can even alter the threshold level of the magic wand, so that it includes only a precise colour or all colours within a certain range.

TrueImage has some very good masking features – this image was enhanced by masking the whole head with the magic wand tool, then pasting it onto a scanned background.

Animations can be constructed from two simple key-frames. Just define the start and end positions and get ready for a long, long wait!

A mixture of chrome, gold and marble surfaces were used to create this scene. Total render time – about twelve hours!

THE LIGHT FANTASTIC!

Gone are the days of command-line raytracing – InShape combines POV-style power with a mouse driven interface that anybody can use! David Nilson surveys the scene...

Raytracing is a booming industry. The technique is being used in everything from advertising campaigns to blockbuster movies and *InShape* is the first program to bring an element of that power to your Falcon! Complete virtual worlds and photo-realistic images are all within the package's many abilities and your creations can be brought to life with key frame animation.

Initially released as a TT-only product in Germany, *InShape* has been tamed slightly for the Falcon, but deep down you're still looking at one red-blooded, potent package at a very attractive price. Let's see how it measures up under scrutiny...

NUMBER CRUNCHING

Once you've equipped your Falcon with a suitably fast maths coprocessor, getting *InShape* up and running is a total breeze. An installation program guides you through the whole procedure and it's just a case of swapping disks when prompted. No less than four tutorials are included in the manual, so you can be up and running literally minutes after you take the disks out of the box.

The first step in producing a "scene" is to create some objects. A *Calamus*-style icon panel is used to do just this, while the action takes place in a grey window to the right of the display. All of the objects are represented in "wireframe" and redraw speeds are very impressive, especially if you use *NVDI*.

The interface is unique to *InShape*. It has a lot in common with GEM and is very easy to use, although won't even consider working with *MultiTOS*. Unlike many other attempts at alternative environments, it shows a lot of thought and even improves on GEM in some ways. Most operations are controlled with the mouse, although there are times when you have to get your hands dirty and enter some coordinates. This reaches a climax at the scene editing stage, which really does need some improvement.

Fortunately, the object editor shows far more thought. The standard range of shapes such as sphere, cone and box are all generated automatically by the program. To create more complex designs, you define an outline and a 3D shape is produced instantly. In general, the documentation is pretty good in explaining how everything works, although some sentences take a little while to comprehend – probably something to do with the manual being translated from German.

MAKE A SCENE

Unlike most raytracers, *InShape* gives you more than an empty universe to work with initially. It terms the groundwork for a scene the "Environment", and lets you define what colour and texture the ground should be, the type of sky and how many clouds will appear in that sky! By adjusting the colour sliders, it's possible to achieve anything from a lifelike daytime scene to a surreal planetary landscape. It can also position a lamp within a sphere to give the appearance of the sun or moon.

Each object you add to the scene can have its own colour, texture and "bump map". A huge number of predefined "materials" are included with the package and almost anything can be simulated by adjusting the attributes of existing substances. For that extra realistic touch, bitmapped images can be mapped

InShape is unbeatable for realism. Everything from the colour of the sky to the number of clouds can be adjusted and the quality of the finished product will blow your mind!

Coordinates are used extensively throughout the scene editor, so be sure to have a few sheets of graph paper handy.

onto planes or wrapped around cylinders! Things really get exciting when you start to explore the animation facilities. Simplicity is the name of the game here and it's just a case of defining the start and end position and allowing the program to work out the frames in between. Spotlights can be instructed to train in on certain objects and you can even pan the camera during the animation if you like! A wireframe preview is available to give you an idea of the completed animation without going through the raytracing process.

In fact, the only disappointment the package presents is its raytracing speed. A large, complex scene can take anything up to fifteen hours to render at photo quality; I'm sure you can imagine how long a fifty frame animation would take! Even a 320 by 200 pixel preview can take an hour to produce, which is a long time to wait for a simple colour test. Incidentally, the Intro version of *InShape* limits you to a maximum resolution of 1280 by 960 pixels.

THE ALTERNATIVES

Even if you don't own a Falcon, you can still get involved in the world of raytracing. There are literally dozens of packages available for the good old ST, none of which will break the bank.

At the base level you could try one of the many public domain offerings. *Persistence of Vision* is particularly good and the results are a match for most commercial packages, although it does lack a proper user interface. If your budget stretches a little bit further, *GFA Raytrace* makes a good choice being both fast and easy to use. Finally don't forget to check out *RayStart*, a review of which you will find in this very issue!

LIGHTS, CAMERA, ACTION!

Despite its little foibles, *InShape* is very impressive. It redefines raytracing on the Atari platform and makes the likes of *GFA Raytrace* look positively antiquated.

Naturally the power does bring with it some complexity, and it's not the sort of program you can master within hours – or weeks for that matter. The basics are easily learned through the tutorials, but a lot of effort will be needed to produce professional quality images. With that in mind, beginners would be well advised to consider something a little simpler to start with.

However, if you like the idea of using your Falcon for professional modelling, *InShape* is the package to go for.

It's been suggested that over ninety percent of its users in Germany are graphics professionals and the results more than justify that claim. Put simply – it's the business!

✔ **Stunning results**
✔ **Nice interface**
✔ **Keyframe animation**

PROS AND CONS

✘ **Resolution limitations**
✘ **Raytracing speed**
✘ **Quite complex**

"A feature-packed modelling package that deserves to take the market by storm."

NAME: INSHAPE INTRO
COMPANY: CGS
CONTACT: 081-679 7307
PRICE: £149
SYSTEM: FALCON WITH FPU AND VGA MONITOR
MIN MEMORY: 4MB

EASE OF USE	●●●○○
DOCUMENTATION	●●●●○
EFFECTIVENESS	●●●●●
VALUE FOR MONEY	●●●●○

OVERALL **88%**
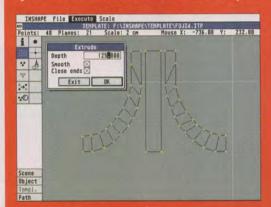
SHAPING UP NICELY

Surreal 3D worlds are a piece of cake with *InShape*. Let's take Fuji as a theme and see what we can come up with...
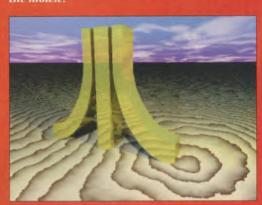
1 *First design a Fuji "template" and mark the faces with the "plane" tool. Don't forget to use "soft points" on the curves, otherwise your object will appear jagged in the finished scene. Once you've perfected the outline, extrude the shape to 125cm.*

2 *When the large dialogue box appears, load the "gold" surface and click the right hand arrow to use it in the design. Now's a good time to gloat over your new 3D object by holding down the <Control> key and wiggling the mouse.*

3 *Move to the scene editor and click the left mouse button within the view window. Add a new "object use" to your scene and enter 180 in the Y-translation field to lift Fuji clear of the surface. Finally move the camera to an interesting position and add a "lamp".*

4 *Five long hours later this is the result at photo quality. A large scale wooden surface and some low density clouds have been used to add some atmosphere to the scene. And don't forget – a whole Fuji movie is just one key-frame away!*

Hyperion

This is the negative filter applied to a block.

Maurice Collins investigates Hyperion, Titan Designs' forthcoming image processor.

OFF INTO HYPERSPACE

Hyperion is one of the many image processing programs that look set to hit the market soon. In fact, Titan Designs is expanding its range of graphics-based products to support the Falcon030's colour capabilities. Other products in the pipeline include the Graffiti and Fresco genlocks, the Exposé true colour digitiser and *Impro Animate*, an all-in-one video and image processing system.

In contrast to products like *Studio Photo* and *TrueImage*, *Hyperion* doesn't have anything like a GEM interface. It uses a series of different screens each with a set of buttons and icons instead of menus and dialogue boxes and while non-standard interfaces aren't everyone's cup of tea, there's little doubt that it makes *Hyperion* generally easy to use. I say generally because we were shown several different versions of the product, each with a slightly different interface but many of the features are fully implemented.

The ST version only works in low resolution, which is pretty much as

you'd expect as it is the only real colour mode, but it will support editing and filtering of true colour images. The Falcon version will run on VGA monitors in either 320 by 200, 320 by 240, 640 by 400 or 640 by 480 pixel resolutions, and in either 256 or true colour modes though at present it only works in the comparatively low resolution of 320 by 240 pixels and true colour. At launch, the ST version will cost £49.95; the Falcon version, £79.95.

File handling hasn't been fully decided yet but Degas, Neo, GIF and TIFF formats will almost certainly be included. Filters already include some interesting effects including bandwidth filters, noise removal and Prewitt edge filters. There are several colour removal and reversal filters, most of which produce strange results, but the main strength of *Hyperion* will be its capacity for letting you experiment. Getting the right effect may take half a dozen filters and operations but the more you have,

An early working version of Hyperion showing the range of icons and effects...

... and this is what the finished product is expected to look like.

the more likely you are to succeed!

The finished interface will have a bank of tiles on the left hand side, each with an icon to represent it. Clicking on the icon will produce a further list of options on the right next to the blue markers while others will produce a second bank of icons. Thumbnails of each image in memory will be visible at the bottom or along the right hand side, the exact number depending on the amount of memory available. Effects will be applied either as a brush or a box, depending on whether it is selected with the left or right mouse button.

It has to be stressed that the current working programs are only early test versions and there's some way to go yet, but for the features already implemented performance seems quite reasonable.

Future versions will have some exciting features not found elsewhere, including conversion from low resolution, 16 colour, Degas and Neo formats to higher resolution formats with either 256 or even 24-bit palettes. These extensions will use some very clever algorithms to

There are some weird and wonderful effects available in Hyperion...

interpolate colour gradients, enabling you to "upgrade" your existing Degas pics into stunning images.

Zoom modes will include 4, 9 and 16 times magnification plus a full toolbox of editing tools like pen, brush, fill, square, polygons, circles and airbrush as well as some features for cutting, copying and pasting parts of images.

As the program has been designed to work in a modular form – *Hyperion* itself is simply a shell to which other extensions can be added – the new features will simply be incorporated as and when they become available.

WINDOW FILTER OPERATIONS
◊ STATISTICAL DIFF.
◊ HIGH PASS FILTER
◊ LOW PASS FILTER
◊ BAND PASS FILTER
◊ K-FILTER
◊ SIGMA FILTER
◊ NOISE REMOVAL
◊ MINIMAX FILTER
◊ SUPERSPIKING
◊ PREWITT FILTER

The ST version...

3D DREAMS

The Raystart 3D modelling system promises unbeatable features, and speed by the bucket-load. Could it be the best thing since sliced sauerkraut, or is it a complete waste of virtual space? David Nilson takes a look...

Three dimensional modelling is the digital equivalent of Lego bricks – and twice as addictive! It allows you to build complex worlds within your machine from simple shapes and view the results from any angle. What's more, the computer can trace the path of light beams to add convincing reflections and shadows to your scenes!

Until recently, *GFA Raytrace* has been the only choice for the budding 3D designer, but that's all about to change thanks to *Raystart*. Offering a fully GEM'ed interface and unrivalled rendering speeds, it looks to be just what the doctor ordered, but does the reality really live up to the hype? Let's take a look...

LET THERE BE LIGHT

The first thing that strikes you about *Raystart* is the simplicity of its design.

And here's something we prepared earlier (ahem!). At this sort of quality, an image can take anywhere up to seven hours to produce!

It's one of those rare programs that you can pick up and use straight away without even thinking about the manual. In fact, it bears more than a passing resemblance to *CAD-3D*, which is good news if you're a *Cyber* fan.

A good test of any modelling package is its range of basic, or primitive, shapes, and *Raystart* scores quite highly in this department. Almost any shape can be created with the "spin" or "extrude" tools and there's even a calculator to construct more complex forms. The usual range of spheres, discs and boxes are all present and any object can be saved separately for use at a later date.

The package is split into three basic sections: the object editor, camera editor and lights editor. Each sports a control panel to the left of the screen and all object positioning is accomplished through a set of on-screen

WHAT IS RAYTRACING?

INSIDE INFO

Put simply, raytracing is the process used to create realistic shadows and reflections in three dimensional scenes. By adjusting how much light is reflected or absorbed by each object, it's possible to simulate natural substances such as metal, wood and plastic. The illusion of reality is completed by applying appropriate colours and patterns.

The main drawback of the raytracing process is speed, or rather lack of it. Examining how light affects each pixel within a large scene is a gargantuan task, and some pictures can take many hours to produce. However, the results are usually worth the wait. The spectacular effects used by films such as *The Lawnmower Man* owe much of their beauty to raytracing and your ST is capable of similar effects with the right software!

Adding lights to your scene is very straightforward – just switch them on and drag to the required position!

cursors. In true *Cyber Studio* style, your creations can be viewed from any side or all sides simultaneously within the same window. Things tend to slow down a little in this mode, but you can always opt to disable some objects temporarily. In general, the screen updates aren't too tedious, even on a standard ST.

With a completed scene in hand, it's time to switch to the camera editor which lets you change your viewpoint on the proceedings. Once again, adjustments are made through simple GEM arrows and you can always enter figures directly into the text fields to speed things up. The camera editor displays all objects as boxes which makes the display look a bit tacky, but at least it keeps redraws up to speed. Your scene can be rendered to any size as long as it's smaller than the current screen resolution which leads to a maximum of 640 by 400 pixels on an ST and 640 by 480 on a Falcon.

When it comes to raytracing, the biggest headache is usually positioning the lights – one false move can waste hours of precious rendering time! Fortunately it's not a problem that afflicts *Raystart*; just switch to the editor and drag the bulbs around with the mouse – it's as simple as that. Of course, getting the things to shine in

the right direction is a different matter altogether, but you can hardly blame that on the software! Three types of lamp are available – lamp, spot and parallel – and up to seven can be positioned around your scene.
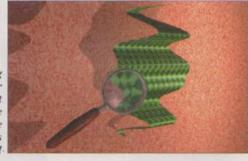
Beautifying all of these dull shapes is the responsibility of the textures dialogue box. It allows you to adjust the properties of an object and also define which pattern should be laid over it. There are only four choices of pattern, but they are quite flexible – for example, a distorted stripes pattern can be used to represent wood. The only annoying aspect is the lack of any way to save predefined patterns!

PEDAL TO THE METAL

Raystart's biggest asset is its speed. It provides four levels of quality ranging from simple hidden line removal to

The number of built-in patterns is quite limited, but they're flexible enough to produce a wide range of effects.

DRAW THE LINE

Modelling packages usually offer two ways to create 3D objects. The first is "spinning", which rotates a simple template around its y axis, leaving a trail of points as it turns around. For example, a cone will be produced if you spin a triangle. Extrusion on the other hand stretches a template to a certain depth – a bit like squeezing toothpaste from a tube.
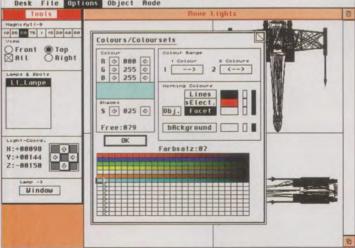
By using these two methods, almost any shape can be created in three dimensional space, from a simple sphere to an exquisite vase! Many packages offer a range of built-in objects such as boxes, cones and discs, so you needn't put mouse to screen at all!

DIFFERENT STROKES

Raystart offers a succession of features that lead to increasing quality of modelling…

STEP BY STEP

Time in h/m/s:
000.01.02

Simple hidden line removal doesn't produce stunning scenes, but as you can see, the render times are very low indeed.

Time in h/m/s:
000.16.08

The shading setting helps things a little – the effect of the light is much more convincing, although occasionally objects appear in the wrong order.

Time in h/m/s:
000.13.21

Bring scanline processing into the bargain and the quality improves dramatically. Notice that the left "T" is restored to its rightful position above the floor.

Time in h/m/s:
003.05.53

Full-blown raytracing takes much longer, but the finished product is usually worth the wait. Both reflections and transparency are possible in this mode and textures are very effective.

full-blown raytracing and the higher the setting, the longer you are kept in suspense. Simple modes don't provide particularly pretty scenes, but they're great for testing the position of lights and the general appearance of objects. You are also free to turn off texture mapping, which pushes render times even further into the realms of reality – in this turbo-nutter mode, a complex scene can be turned out in under a minute!

Move up to "real" raytracing and the program falls much closer into line with the competition. It's certainly not as slow as *InShape*, but a top quality scene can still take several hours to produce on a standard ST. Scenes can be drawn directly to screen or saved to disk in TIFF format.

In terms of picture quality, the program is entirely dependent on your hardware. Unlike most packages, it works from a palette, so the more colours your machine is capable of providing, the better the results will

be. Owners of the Nova graphics card will no doubt be delighted with this system, but it effectively limits scenes to 16 basic colours on an ST. Printing to disk sidesteps the problem by providing subtle shading based on the palette, but it's still no substitute for working in 24-bit colour. The situation does improve on the Falcon because you have more colours to play with – 256 to be precise.

A PRETTY PICTURE?

On paper, *Raystart* has a lot going for it, but in reality it doesn't quite come up with the goods. The colour restriction is the main problem, but the complete lack of animation doesn't do much to improve matters.

It's a shame, because there's the basis of a damn fine package lurking in there somewhere. The interface is very well designed and it's a nice piece of software to use, but there's simply not

enough support for the plain vanilla ST. It might prove a good grounding for more powerful packages, but be sure to take the demo version for a test drive before parting with your cash.

> *"A nicely tuned modelling package that could do with more support for the standard ST."*

NAME: RAYSTART
COMPANY: 16/32 SYSTEMS
CONTACT: 0634 710788
PRICE: £89
SYSTEM: ANY ST
MIN MEMORY: 1MB

EASE OF USE	●●●●●
DOCUMENTATION	●●●○○
EFFECTIVENESS	●●●○○
VALUE FOR MONEY	●●●○○

OVERALL

72%

The palette dialogue box allows you to choose which colours will be used within a scene. Whole collections can be saved and loaded as needed.

PROS AND CONS

✔ Speed
✔ Easy to use
✔ Loads *Cyber Studio* files

✗ Inflexible
✗ Limited texture mapping
✗ Price

28

CAUSE AND EFFECTS...

The image master has arrived! ChromaStudio turns your Falcon into a powerful animation workshop. Nial Grimes is on the case...

The Atari series has never been short of top quality art packages and *ChromaStudio-24* is likely to set the Falcon alight. The package is being written by Douglas Little of *PhotoChrome* fame and *ST Review* has been given an exclusive preview of how work is progressing.

The simple tools screen belies the fact that this really is an art package for the nineties. It runs in 256 colours or true colour and you can easily work on pictures up to 1280 by 960 pixels in size. All block operations take place in real time as you move the mouse and by using *PhotoChrome* techniques, the Falcon's colour palette is boosted from 18-bit to full 24-bit status – over 16 million colours! There are one or two peculiar limitations at this stage – the lack of font support being a prime example – but our hopes are high for the release version.

MOVING PICTURES

Although it does a good impression of a paint package, *Chroma* is all about animation. The controls for all animation facilities lie in an icon panel at the bottom of the screen. Here you'll find buttons to insert new frames, play the animation in memory, adjust the speed and so on. In operation it feels very natural and although you edit an image with the tools on screen, all adjustments to the animation settings happen in realtime.

Chroma occupies around half a megabyte of RAM and the DSP chips in with real-time delta-compression, meaning you can work with hundreds of frames on a four megabyte machine! The average compression ratio is 3:1 and up to four thousand frames can be stored, memory permitting. Both *Autodesk Animator* and *Cyber Paint* files can be directly imported for editing and improvements. The Save formats are quite limited at the moment, but once again this is likely to be remedied by the time the package hits the streets.

LET'S TWIST AGAIN...

The most exciting part of *Chroma* has to be its "morphing" studio. No doubt you've seen the technique used in videos, adverts and films –now you can toy with the same effects on your desktop. Although it looks like a very complex thing to do, putting together your own morphing animations is surprisingly easy.

The DSP is put through its paces here and rendering times are phenomenally quick. A complex field-warping operation which would take the ST ten hours to produce can be turned out in under 20 minutes on the Falcon, in true colour. Tests show that even a 486-33 PC would struggle to keep up with *Chroma* in the morphing department!

No matter what resolution you are using, the screen updates are instant. The price you pay for this rapidity is the lack of a GEM interface, but the custom alternative is very nice to work with. It will even run with *MultiTOS*, although all background operations are put on ice while *Chroma* is being used.

Morphing is only one of the package's many talents. Similar techniques can be used to distort images in a huge number of ways and the results can be directly turned into animations. By combining the morphing studio, the paint tools and the animation facilities you can come up with some stunning results – a spinning morph for example!

There are still one or two bugs to be squeezed out and few features to be added, but *ChromaStudio* is shaping into one leviathan of a package. In short, it deserves to take the world by storm!

Autodesk animations can be imported directly into Chroma and literally hundreds of frames can be used on a 4Mb machine!

Four magnification levels are available and the screen updates instantly as you switch between settings.

All block operations occur in realtime – just wiggle the mouse and prepare to be amazed!

The effect of morphing is very hard to convey on paper, but here are five images taken from a sixteen frame Chroma animation – total render time, about fifteen minutes.

IN THE STUDIO

Maurice Collins checks out Studio Photo, Compo's new image processing package.

Studio Photo handles all kinds of images.

Studio Photo is a brand new image processing package from Compo that handles a wide range of images, from Kodak PhotoCD and JPEG to standard Atari formats like Degas and Neo. Despite being keenly priced, it boasts over 50 different filters and special effects, a full suite of editing and retouching tools, facilities for resizing and rotating images, and a superb GEM-based user interface.

Studio Photo actually comes in two versions, both of which are supplied on the same disk: a 68000 version for the ST and a separate 68030 version for the TT and Falcon. To get the best from image processing, it is clearly best to work in colour so that you can see your image as it will end up and clearly the Falcon will be the optimum choice of platform. However, any

image *Studio Photo* loads is treated internally as either an 8-bit greyscale or a 24-bit true colour image, dithered to match the selected screen resolution. So even if you use an ST with a high resolution monochrome monitor, you will still be able to load, edit and transform full colour images from all kinds of sources and then save them to disk – but you will only see colour in low resolution.

WHAT YOU GET...

The program comes on a single disk with a unique copy protection system. It can only be installed twice from the master disk and has to be deinstalled using the supplied utility if you want to move it from one hard disk or computer to another. The danger here is that if you suffer a hard drive crash or damage the floppy it is installed on, you've lost a life so to speak. The A5 ringbound manual runs to only 43 pages, which is surprisingly short for such a powerful package. While it couldn't be described as comprehensive, most of the information you'll need to get started is in there somewhere.

Studio Photo is a GEM-based program that supports multiple

images in different windows and provides access to desk accessories and all its main functions via drop down menus. Alternatively there are keyboard shortcuts, if needed, though most of them are non-standard.

One of *Studio Photo*'s biggest strengths is in its file handling. It works very well as an image viewer and converter with support for import and export of Neo, Degas, IFF, GIF, TIFF, Targa, PCX, JPEG (highly compressed images) and Kodak's PhotoCD image formats. There is also a native format, SEF, which loads and saves particularly quickly. JPEG loading and decoding is particularly fast on the Falcon version when you use the option of using the DSP chip.
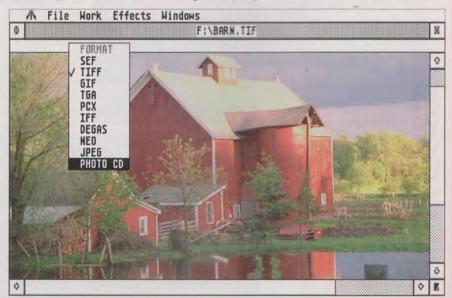
FILTERS AND TOOLS

Once an image is loaded it can either be edited pixel by pixel or processed using one or more of the special effects filters. There are over 50 to choose from including some pretty

spectacular ones like motion blur, mosaic and spherisation (see the accompanying box). Others, referred to as convolutions in *Studio Photo*, include Sobel, Prewitt, Kirsh, Laplacien, anti-aliasing and outline. Filters are applied to the existing image rather than creating a copy and there is no undo function. On the other hand the basic filters like sharpening, brightening and blurring are pretty fast, so reloading the image and trying again shouldn't present a problem. If you can't find the effect you want from the 50 or so provided, you can always design your own using either 3x3 or 5x5 grids.

For detailed work there are eight zoom modes (up to a maximum of 16 times normal size) though only four are actually magnifications. Conversion to grey scale is possible too with some comprehensive control over the RGB channels. This is a vital feature for those interested in DTP – the ability to convert 24-bit colour images to greyscale with fine control over sharpness and contrast is essential for

This PhotoCD image has been converted into TIFF format.

FILTERS AND SPECIAL EFFECTS

Figure 1 shows what happens when you start playing about with colour. Imagine you want to use the image of the fish but you need it to be red, not yellow. With a paint program, you would have to spend hours carefully changing over each individual colour using area fill tools or gentle airbrushing. Not a job for the impatient! With *Studio Photo* it is simply a matter of remapping all the various shades of yellow to a similar range of reds. This is done by adjusting the shape of the colour curve (inset) with the mouse.

Figure 2 shows five versions of the same image, which is itself a small section of a much larger Kodak PhotoCD format image. The original picture is at top left while below it is the same image with the motion blur filter applied to it.

The image in the centre was created using a special effect filter while the one at the top right has had a mosaic effect applied to part of the parrot's head (presumably it didn't want to be identified!). The image at the bottom right is "spherised", in other words projected onto a sphere as if looking at its reflection in a glass ball – sometimes also described as the "fisheye" effect.
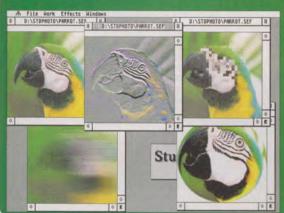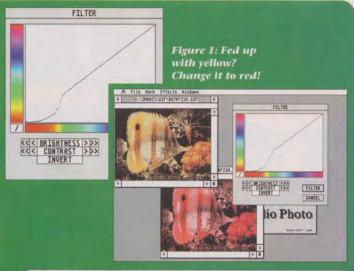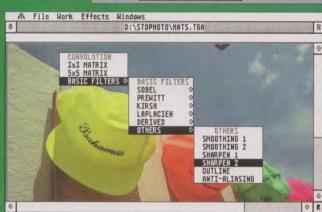
Figure 1: Fed up with yellow? Change it to red!

Figure 2: Some of the effects possible with Studio Photo.

Filters – the choice is yours...

getting the best image to work with.

Clicking on the right button brings up the toolbox which contains fourteen different tools, most of which are fully configurable. The tools can be used to create images from scratch or touch up existing ones. There are standard tools like pencil, paintbrush and airbrush as well as more exotic ones like finger, water, sharpener and rubber stamp. If you imagine wetting your finger and dragging it across the boundary between two half dry colours, you have some idea of what the finger tool does. The water tool works in a similar way except the colours are diluted while the rubber stamp lets you grab part of an existing image and use it to paint with.

The tools are extremely powerful and can be tweaked to create virtually any desired effect. For example, the finger tool offers 18 different shapes and sizes for the finger, a percentage value for both the strength and fade plus a choice between

normal and hue modes. Some tools can be added to the existing image, almost like working with real water colour paints that mix on contact. In this way it is possible, with a little effort, to create an image that looks as if it has actually been painted rather than created on a computer.

Other special features include smooth colour gradients for use as backgrounds and an eyedropper tool for selecting a colour from an existing image. The cropping tool works well too. Bits of an image can be cut or copied into a new window, edited and worked on, then pasted back to the original location. This is very useful for applying adjustments to parts of an image, but it isn't anywhere near as powerful as the masking feature in programs like *Retouche CD* and other professional image editors. Masks allow the user to create irregular shapes with which to protect or copy parts of an image. *Studio Photo's* rectangular cropping tool would not let you lift a face from

The toolbox offers a wide range of useful tools for creating pictures – this is ST low resolution.

a picture and then graft it onto another body, for instance, unless the backgrounds were identical. With an irregular masking tool, it would be relatively straightforward.

VERDICT

There are still a few minor bugs in the program – DSP decoded JPEGs and PCD imports can cause screen corruption, for example – but Compo has an excellent track record for fixes and upgrades, so there should be few lasting problems.

Studio Photo is a powerful image handler and an excellent buy for those wanting to branch out into colour image processing and retouching. It is ridiculously easy to use, attractively priced and has oodles of features and filters despite the missing masking facilities. It has to be seen as a fun program rather than a professional tool but it's one that anyone can use and enjoy, whether they want to enhance images for use in DTP or create weird and wonderful effects from those boring holiday snapshots.

✔ **Great file conversion features**
✔ **PhotoCD and fast JPEG support**
✔ **Customisable drawing and editing tool**

PROS AND CONS
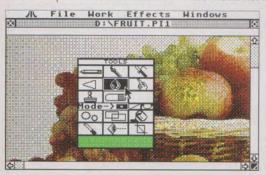
✗ **Zoom could be more flexible**
✗ **No masking**
✗ **Can't undo filters**

"A fun, feature-packed program with broad appeal."

NAME: STUDIO PHOTO
COMPANY: COMPO
CONTACT: 0480 891819
PRICE: £79
MIN MEMORY: 1MB

EASE OF USE ✪✪✪✪✪
DOCUMENTATION ✪✪✪✪✪
FEATURES ✪✪✪✪✪
VALUE FOR MONEY ✪✪✪✪✪

OVERALL **87%**

TECH TALK

Even the most powerful hardware is useless without good software…

For almost a year we've been hearing how powerful the Falcon sound system is and how useful the DSP can be. The promise of digital audio is exciting news, especially to Atari computer owners whose main interest is MIDI. After reviewing packages like *MUSiCOM*, *D2D* and *DigiTape*, I was left with the feeling that while the Falcon audio is impressive, perhaps it was not as powerful as I had initially believed.

It wasn't the audio quality that disappointed me, but the lack of flexibility I had got used to after using *Cubase* for several years. To the uninitiated, *Cubase* offers the MIDI musician similar features to those possible with a word processor. Words or whole paragraphs can be cut and pasted, spell-checked and formatted. In a similar manner, *Cubase* can take musical notes, cut and paste them, carry out time correction and much more. MIDI has changed the way music is made – for better or worse.

Having owned a Falcon for almost a year , I was getting used to the idea that this flexibility was simply not possible with digital audio. The size of the files and processing power required to make the slightest change is mind boggling. A typical paragraph in a word processor may contain 500 characters, so using 500 bytes of computer memory or disk space. A ten-second long audio sample requires over one megabyte of RAM! No matter how fast a hard disk is, eight tracks is simply pushing the SCSI protocol to its limit.

This story could have a sad end, but last week I finally got hold of a preview version of *Cubase Audio*. It only took a few minutes to be convinced that digital audio on the Falcon is not just a possibility, but a reality. And *Cubase Audio* should be widely available by the time you read this.

We are standing on the verge of another musical revolution similar to that brought about by the ST and MIDI almost 10 years ago. Musicians with a limited budget will now have access to top-of-the-range digital audio editing and direct-to-disk recording facilities. How this will affect music is open to discussion, but it certainly will affect it and generate sales of the Falcon.

Most hi-tech music stores are rejecting the Falcon as a games machine. "It's a glorified and expensive toy, not a reliable workhorse," they say, while pointing at a Mac or PC system costing three times as much. The truth of the matter is that almost all MIDI musicians badly want to have access to digital audio. A typical order in a music shop is "*Cubase*, a keyboard and a screen". With a bit of luck – and lots of advertising – this may change to "*Cubase Audio*, a keyboard and a screen", the keyboard being an Atari Falcon!

At the recent London Atari Show, Ofir demonstrated Cubase Audio on the Falcon. Unfortunately, the pre-release key that plugged into the DSP port was obstructing the audio input socket. The result? One dismantled key. And did Ofir take it apart? Did he heck…

ALL CHANGE

Ever tried to produce a professional looking document and found that your program won't accept the picture you want to use? Ofir Gal considers the three best conversion utilities...

If you have a vast selection of clip art and picture files, it is fair to think that it should be easy to incorporate these into documents. Unfortunately, the vast number of file formats may make it difficult to find an image file that you word processor or DTP program recognises. And that's why you need an image converter...

IMAGECOPY 2

IN BRIEF: Originally designed as a snapshot utility with viewing and printing facilities, *ImageCopy* has grown into a powerful image processor and converter. It can load a wide range of image formats that can be cropped if needed and saved in Degas, IMG, TIFF or Targa formats. The program can also run as a desk accessory and requires about 200Kb of RAM.

ImageCopy 2 **runs in all resolutions and can display 256 colour and true colour images on an ST using colour or monochrome dithering techniques. So you can convert a true colour TIFF image to a monochrome IMG if required. There are several different dithering techniques, some of which are optimised for printing, others for viewing. Printing facilities are comprehensive and includes support for colour printers. Even standard monochrome printers can produce high quality colour printouts of true colour images using colour separation techniques. The colour balance and contrast of the image can be modified at will, although this requires the reloading of the image.**

ST REVIEW COMMENT: "A fast and reliable image utility at an affordable price. Excellent dithered output and printing facilities along with a slick and simple to use interface make *ImageCopy 2* a must for anyone with an interest in computer images. Recommended."

ImageCopy provides powerful, fast and easy to use image conversion facilities among many other features.

GEMVIEW 2.48

IN BRIEF: *GEMView* is by far the most powerful image utility around, supporting almost any file type in existence. Images can be enlarged, scaled down, cropped and converted to a wide selection of formats. Included with the package is a snapshot utility which can only save IMG files but works rather well. *GEMView* requires over 500Kb to run as either a stand-alone program or a desk accessory.

No less than 30 file formats are supported including JPEG and Kodak's Photo CD file format (PCD). Images can be rotated and there is full control of the colour balance although the latter reloads the image. *GEMView* supports various dithering techniques, all of which work well, but the results are not as good as with *ImageCopy*. There's optional support for the Falcon DSP which is used for JPEG decompression.

While *GEMView* is very flexible, it is also the slowest at image processing. However, it can convert a large number of files in one operation by using wildcards – specifying the file name *.IMG will load and convert all IMG files found to any specified formats.

ST REVIEW COMMENT: "If you need a comprehensive package covering a large number of file formats, and do not mind the lack of speed, then *GEMView* is the program for you.

GEMView supports a large number of file formats. Rather clever dithering algorithms are available, allowing for conversion of colour images to monochrome.

PICSWITCH 1.01

IN BRIEF: *Picswitch* has been around since 1987. It is not as powerful as *ImageCopy 2* or *GEMView*, has less features, supports a smaller number of file formats and can only convert to IMG format. It does have one crucial factor in its favour – it is fast. In addition, it requires just 200Kb of RAM.

Picswitch is designed to convert colour images to monochrome and offers image enhancing features such as image scaling and contrast adjustment. It is easy to try out different dithering algorithms, available from a pop-up menu, and there is no need to reload an image making processing extremely fast. *Picswitch* can also print dithered monochrome images.

ST REVIEW COMMENT: "The ideal image converter for DTP work. Only outputs mono IMG files but compensates with powerful and fast dithering facilities. The only converter to offer real-time adjustment of images."

This unassuming dialogue box can quickly transform an image from dull grey into a sharp and impressive picture.

VERDICT

There is no clear winner – each has its merits and disadvantages. If all you require are monochrome IMG files, then *Picswitch* is an ideal tool. If you need colour conversions, then it's a tough choice between *ImageCopy*, which is fast, simple to use and has colour printing facilities, and *GEMView*, more versatile but slower. The answer? Get all three!

ImageCopy 2 – £19.95 from The ST Club (0602 410241).
GEMView – shareware via PD libraries.
Picswitch – on *ST Review* cover disk, issue 18 (October 1993).

OPEN HOUSE

How much do you know about your computer?

When writing about the ST, it's easy to lose sight of the fact that not everyone goes as deeply into the machine as we do. Many people have a computer for a specific purpose, be it to play games, write letters, create newsletters or posters, or even just to draw pictures. We try to cover all levels, but it's not always possible.

Some of the letters received here tell us that some people need more help than others when it comes to root directories and boot disks. A couple of gems in the mailbag include:

"I have a double sided disk drive and when I turned the disk over and put it in the machine, it got stuck. No end of poking with a screwdriver would get it free. What should I do?"

"I have managed to get a directory listing but am unable to run any of the programs on my Amstrad."

..and this diamond from a reader that had bought a PC magazine with a 5.25" disk...

"I bought the latest issue of the magazine and had to fold the floppy disk to get it to fit into the Atari's disk drive!"

While I would never wish to embarrass people for their lack of knowledge, it does make me wonder if there should be some kind of test for potential buyers of new computers!

Our aim here at *ST Review* is primarily to educate and entertain the reader. Where do we draw the line? Personally, I'd hate to become elitist and exclude the beginner, but I'd also be loathe to insult the "computer literate" reader by being too basic in approach.

On the subject of readers, why is computing a male-dominated hobby? Surely there are enough programs to interest the fairer sex – recipes, knitting patterns, art packages, electronic engineering...

At the risk of appearing sexist (*more like a racing certainty than a risk... Ed*), the recent London Atari Show at Alexandra Palace was a perfect example. Most of the female contingent spent their time being dragged around yawning, with their husbands or boyfriends saying "look at this fascinating vector graphics package".

There were some notable exceptions to this, like the young lady who was there on her own and came to the stand to ask about getting the cursor to appear when working on a white background in *Neochrome*. One of the *Ask The Experts* questions this month comes from a young Italian girl who owns a Mega STE and is concerned about its speed in MIPS.

As always, we love to receive letters and questions from all readers, but it would be nice to hear from some of you ladies using the computer as well, so please put pen to paper and tell us what you use your computer for. If we get a response, who knows? Maybe we could devote a regular page to the "Woman's Perspective".

Well, that's about all for this month. With Christmas approaching, I wonder what Santa has in his sack for my ST?

Be seeing you...

Tony Kaye has been Deputy Editor of *ST Review* since the move to Europress. Not only does he believe in Santa Claus, but he still leaves his lost teeth under the pillow. As he lives alone, he now disputes the existence of the tooth fairy...

AMERICAN PIE

The Atari Jaguar logo is on the US screens...

Shares in Atari stock are up again. Contributing factors are the realization that the Jaguar *is* going to be a major force in the console wars of 1994 and to a rumor that Atari is up for sale. I saw several on-line messages spreading tasty rumors that Atari was being sold to a major computer developer. That's all this is though – a nasty unconfirmed rumor...

The other day I turned on CBS Morning News and they were showing the new 3DO game system. Just as I was about to continue my channel switching ritual, (the joys of cable TV) the Atari Jaguar logo popped up on the screen! Next I was treated with previews of several Jaguar games. The spokesperson confirmed that the Jaguar was indeed more powerful than the 3DO and with a substantial lower price. This is the first time in years that anything with the Atari name has had national exposure on TV. They even showed the CD hook-up for the Jaguar which then proceeded to truly blow the 3DO system off the air. But that *Crash-n-Burn* 3DO game does look good....

Continuing with the Jaguar media blitz this month, almost all the consumer game magazines here in the States had between two and three pages of Jaguar pics and reviews. The game that'll be packaged with the Jaguar, namely *Cybermorph*, has received the best reviews by far. The only thing that puzzles me at this point is that several sources are stating the price of the Jaguar as being between $200 and $299.99. I hope Atari can keep the price of the unit at $199.99 without a game and, perhaps, $249.95 with a game! It looks like we finally have a winner on our hands...

Here's food for thought. The Falcon sells at $1,200 for which you get a good machine with decent graphics and sound. The Jaguar will sell for about $200 and it has superior graphics and sound capabilities. How about if Atari produces a Jaguar computer kit? A small case with hard drive, floppy, all the input and output ports and keyboard. Even if sold at an incredibly high price like $1,000, this would still represent a more powerful multimedia machine than the Falcon at about the same final price. Don't forget the TOS 2.06 cartridge for it though!

The biggest Atari Users computer show was presented recently in Glendale, California. Around 1,500 Atari supporters from around the country made the trip to see all the latest goodies first hand. A smaller showing than previous years, but vendors reported brisk sales. A few developers were there like Oregon Research with *Diamond Back III*, Newstar Technology with *Straight Fax 2.0* and Clear Thinking with *EdHak Pro*. Of course, Atari were there with hardware and developer news.

New products? Well, Migraph has a new colorburst hand scanner for the Falcon at under $400, and there's also a new book for Atari developers, experienced or otherwise. It's called *The Atari Compendium* (*full review next issue... Ed*). For $49.95, you get over 800 pages of hardware and TOS information for all versions.

On a final note, I ask the question why in a retail/residential market as big as Fort Worth, Dallas, is there only one Atari retail store? And even that one store *still* doesn't have access to Falcons!

Dave Munsie has just recovered from a 30 day programmer's burn out, but thanks to a new paint job on his Mega STe he's happy to report that he's cured. Perhaps he'll send us a picture for the next issue...

NEXT MONTH

TIMEWORKS 2!!

Another *Atari ST Review* exclusive – a usable version of *Timeworks 2*! Not a demo either – none of this "save disabled" lark for *ST Review* readers. The Xmas cover disk version of *Timeworks 2* really places the world of DTP at your hands.

You can:

- *Design your own pages*
- *Change them until your heart's content*
- *Output to an Epson-compatible printer*
- *Save your masterpieces*
- *Load them the next day after an evening's contemplation!*

And to get you started, there'll be four pages of superb, practical tutorial. Mouth watering or what…

FIRST ANNUAL ATARI ST REVIEW AWARDS

Remember that form in September's issue that you filled in and sent to us? The one with your votes for the best products and companies? Our Christmas special will have all the results and the name of the lucky reader who's won a Hewlett Packard LaserJet 4L…

SIMPLY THE BEST...

- Reviews ● Tutorials ● Cover disks ● Features

YES, ST REVIEW BRINGS YOU THE BEST EDITORIAL COVERAGE OF ANY ATARI MAGAZINE – ESSENTIAL READING FOR ALL ST OWNERS!

ON SALE DECEMBER 9 – PLACE YOUR ORDER NOW!

Full colour Works...

Andrew Wright slips into Works mode as he reviews the latest Atari blockbuster...

THE WORKS OUTING

Take a letter, Miss Prendergast. No, cancel that – get Smith's address from the filing cabinet first. Oh and while you're there, dig out last month's sales figures. We'll need to include them too.

Sound familiar? Even if you don't happen to have the luxury of a Miss Prendergast to do your typing for you, you've probably been there before – writing a simple letter can turn into a major effort if you don't have everything to hand at the same time.
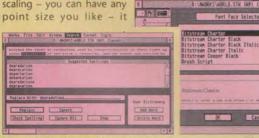
Most ST users will be familiar with loading up a word processor, quitting to load an address book or database, and then quitting again to fire up the spreadsheet or accounts program. It is possible to install address book accessories, of course, although accessory spreadsheets are a little thinner on the ground. Under *MultiTOS* you can always load every program you might need into memory but don't expect the system to enjoy it. Indeed, the likelihood of *all* your favourite applications proving totally compatible with *MultiTOS* is rather slim at present.

The answer is here at last, though, and it's all thanks to Atari. Integrated applications have made a name for themselves in the business world and Atari has come up with a superbly put together package called *Atari Works*. It takes care of everything in one single integrated program – word processor, database and spreadsheet. You

WORD PROCESSOR

The main component of *Works* is the word processor – and what an impressive one it is. Each document is opened in a GEM window with an icon bar along the top and a ruler below that. With a click of the mouse you can access common functions like text alignment, style, tab format, line spacing and up to 20 paragraph styles. There are keyboard shortcuts for everything and a series of comprehensive drop-down menus.

Any Speedo font can be used and font scaling is surprisingly quick. General performance is about average in terms of scrolling speed and redraws but when you consider the flexibility of the font scaling – you can have any point size you like – it

Paragraph styles in the Works word processor.

measures up very well indeed. Printout is something close to astonishing; even on a standard inkjet, the quality of the hinted Speedo fonts is quite stunning.

Other features include thesaurus and spell checker, headers and footers, integral graphics such as boxes and rules, and import of GEM and IMG format graphics. It doesn't have things like outliners, a word counter or different page views and print previews but it is still one of the most powerful word processors available on the ST.

The US dictionary is pretty good despite the Americanisms.

The first Atari WP to use Speedo fonts?

SPREADSHEET

The spreadsheet part of works is as impressive as the word processor. Again Speedo fonts are used for display at any size and parts of the sheet can be copied and pasted into the database or word processor with ease. Import and export is limited to delimited ASCII so existing spreadsheet users may have some work to do transferring data but it is so much more flexible than the average ST spreadsheet that the effort will soon pay dividends.
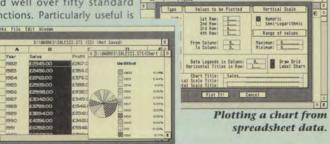
It is extremely intuitive as most actions can be accomplished with the mouse – even ranges can be selected to insert in complex formulae. There are dozens of options for the power user too, including charts and graphs, five different data formats from percentage to pounds and several different date formats, powerful print control and well over fifty standard functions. Particularly useful is the fill feature which lets you copy data or formula over a wide range of cells but still maintain the relationship between them.
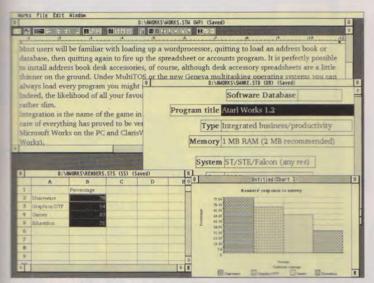
Moving around is easy too and far more instinctive than some other spreadsheet programs, with the <return> key positioning the cursor on the next line. Information can be entered quite freely and the program decides whether it's a label or data.

The charting isn't as good as it looks – you are limited to five basic charts and graphs, including pie, bar, stacked bar, line and combined, but only four rows can be used at a time, which rather limits its usefulness for larger spreadsheets. On the whole, though, the spreadsheet is better than most and well worth having.

Plotting a chart from spreadsheet data.

Charts are automatically updated from the spreadsheet in real time.

Works and ScreenBlaster go well together...

can be typing a report one minute, looking up a telephone number or customer record the next and still have your annual accounts on the screen at the same time.

Works will run on any Atari, as long as it has at least 1Mb of memory but I wouldn't advise trying to use it seriously without a hard drive or at least 2Mb of RAM. The reason is that you need *SpeedoGDOS* to get any output at all and that requires extra RAM to cache the font outlines. You can actually use the program without *Speedo* – it simply displays the system font instead of the outline

fonts. *Speedo* also accesses the disk quite heavily at times, particularly when changing typefaces. *Works* won't run in lower resolutions, as you'd expect, and it needs ST medium/high or 80 column mode on the Falcon.

The release version will come with a straightforward installation program that copies the files to your boot disk (or disks on a floppy-based system) and sets the program up for use. Running the main program produces the startup dialogue box with four icons. At this point you can decide which type of file you want to use and select either the word processor,

DATABASE

The database seems to be the least well-featured of the three options but its strength lies not in the fact that it handles data well, but in the way that it integrates with the other parts of *Works*. This makes activities like mailing lists, labels and invoicing very easy to set up.

Import and export is again limited to ASCII delimited files which might mean some data

The Works database.

conversion, but the advantages of immediate access while you're working and the excellent cut, copy and paste facilities will certainly make it worthwhile. Parts of the database can be copied as a graphic and even field totals can be copied to other parts of the program.

The flatfile database is fairly simplistic and consists of either a form view or a list. The form can only have one font, so it won't be possible to design exciting looking business forms, but it should suffice for most purposes. Fields, either text, numeric, date, time or computed, can be moved around

the form with the mouse, and the database itself navigated via the keyboard arrow keys. It might be the weakest part of the package but it's far from useless.

Works offers flexible fielding.

database or spreadsheet icons and open a new or existing file. The fourth icon lets you load any type of file – useful for occasions when you know the name of the file you need to load but can't remember if it's a spreadsheet or a database.

Atari Works is the first application of its kind and it promises to be a huge success. Unfortunately there are plenty of "ifs" and a few "buts" into the bargain. For a start, the price is pretty steep, especially as *Atari Works* is bundled free with every Falcon sold in the USA. Atari UK have told us officially that they still haven't decided what to do as far as Europe is concerned but they don't rule out a cut price deal for Falcon owners. ST owners, it seems, will have to pay the full price. There

still isn't a dedicated UK version either – our review copy came direct from the USA though that really affects only the dictionary and thesaurus.

Viewed purely as a package, *Works* is a big step forward for Atari users. It's the first word processor to use *SpeedoGDOS*, which makes it pretty special in itself, but it's the all-in-one features that make it great. Integrated packages are often seen as being a jack of all trades and master of none, but this will be the most welcome piece of software to squeeze itself onto my hard drive for years. It certainly *Works* for me...

> *"Great for small business or personal productivity – puts Atari back in the front line."*

NAME: ATARI WORKS
COMPANY: HISOFT
CONTACT: 0525 718181
PRICE: £129
MIN MEMORY: 1MB

EASE OF USE	●●●●●
DOCUMENTATION	●●●●○
EFFECTIVENESS	●●●●●
VALUE FOR MONEY	●●●●●

OVERALL **92%**

✔ Very easy to use
✔ Excellent word processor
✔ Good modern spreadsheet
✔ Fast printing and screen displays

PROS AND CONS

✗ Too expensive for the casual user
✗ No dedicated UK version yet

WRIGHT ISSUES

Tell the truth, the whole truth and nothing but the truth, so help me...

Talking to some would-be computer users at a big London show recently, I found myself being grilled about a dozen aspects of computing I'd never really thought of before. Those of us who have grown up with bits and bytes tend to forget that there are people whose knowledge is rather more limited.

One harassed lady with two kids in tow asked me how much power a computer used. Well that floored me. If she's asked me how many sectors on a disk or the number of pixels on the screen, I'd have leapt in full of confidence. I might even have got the answer right. Unfortunately I can distinctly remember looking at the poor woman with amazement. What a daft question, I thought. But when you think about it, it's just one of the minor mysteries of the universe that never gets explained in magazines or anywhere else.

I suppose an ST plus monitor must add up to about the equivalent of a couple of light bulbs rather than a three bar fire – my own electric bills certainly don't indicate otherwise – but I can't help feeling the lady went away disappointed.

The other surprise was the almost paranoid fear of viruses some people have. They were actually afraid to buy a computer for fear of getting a virus on the disk. Now that seems to me to be the equivalent of not breathing in case you catch a cold but it appears that all the media scaremongering hasn't been in vain.

If you saw some of the dodgy old disks that go into my drive bays, you'd probably be surprised to learn that I've never been bothered by anything other then the ghost virus – and that's pretty harmless. I've never lost any data through virus activity and I can only assume that they're actually quite rare. I know one user who has a couple of Auto folder programs plus a desk accessory, all watching and waiting to pounce on some unsuspecting bit of code it doesn't recognise. I gave that up long ago.

Call me foolish, if you must, or even irresponsible, but unless we stop generating all these scare stories about viruses and try to be a bit more encouraging, thousands of people are going to have to forego the pleasure of joining us in our blinkered little binary world.

So if you're reading this, madam, please accept my apologies for being a condescending, so-called expert. I'll be much more sympathetic next time. And don't worry about your son's Ribena – it came out in the wash...

Andrew Wright is a freelance writer for various magazines and has been with *ST Review* since its inception. When the golf course is wet and soggy, he can usually be found at user groups and exhibitions. But only if there's a bar...

SUPER

After last month's guide through the Falcon monitor minefield, Ofir Gal decides to Blow Up the Screen with a Blaster!

Last issue's feature on Falcon monitors explained how a variety of displays can be used, ranging from RGB colour screens for the ST to SVGA and Multisync. After facing the dilemma of which monitor to buy, the next question is how to get the best out of it.

ScreenBlaster and BlowUp030 are two products designed to push the Falcon video hardware beyond the standard resolutions available from the desktop. If you work with a word processor or DTP program, or art and graphics packages, you can benefit greatly from increased display resolution. While the physical size of the screen does not change with these products, the number of picture elements (or pixels for short) is increased and so

more information can be displayed on-screen.

STANDARD RESOLUTIONS

Depending on the monitor, Falcon resolutions go up to 640 by 480 pixels on a VGA or SVGA monitor, or a little higher on an RGB monitor using the built-in overscan mode. Most modern SVGA monitors are capable of much higher resolutions – 1024 by 768 pixels is pretty much the standard for new monitors. But trying to display such a resolution on a monitor whose hardware is not up to the job can cause serious damage. Perhaps this is why Atari opted for safety rather than features; almost any monitor can be connected to a standard Falcon

Standard VGA resolution (right) compared with the enhanced display (above) possible with ScreenBlaster or BlowUp030.

SCREENBLASTER

ScreenBlaster was designed by the Overscan team who have been responsible for products such as AutoSwitch Overscan, VRAM and the *Chameleon* desk accessory loader. The controlling software was written by the Behne brothers, also known for their successful screen accelerator, *NVDI*.

The hardware attaches to the Falcon monitor port and

Configuring ScreenBlaster is as simple as selecting the monitor type and model, and pressing Install.

an additional lead connects to one of the analogue joystick ports. The control software includes a setup program where you select the monitor type. A long list of monitor makes and models appears in a scrolling list along with their specifications, enabling you to select one that is close in features

to your monitor. There is also a choice between joystick port A or B, in case one is already in use. A click on the Install button creates a program in the Auto folder of the hard disk and ScreenBlaster is ready to go.

On rebooting the system, you are presented with a list of possible resolutions according to the current colour mode and monitor type. Selection is made via the cursor keys and is automatically stored. An additional *XControl* (CPX) module is provided to help you align the image on screen. ScreenBlaster also provides the facility of a "virtual screen" where your monitor is a part of a larger display. Moving the mouse to the edge of the monitor causes the physical screen to scroll. This is similar to *BigScreen*, which is available for the ST and STE, but is much faster and smoother in response.

ScreenBlaster is designed with SVGA monitors in mind. It can handle standard VGA and even SM124s, but does not give you many choices of resolution for these monitors. As the hardware is capable of producing more resolutions than are available at present, this can probably be rectified with a software upgrade.

It is sometimes necessary to re-align the picture when using ScreenBlaster – this little CPX module is included with the package.

"A powerful and easy-to-use utility that richly enhances SVGA monitors."

NAME: SCREENBLASTER
COMPANY: COMPO
CONTACT: 0480 891819
PRICE: £79.95

EASE OF USE ✪✪✪✪✪
DOCUMENTATION ✪✪✪✪✪
EFFECTIVENESS ✪✪✪✪✪
VALUE FOR MONEY ✪✪✪✪✪

OVERALL **89**%

✓ Easy to install and use
✓ Large selection of available presets

PROS AND CONS

✗ Intended for SVGA monitors
✗ Could be more flexible

Small and sweet! Simply plug in and away you go...

SCREENS!

without any risk.

CLOCKS AND PIXELS

The video signal sent to a monitor is created by a crystal clock. This generates the signals at a fixed frequency suitable for the monitor. Two clocks are available on the Falcon and these can be tweaked using undocumented system features. The designers of ScreenBlaster and BlowUp030 spent some time investigating these clocks and have managed to produce a much wider range of resolutions, reaching up to 1240 by 960 pixels depending on the monitor.

As always, there is a payback – increasing the number of pixels requires that the screen refresh rate is reduced. This results in the display flickering when the

refresh rate drops below 60Hz, which is the standard VGA refresh frequency. The technical reasons are beyond the scope of this review, but suffice to say that rates higher than 60Hz are pleasant to work with, while lower rates are invariably tiring to view for long periods.

By careful manipulation of the Falcon's clocks, the designers of BlowUp030 have managed to push the resolution to about 736 by 544 pixels on a VGA monitor while maintaining a refresh rate of 60Hz. Such trickery does not require any additional hardware – all you get is a configurable Auto program. Less impressive results are also achieved on a standard SM124 mono monitor, although this was never designed to cope with anything

other the standard 640 by 400 pixel ST high resolution.

HARDWARE SOLUTIONS

The designers of both products realised that pushing the resolution beyond these figures requires an external video clock. This is supplied in a small box, measuring approximately 7cm by 5cm with a thickness of about 1cm, and plugs in between the Falcon and monitor. There is no complex installation– it's simply a plug-in-and-go solution.

Using the external hardware enables both systems to achieve resolutions of up to 1280 by 960 pixels at reasonable refresh rates. Typically, they can achieve a screen resolution of 880 by 656 at the high refresh rate of 68Hz which is both flicker-free and manageable on a 14 inch display.

VERDICT

There is not much to choose between these two excellent utilities. ScreenBlaster is simpler to setup and more of an all-round, fool-proof solution. On the other hand, BlowUp030 is far more versatile but a little more fiddly to install.

If you have a VGA monitor without multiscan capability, then BlowUp030 Hard II is the best solution. The choice is a little more difficult if you own a multiscanning SVGA monitor. Hard I is markedly cheaper, but ScreenBlaster is quicker to set up; both produce comparable results with such monitors.

As with ScreenBlaster, the BlowUp030 hardware is very simple to install.

BLOWUP030

BlowUp030 has arrived in three flavours, the software-only version being a cost-effective, but powerful, solution. Two hardware versions are available, imaginatively named Hard I and Hard II. Hard I is designed to work with SVGA monitors while the latter offers greater flexibility and is also capable of producing remarkable results with VGA monitors, something which ScreenBlaster fails to do. Hard I uses the "old" joystick port located next to the mouse port. This is useful if you intend to use the new Atari Joypad which uses both of the "new" analogue ports. Hard II uses the other port just like ScreenBlaster.

The BlowUp software is a little more complex to set up. The main

screen features a selection of sliders, allowing you to directly adjust the clock parameters. The "Conf" button brings up a list of predefined configurations for you to choose from, the selection depending on the hardware version. If you are using an SVGA monitor with multiscan capabilities, you can see the effect of each configuration immediately. This enables you to find the best settings without having to reboot each time.

This added flexibility has the advantage of giving you more control which would normally result in better resolutions for any given monitor. However, there is a degree of risk involved and the program displays various alerts and warnings if you do

anything that may cause damage to the monitor. Two separate resolutions can be stored for each colour mode and a small desk accessory is provided to select the resolution. Very little documentation is available in English and a proper manual is still being prepared.

ATARI ST ESSENTIAL BUY REVIEW

"Using BlowUp030 ensures that higher resolutions can be obtained from almost any monitor."

NAME: BLOWUP030

COMPANY: SYSTEM SOLUTIONS

CONTACT: 081-693 3355

PRICE: SOFTWARE ONLY – £14.95
HARD I – £49.95
HARD II – £69.95

The desk accessory lets you switch between the various resolutions. Also included is a screensaver that speeds up the Falcon by relieving it from the hard work of accessing the screen.

A list of preset configurations is available for use with both software and hardware versions.

✔ Flexible configuration program
✔ Good performance from a standard VGA monitor

PROS AND CONS

✘ Configuration program a little complex
✘ Could do with more presets

EASE OF USE ✪✪✪✪✪
DOCUMENTATION ✪✪✪✪✪
EFFECTIVENESS ✪✪✪✪✪
VALUE FOR MONEY ✪✪✪✪

OVERALL 91%

We all want to save money, so buying used goods looks attractive. But is it? Tony Kaye investigates...

BUYING SECOND-HAND

Computers are sold privately for many reasons. People upgrade to higher specified or newer machines, requirements change or they just get bored with them, especially true of games consoles. While there is a buoyant second-hand market and you can save money, it could be a costly experience that you may regret. There is some legal protection, but the best security is to check what you're buying thoroughly before you part with your hard-earned cash.

CAR BOOT SALE

If you're buying from a private individual at a boot sale, try to check that what you're buying wasn't removed from the previous owner while he was out! Check for etched marks of ownership like a postcode engraved on the base. If it's too cheap or incomplete, this could also be an indication that the machine isn't owned by the seller.

Once you are happy that the person selling the machine is the rightful owner, you need to find a way of checking that it works. Try to arrange to meet after the sale to test the equipment. Always get the name and address of the seller and the registration number of his car.

POINT OF LAW: All goods sold must be "as described", so take a friend with you to witness anything said between you. If you think that an item was described wrongly, reject it and demand your money back.

BUYING FROM AN AUCTION

It is unlikely that you will find many STs at a computer auction, but they are a good source of component parts like SCSI hard disk drives, tape streamers, memory, Falcon monitors (VGA) and printers.

Visit a few different sales before you actually buy anything, just to get an idea of pricing. Make a note in the catalogue as each lot passes through and you will get a good idea of what the different items sell for. Prices vary quite considerably from sale to sale, so this will only be a rough guide. Once you have decided what you want to pay, taking note of any extras to be added to the bidding price (auctioneer's commission and VAT), you are ready to bid. When the item of your choice comes up, make a bid. Don't be first and don't appear too keen. Show that you are willing to wait for the right goods at the right price and don't go above your own preset limit.

Loot and Micro Mart are good sources of adverts, as well as Exchange And Mart and even the local paper.

WHAT TO PAY

The value of a computer varies from person to person, so it's difficult to say exactly what is a fair price and what isn't.

As a rough guide, a 1040 STE now costs around £200 new, complete with a software bundle, so if you are looking at one being sold privately and in good condition, around half of this would be reasonable. Machines are often sold as part of a package, so it's up to you to decide whether the overall price reflects what you are getting.

Take a look through the different magazines and use them as a guide. Note any cosmetic faults and use them as a bargaining tool when trying to bring the price down. Try to split packages that include, say, a printer and a hard disk drive if they take the total outside your price range.

YOU AND THE LAW

If things go wrong, there are laws to protect you. They all have fancy names like:

Supply of Goods (Implied Terms) Act 1973
Unfair Contract Terms Act 1977
Sale of Goods Act 1979
Supply of Goods and Services Act 1982

The above are all civil acts and apply to the general selling and trading in new and second-hand goods. All of the red tape can be simplified into three main areas. All goods must:

1. be of "merchantable quality"
2. be "fit for the purpose"
3. "correspond with the description"

All this means is that it is (1) in reasonable condition, (2) will do the job for which it is sold and (3) described properly. For the private sale, such as a small ad or boot sale, number three is the only one enforceable by law.

An example of a product not corresponding with the description would be someone selling an STFM and describing it as having the "latest operating system". When you get it home, you discover that it has TOS 1.00 and not 1.04 as you would expect.

A point to note, though. If a fault is pointed out to you or noticed before you buy it and a price adjustment made, you do not then have the right to return it later on that same point.

There is one other law that covers anything sold and that is the **Trade Descriptions Act**. This covers the criminal side of the law and accounts for anything that is sold with the wrong description in an attempt to mislead the buyer (either intentionally or not).

POINT OF LAW: Auctioneers can refuse responsibility for faulty goods, but only if it is stated before the start of the sale. If this is unreasonable, it can be challenged in court.

BUYING FROM A SHOP

Some people part-exchange goods when they upgrade and a shop may sell the second-hand goods to you at a reduced price. This will cost more than buying from a car boot sale or auction, but it does mean that you have a comeback should things go wrong. There are shops around that specialise in second user electrical goods and, often, you have the opportunity to test the equipment in the store. As with anything you buy from a trader, be it in a shop or a market stall, you are protected by law. See the separate box for more details of the relevant laws.

POINT OF LAW: Any new or second-hand items sold from a trader must be "of merchantable quality", "fit for a particular purpose" and "as described".

SMALL ADS

A good place to look for second-hand equipment is in the small ads of your local paper, or in specialist publications like *Exchange And Mart*, *Loot* or computer-specific classified magazines like *Micro Computer Mart*.

It is difficult to get an idea of pricing from reading the adverts themselves as you often don't know what software is being offered and not everyone states the model or the memory capacity. A typical ad may well read like this:

ATARI 520ST, 1Mb upgrade, joystick, mouse, over 100 disks of games and utilities, £250 o.n.o. 081-123 4567.

The OFT also publish some consumer-style magazines...

The advert does not say what machine it is so the upgrade could be SIMMs or a full Marpet installation. It could have anything from TOS 1.00 to 1.62 and may not even have an internal disk drive! The games and utilities could all be public domain...

When looking through the small ads, be prepared to make some telephone calls to find out exactly what's on offer. Haggle and make an offer slightly below the figure you've decided the package is worth. If you get it for this price, you've saved even more money, but the chances are that you will meet somewhere in between. Be prepared to walk away if you can't get the price you're looking for, but try to be reasonable.

POINT OF LAW: Again, goods must be "as described". There is an element of risk if dealing by post, so try and avoid this if possible or make sure all mail is sent by courier or recorded delivery.

BUYING FROM A RALLY

Ever heard of Amateur Radio Rallies? Most Hams are computer freaks and spend a lot of time using them in conjunction with their hobby. Rallies usually combine computer fairs with the radio side of the hobby, so there's plenty for anyone who may be interested in electronics and computing. You can pick up anything from a new fuse to a SCSI disk drive or PD software and most have a Bring-and-Buy stall where you can trade goods for a nominal fee.

To find out where the nearest rally is to you, ask any Ham friends you may have or ring the Radio Society of Great Britain on 0707 659015. Dates may be found in specialist magazines like *Ham Radio Today* or *Practical Electronics*.

These three SCSI hard disk drives look as good as new, but the one on the left was actually scrapped by a company. It works on the ST without any problems, but you could just as easily buy one that won't perform...

The Office of Fair Trading publish an excellent range of booklets to help when things go wrong.

POINT OF LAW: The traders are covered by the shop laws but private individuals are not. Some may even be anonymous, so make sure you're happy with your purchase before you buy.

ST REVIEW ADVICE

- Be careful when buying from someone you don't know. Make sure you check the goods as soon as possible.
- Take someone with you when you buy so they can witness anything said during the proceedings. This may be useful if you have problems later.
- When visiting an auction, set price limits for goods and stick to them. Do not be tempted to bid higher than you can afford to.

FACT OR FICTION

"It's better to buy from a shop than a private individual."
Fact. You will almost certainly pay more in a shop, so you won't get quite the bargain that you may get from a private sale, but you have more rights and are likely to get better service and backup.

HOW TO COMPLAIN

If things do go wrong and you have a complaint, in the first instance reject the goods by informing the seller. Tell them why you don't want them and ask for your money back. If they refuse, then contact your local Trading Standards or Consumer Protection Departments (see your telephone book) or go to the Citizens Advice Bureau. Do not return the goods without getting a receipt or a refund.

If the goods are faulty and bought from a trader you are entitled to a cash refund – you do not have to accept a credit note.

Sound Module

Is there room for another General MIDI module? Vic Lennard investigates Korg's Audio Gallery...

PLAYING TO THE GALLERY

General MIDI is big business these days, with numerous sound modules and synths vying for attention. *ST Review*'s "Playback" page gives you an idea of just how many companies provide GM-compatible song files, and the sum total is a million pounds-plus per year UK industry.

Korg should need no introduction: its M1 synth is the best-selling of all time, and the 01/W range of synths topped various charts last year. Audio Gallery is its attempt to taste a piece of the pie.

PART OF THE PACK

As with Yamaha's "Hello Music" and Roland's "Starter Pack", only the PC and Apple Macintosh are being supported in terms of a specific pack with software and connecting cables. However, the AG-10 Audio Gallery sound module can happily be connected to an ST via the latter's MIDI ports.

Most GM modules are simple affairs and the AG-10 is no exception. The front panel hosts a volume slider and a couple of red LEDs for on/off and MIDI signal, while the rear has MIDI In, Out and Thru sockets, a pair of audio ins and outs that act as a

basic mixer, stereo headphone out and a socket for direct connection to a PC or Mac. Power is via a separate 12V adaptor and the rear panel incorporates a cable strain relief in a similar manner to Roland's Sound Canvas.

Audio Gallery sports the standard 128 GM sounds along with four drum kits, reverb and chorus. The sound system is sample-based to recreate the tones of real instruments, as with most other GM synths, and is capable of 32 voice polyphony. This may not equate to 32 simultaneous notes as some complex sounds probably require two voices; the manual is purely a set-up guide without such detail.

SOUNDS IMPRESSIVE

Part of the joy of regularly reviewing sound modules is being able to cable together similar units and compare them, in this case a Roland Sound Canvas and Yamaha's CBX-T3.

Using various GM song files, the Audio Gallery immediately comes across as having a sweet tone, which means that it is mid-heavy. However, sounds like the Steel-Strung Guitar really ring out on Audio Gallery with plenty of top end definition, and this sets the scene for timbres generally.

Most natural instruments have useful clarity. Clarinet and Oboe are a couple of examples where the Sound Canvas offering is sweet but Audio Gallery puts the innate tone across

The front is a very simple affair; volume slider and a couple of LEDs.

more clearly. The Acoustic Piano is one instrument where the Sound Canvas scores highly, but Audio Gallery's offering isn't too far behind.

ALL TOGETHER NOW

Listening to individual sounds is all very well, but what about in the context of a complete song? Audio Gallery scores well here, having plenty of body but enough clarity at the top end for all instruments to be heard distinctly. In this respect, it falls slap bang in the middle of the warm but indistinct Sound Canvas, and the raucous but dynamic CBX-T3.

Almost all aspects of the sounds can be edited; the Audio Gallery's tone structure is based on AI^2 synthesis with 4Mb of waveforms. Unfortunately, the manual does not state how such editing can be achieved although I suspect that System Exclusive is used. As memory

is not battery-backed, any alterations have to be sent over MIDI to your sequencer otherwise they are lost when you switch Audio Gallery off.

At £399, Audio Gallery offers good value for money to a PC or Mac owner who gets a sequencer, editor, MIDI File player and convertor, and all connecting cables. For us ST owners, all we get is the sound module. Without a specialist ST pack, Audio Gallery is likely to make its home next to computers other than the ST which is a shame – it really does sound very good...

> **"Audio Gallery's sweetness and clarity of sound make it a worthwhile alternative."**

INSIDE INFO

Those of you into MIDI may be interested in Audio Gallery's big brother, the 05R/W. Based on the best-selling 01/W, it sports 6Mb of sounds and comes complete with hundreds of flexible waveforms, over 100 drum sounds, and space for you to save your own creations. It's equipped with two independent stereo effects processors – and a massive 47 different effects to choose from. The price is a very competitive £599.

All the usual MIDI and audio sockets, but the eight-pin mini socket is of little consequence to us ST'ers.

✓ Good sound quality
✓ GM-compatible

PROS AND CONS

✗ No ST-specific pack
✗ Awkward editing

NAME: AUDIO GALLERY AG-10
COMPANY: KORG UK
CONTACT: 081-427 5377
PRICE: £399
MIN MEMORY: N/A

EASE OF USE	●●●○○
DOCUMENTATION	●●●○○
EFFECTIVENESS	●●●●●
VALUE FOR MONEY	●●●●○

OVERALL 83%

Why does inspiration always disappear by the time you load your sequencer? Ofir Gal considers a possible remedy...

Almost all functions are available from the main dialogue box – no stepping through an array of screens to reach the option you are after.

MIDI SPY by John Eidsvoog
© 1993 CodeHead Technologies

SONGS – 010	EVENTS	TEMPO 100%
⬚ 3	316	100%

MEMORY USED

Playing	Overdub	Erase
Stop	Thru	Load
Merge	⬚ 3 ⬚	Save
	MIDI CHANNEL	
Duplicate	MIDI IN	Config
	Enable	
Append	Commands	Exit

EYE SPY MIDI SPY!

-= Save =-

| Song 003 |
| Song Set |
| MIDI File-0 |
| MIDI File-1 |
| MIDI File-2 |
| Cancel |

MIDI Spy supports all MIDI File formats.

The best musical ideas always come while you are writing letters or printing out some leaflet. By the time you quit the program, load the sequencer, select a track and press record you just can't remember what the idea was! If this sounds familiar, there is a solution – *MIDI Spy*.

Written by John Eidsvoog of Codehead, *MIDI Spy* is an unassuming desk accessory that constantly records MIDI data. Described as a "multi-tasking MIDI playback and recording system", *MIDI Spy* does not have a record button because it is always recording. The idea behind it, as described in the manual, is to stop the "red light" syndrome – it is amazing how well people play until you press the record button on a standard sequencer...

MIDI Spy can also play back any MIDI data recorded, and selected sections can be saved as a Standard MIDI File for editing or improvement in a more sophisticated sequencer. There are no editing facilities, no quantising or edit pages but being able to load and play MIDI Files means that it can also be used as a MIDI jukebox.

WHAT YOU GET

Installation is simple – copy *MIDISPY.ACC* to your boot disk and reset the computer. *MIDI Spy* can also work with *MultiDesk* and so can be loaded at any time. The program works in high or medium resolution and is Falcon-compatible.

Once installed, any MIDI input is stored in *MIDI Spy*, even if it is not on screen. You may have your word processor or art package running but whenever you play the MIDI keyboard, *MIDI Spy* records all incoming MIDI information. There is space for 999 songs in the program and a new song is automatically started whenever you stop playing for a while – the accessory will probably run out of memory before reaching the song limit. *MIDI Spy* uses only 40Kb of RAM and the default song buffer is set to 50Kb which can be changed at any time. The number of MIDI events recorded and total number of songs is displayed as well as the remaining amount of memory.

MIDI Spy can also overdub additional tracks which are treated as separate songs. Songs may be merged, erased or saved to disk in a variety of formats including MIDI File types 0, 1 and 2 to provide full compatibility with other sequencers.

OPTIONS

As simple as *MIDI Spy* seems, there are quite a few extra features hidden in the Configuration dialogue box. Among these is the ability to assign *MIDI Spy* commands to any MIDI event. For instance, a certain note could be assigned to change the tempo and, depending on the keyboard, program changes might be set to scroll through songs, enable overdub mode, start and stop playback or any other of a variety of functions.

Song merging is simple but versatile. Set two song numbers and all songs between these are merged, with the original songs optionally deleted to free up some memory. *MIDI Spy* even records System Exclusive data and can be used to store banks of synth sounds.

VERDICT

MIDI Spy is a nice idea – why hasn't anyone thought of it before?

The interface is a little dull and dated when compared with the latest German programs, and some simple quantising facilities and an undo option would be welcome. That said, *MIDI Spy* is a useful piece of software, especially as it is partnered by a clearly written and easy-to-understand manual.

✔ Easy to use
✔ Supports all MIDI File formats

PROS AND CONS

✘ No quantise
✘ No Undo facility

"MIDI Spy means never having to load a sequencer to record an idea."

NAME: MIDI SPY v1.2
COMPANY: SYSTEMS SOLUTIONS
CONTACT: 081-693 3355
PRICE: £59.95
MIN MEMORY: 0.5MB

EASE OF USE	✪✪✪✪✪
DOCUMENTATION	✪✪✪✪✪
EFFECTIVENESS	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

OVERALL **85%**

Configuration Options

Record gap: 005 seconds
Chain gap: 005 seconds
Memory size: 0050 K

Notes Off: [Short] [Long]

Auto-Play	Chain
Auto-Merge	Warnings
MIDIMAX Mode	Commands
200Hz Hog	Save
MIDI Start	Exit

The configuration box allows you to set the buffer size, remote control commands and other options.

Merge Songs

Number : __2   and
Number : __6   through
Delete Source Songs
[Merge]   [Cancel]

Merging songs or ideas is simply a case of clicking on the Merge button...

PLAYBACK

Regular *Playback* readers have probably gathered that there are four or five main song file libraries in the UK. While others occasionally send in their wares, few offer the quality that warrants space on this overpopulated single page. However, there is a worthy newcomer.

Sound Image Productions has been trading for about a year and specialises in backing music, MIDI Files and cassettes, so I am ably informed by the proprietor, Scott MacAlister. A swift telephone call and a disk winged its way to *ST Review*...

FIRST IMPRESSIONS...

The demo disk features seven songs; four "chart" hits and three "standards". From the first chords of *I Just Died In Your Arms Tonight*, it's clear that the programmer knows his job. The life hasn't been strangled

INFORMATION

Files cost £4.90 each, and various five-song collections retail at £15.00 – 60s, 70s, Beatles, Queen and so on. Write to Sound Image Productions at 1 Burns Place, Shotts, Lanarkshire ML7 4LQ or call 0501 825109.

Sound Image Productions is the new kid on the block – but just how good are its song files? Vic Lennard finds out...

out of these songs by over-quantising; the velocities, and hence loudnesses, are untouched as are the lengths of notes. I'd venture a guess that there has been little copying from one section to the next, factors that all contribute to a very live feel.

Songs play back perfectly on a Roland Sound Canvas and the selection of synth sounds have been well chosen. *Little Bird* has excellent use of synth bass and pitch bend, while *Walking On Broken Glass* is superb, with just the right amount of chorus effect on the acoustic piano and good use of the reverse cymbal. Finally, *My Destiny* has acoustic guitar chording that make you question whether they've been played on a keyboard. The fact that Scott is using a Roland GR50 guitar synth provides the answer.

There is clearly a high degree of interpretation in these files; they are not clones of the originals, which isn't a bad thing in itself. However,

a higher degree of fidelity is necessary where "standards" are concerned. The three demo songs of this type are a little disappointing, especially *Three Times A Lady* where quite a few of the chords are wrong.

SECOND IMPRESSIONS...

Also included were singles in three different styles – and these were superb. I've heard various different versions of *All That She Wants* by Ace Of Base, but the excellent bass line makes this one really groove along. UB40's *I Can't Help Falling In Love With You* features some good drum programming, with very effective snare rolls, and convincing honky-tonk piano lines. Finally, *I Guess It Doesn't Matter Anymore* is an authentic country & western rendition – the mixture of honky-tonk piano and muted guitar sounds playing banjo-style lines is very impressive.

OVERALL
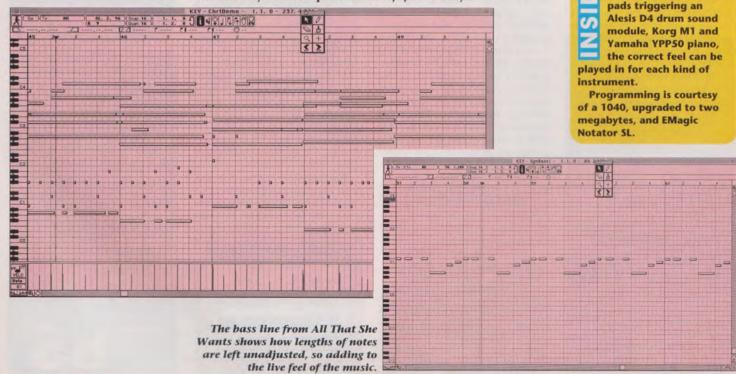
A lot of thought has gone into the style of programming, and this shows in the results. As mentioned above, corrections to note velocities and lengths are minimal, resulting in a very live feel. Reverb and chorus, for a Sound Canvas, have been used to good effect, and instruments often swell up and down in the course of a song to give dynamic movement. Occasional timing glitches were heard due to an overload of data being sent to the synth, but the programmer has tried to combat this by slightly moving MIDI events where such bottlenecks occur.

A three page document is included with all songs and gives the lyrics, bar counts and MIDI channel usage. The current catalogue is around 300 songs and each can be supplied in either MIDI File format 0 or 1, depending on the sequencer it is intended for. Do yourself a favour; send off £1 for the demo disk (refundable with the first order) and check it out for yourself...

INSIDE INFO

Apart from the programmer's skill, the MIDI instruments used go a long way to explaining the live feel of the songs. With a Roland GR50 guitar synth, Simmons drum pads triggering an Alesis D4 drum sound module, Korg M1 and Yamaha YPP50 piano, the correct feel can be played in for each kind of instrument.

Programming is courtesy of a 1040, upgraded to two megabytes, and EMagic Notator SL.

The vertical bars at the bottom of the screen show how both velocity and note position are left free 'n' easy.

The bass line from All That She Wants shows how lengths of notes are left unadjusted, so adding to the live feel of the music.

The trail leads to North Yorkshire this month as Tony Kaye visits the home of the memory specialists, Marpet Developments.

THROUGH

It would be difficult to imagine a more picturesque setting for an office than in the middle of the North Yorkshire countryside. For any map readers out there, Meadowfield Farm is situated north of Harrogate, between Pateley Bridge and Felbeck. The smallholding is owned by Peter Franklin, one half of Marpet Developments, and the land is used for sheep farming.

The other half of the partnership is Martin Walsh, who was previously with Andrew Bennett at Frontier Software until it folded in 1991. Without a penny between them, Martin and Peter decided to buy the rights to the Frontier products and continue trading as a new company. In two years, Marpet has become *the* memory specialists to which most other dealers go to buy their upgrade products.

FROM LITTLE ACORNS...

While at college, Martin painted his father-in-law's house one summer. As payment for the job, his father-in-law bought him a Sinclair ZX81 which was quickly changed for a Dragon, resulting in one completely hooked Mr Walsh. He played with OS/9 (still available for the ST from Cumana) until he saw the ST in early 1986 – bye-bye Dragon. Martin's comment

Gary tests a memory upgrade in a computer that had a soldered-in Video Shifter chip.

The luxurious offices of Marpet Developments, featuring Martin Walsh.

to his wife of "if I buy this, dear, there'll be no more buying boxes of floppy disks every couple of weeks because they store twice as much" was repeated a week later with the purchase of a high resolution mono monitor.

Everyone who saw the ST was impressed at how easy it was to use. As Martin recalls, "people said 'Wow, that's not a computer.' They couldn't believe that you didn't have to learn all the commands and things."

Martin produced a few drawings for which he was paid £60 when they were published in *Atari User*. This hooked him on working for magazines – until he found out how long it took to get paid! He offered Hugh Gollner, the publisher, a feature on floppy disk manufacture which resulted in a visit to Parrott Corporation in South Wales. Following this, a letter to Frontier Software offering to do a feature led to a reply of "you can do the feature if you want, but I'm looking for someone interested in Atari computers to work for me. Do you like pizza? If so, meet me at such-and-such restaurant."

After a successful meeting with Andrew Bennett, spending over three hours discussing Atari, *Star Trek* and *Hill Street Blues*, Martin was offered a job. At that time, Frontier consisted of just the two of them and only sold the Supra range of hard drives. A year later, ICD launched its interfaces and major competition appeared on the scene in the form of Third Coast Technologies. In looking for another product, Frontier contacted an American company called Aerco and AS&T in Southend, who offered 0.5

megabyte upgrades and were about to close down. This led to the production of the original XtraRAM two megabyte board, which sold around 50 units at £399 each at the first exhibition! Listening to the suggestion that it would be a good idea to offer a half megabyte alternative, along with an upgrade path to two or 2.5 megabytes later on, the XtraRAM standard upgrade was born.

MOVING FORWARD...

The links with Supra were severed when an approach to them to reduce the prices was met with a firm "no". Andrew and Martin then developed the Forget-Me-Clock II, which was unfortunately copied almost immediately by another company. But as the copy never worked properly, the Frontier product became the firm favourite.

Peter prepares another circuit board for the flow solder machine, but he looks as if he'd rather be out on the land.

The standard memory board sold well, but a company can never sit on its laurels. With the introduction of SIMMs, Frontier looked carefully at the prospect of developing a board that could use them. This became the XtraRAM Deluxe, a four megabyte memory board. In 1991, after an attempt to launch into the Amiga market and a particularly poor summer, Frontier went bankrupt and Martin was out of work again.

A week or so later, Peter, who was assembling products and packing for Frontier, contacted Martin. It soon became clear that both of them believed there was enough of a market to continue the business. After a fraught time with the bank manager, they bought

THE KEYHOLE

How about waking up to a view like this and knowing that your job is just a walk down a path?

One of the rooms has been converted into an extension to the workshop.

the rights for the products from Andrew and set up Marpet, named after the first three letters from each of their names.

Peter's entry into the company was a little simpler. He had the small-holding and a milk round, which entailed getting up at four thirty every morning, but was losing money.

Martin offered Peter's wife a part-time job with Frontier, but as she couldn't find the time, Peter proposed to work 15 hours a week. Four months later, Frontier employed him on a full-time basis. He freely admits that he didn't know one end of a computer from the other before Frontier and would still prefer be out in a field shearing sheep or driving a tractor! That said, he is totally dedicated to Marpet.

PERSONNEL

No company can be successful without a good team behind it. Gary Robinson, who started working for Martin at Frontier, is responsible for fitting upgrades, assembling products and supplying technical help over the telephone. Most of the problems he deals with are caused by soldered chips in the ST, although he takes a number of calls from people who are simply not used to opening up the machine. "If you remove the video shifter chip, make sure you return it the right way round or damage can be done to various other components," comments Gary.

Colin Bayley is the main Atari specialist and deals with ST problems

The team, hard at work assembling boards.

on the telephone although he also spends entire days checking D-RAM chips, a job that he most definitely gets fed up with. Hardly surprising, really...The other people in the office include John, Tony and Julie who are mainly involved in assembling memory boards. As with all small companies, everyone is prepared to do whatever is necessary to support the company.

PRODUCTS

Marpet are currently working on various memory-related goodies. A Falcon upgrade is in the pipeline and the XtraRAM +8, eight megabyte upgrade board, is about to be available for the Mega ST/E and STE machines. This was developed alongside an upgrade of the Amiga A1200 and uses similar logic circuitry.

The STE version has been delayed

for a couple of reasons: a large memory order, requiring everyone's attention, and the lack of compatibility with a TOS switcher (TOS 2.06 is needed to run the board). The original board runs without trouble if the TOS upgrade exists in ROM (non-switchable), but it was felt that the option should be available. Although the design has been changed, the board will work with *MultiTOS* without the addition of TOS 2.06. "The main problem is that Atari did not design the ST to be upgraded so there's not a lot of room

to work under the shielding. If they had produced a PC style case, there would be no problems", Martin commented. New prototype boards were expected to be available in mid-October with the production unit to follow soon afterwards.

Plans are being drawn up to produce a memory upgrade for the Falcon giving various configurations between two and 14 megabytes. Martin said: "We won't look at it until after Christmas, when we have more time and Atari have sold a few more Falcons."

THE PREMISES

The office and main workshop is a converted turkey house! The premises are rented from Peter for the princely sum of £1 per year. "I'm thinking of becoming a tyrant and doubling the rent," he said.

Downstairs, the calf pens have been removed to make more room. Currently, this is filled with two flow solder machines and a shrink-wrapper as well as providing more workspace.

Under the main work-shop are two calving rooms that are used for Peter's sheep.

SUBSCRIBE TO THE

THE BENEFITS OF SUBSCRIBING:

You receive your copy before it is on sale in the newsagents ●

You hear all the news and reviews before everyone else ●

Your copy of Atari ST Review is reserved for you personally ●

Paying by Direct Debit saves you money as well ●

Your copy is delivered right to your door ●

You save time and hassle and don't even have to set foot outside ●

You get to choose any one of our free gifts ●

SUBSCRIPTION ORDER FORM

To place your order complete this form (photocopies are acceptable) and send it to:
Atari ST Review Subscriptions Department, P.O. Box 500, Leicester LE99 0AA,
or, if paying by Access or Visa, you can fax your order on **0858 434190**.

Name_____

Address _____

_____

_____

Postcode _____ Daytime Phone _____

● Tick which subscription you want:

UK
☐ 12 issues at £41.99 ★
☐ 6 issues at £18.99
☐ Ongoing Quarterly Direct Debit at £8.99 per quarter ★ (Over a year you get one extra issue)

EEC
☐ 12 issues at £41.99 ★
☐ 6 issues at £26.49

REST OF WORLD
☐ 12 issues at £41.99
☐ 6 issues at £26.49

● If you have chosen a subscription with a ★ beside it now choose any one of the following *free gifts*:

☐ Mouse and Mat
☐ Two extra issues and binder
☐ Zool
☐ ImageCopy Colour
☐ Universal Item Selector III

● Please start my subscription from the _____ issue of *Atari ST Review* (please enter month)

● I wish to pay £_____ by:

☐ Direct Debit (Complete the form on the right. UK only)
☐ Credit Charge Card Authority (Complete the form on the right. UK only)
☐ Cheque/postal order payable to Europress Enterprise Ltd
☐ International Money Order
☐ Access/Visa Card Number ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Expiry Date ____ /____ Signature _____

Complete this section if you have ticked the Direct Debit of your bank account or credit card option.

Signature _____ Date _____

Complete only one of the sections below

● **AUTHORITY TO YOUR BANK/BUILDING SOCIETY TO PAY DIRECT DEBITS QUARTERLY**

Name of bank/building society_____

Address _____

_____

_____

Name of account_____

Account No. ☐☐☐☐☐☐☐☐

Sort code ☐☐ ☐☐ ☐☐

● **AUTHORITY TO EUROPRESS TO DEBIT YOUR CREDIT CARD QUARTERLY**

Credit Card No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Expiry Date ____ /____

Your instructions to the bank/building society/Europress.

• I instruct you to pay Direct Debits from my account at the request of Europress Ltd

• The amounts are variable and may be debited on various dates.

• No acknowledgement required.

• I understand that Europress may change the amounts and dates only after giving me prior notice.

• I will inform the bank/building society/Europress in writing if I wish to cancel this instruction.

• I understand that if any Direct Debit is paid which breaks the terms of the instruction, the bank/building society/Europress will make a refund.

• Bank/building society/Europress may decline to accept instructions to pay Direct Debit from some types of accounts.

FOR OFFICE USE ONLY
Originator's identifications No. 8 5 1 4 1 2

REF NO. _____

☐ Tick this box if you do not wish to receive promotional material from other companies

BEST VALUE GUIDE TO YOUR ATARI ST

*Subscribing to **Atari ST Review** means you reap all the benefits of the exclusive treatment you'll receive as a subscriber, and you get to choose one of these great **free gifts** as well.*

So, you're wondering, what exactly is this exclusive treatment? It's a whole range of things that ensure you get your copy of *Atari ST Review* without any fuss or effort. As a subscriber there are no worries about remembering when the next issue is on sale. You can watch your favourite soap or have a lie in, because you won't be scrambling down to the newsagents with the rabble. You'll be smug and warm, content in the knowledge that you are part of the select, because your copy of *Atari ST Review* is reserved for you personally. Before the masses have even thought about their monthly expedition to the shops you'll have had your copy for a few days, delivered direct to your door, postage free. Not only do you already know the latest news and gossip, but you've also had first pick of the bargains on offer. You can even choose which specific issue you want your subscription to start from.

SUBSCRIPTION HOTLINE 0858 410510

CHOOSE ANY ONE OF THESE FREE GIFTS

1 FREE **SAVE £18.99**

2 FREE **SAVE £13.49**

3 FREE **SAVE £25.99**

4 FREE **SAVE £14.99**

5 FREE **SAVE £14.99**

1 FREE ALPHA DATA MEGA MOUSE AND LOGIC 3 MOUSE MAT

2 FREE TWO EXTRA ISSUES AND AN ATARI ST REVIEW MAGAZINE BINDER
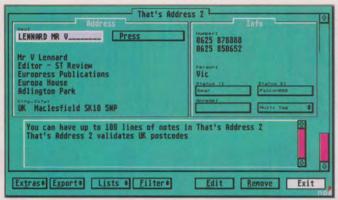
3 FREE ZOOL

4 FREE IMAGECOPY COLOUR
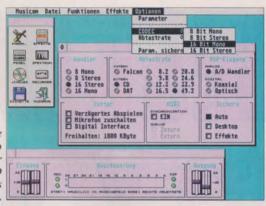
5 FREE UNIVERSAL ITEM SELECTOR

53

Compo's programs all share a common "look". For example, the 3D appearance of That's Address 2 is similar to MUSiCOM.

MUSiCOM 2, the direct-to-disk audio recording program for the Falcon. The 3D buttons and controls are Jörg's speciality.

COMPO DESIGN SECRETS...

Vic Lennard interviews the man in the know at Compo...

Jörg Zabell, Software Manager for Compo in Germany.

I f you've seen *That's Write 2* or *MUSiCOM*, the budget direct-to-disk recording program for the Falcon, you cannot help but be impressed by the way the screen looks – the user interface, to coin a rather hackneyed phrase. Clear, well laid out and with a host of 3D icons for buttons, switches, sliders and the like. Who is responsible for this side of Compo? Jörg Zabell, the Software Manager and focal point of this interview.

"My main job is software organisation." explains Jörg. "Manuals, information, software support and so on. I attend many of the shows, demonstrating Compo products, and generally support our software people in Germany and worldwide."

Which products are you directly involved with? "*That's Write*, of course, *That's Address*, *ComBase*, *CompoScript* and *NoDesk*. The last product is an extremely powerful desktop replacement program in Germany."

To set the scene for this interview, it is important to understand exactly how Jörg functions within Compo. "I have the latitude to do the things

that nobody else wants to do." chuckles Jörg. "I handle low-level Assembler programming like font appearance on-screen, but mainly the user interface. Yes – I'm responsible for the dialogue boxes and forgotten keystrokes!"

WHAT YOU SEE...

What someone sees on the screen makes the difference between a good piece of software and an excellent one. What goes into deciding this critical area? "You have to make a decision between first-time users and the experienced – it's important to cater for each. We have to make the computer look quite human, not as technical."
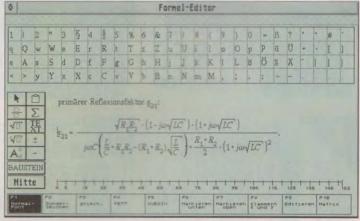
Jörg elaborates further. "No contact with the file system if it can be avoided at all – no file selectors. Incorporate an intelligent help system where you can point to a function and get an immediate explanation, not a line followed by 'look at page so and so in the manual'. In the last revision of our user interface – called *NoLook* – we added a 3D look to our

buttons and were very careful with the colours. We drew on the appearance of TV sets and stereos so that people get a familiar look. This stops the first-time user from panicking.

"We have a library of technical tools that are quite easy to use. You build your interface and resources as usual and then call up our library

routines. This guarantees that the look and feel is the same for all of our programs."

TESTING, TESTING

Many companies are guilty of releasing half finished programs to the public and then reacting to its

Formel-X, a mathematical formula program never released outside of Germany.

complaints. How much time does Compo spend testing programs? "As much as possible," is the rather emphatic answer, "but the customer sometimes decides when he wants to have it! However, through the use of our tried and tested toolboxes, even a new program is usually quite stable and any problems that are found are solved as quickly as possible."

Does Compo test software out of house? "We have a group of people from different areas – teachers, programmers, friends – and a selected statistical group who get a product to work with and report back. We have a bulletin board system in Germany which is particularly good for serious users who want software fast."

TEAMWORK
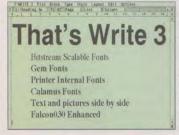
Original thought is needed both before and during the design of innovative products. Who is responsible for formulating ideas at Compo? "No-one in particular." grins Jörg. "Laziness makes the best programs. Our telephone answering program started when the person responsible for answering the telephone at Compo remarked 'why can't it do it when I'm not here?'. Someone else saw a screen clock on the Falcon and said 'why can't it make some noise?'. It's much easier to take notice of sound than a message on a computer screen or piece of paper."

How is a development team put together? What qualities are looked for? "That's not my decision; it's a natural process." informs Jörg. "In the beginning, a few individuals worked on their own products but with the core, *That's Write* team of three people, code started to be exchanged leading to shared information.

"Using many programmers leads to many styles of programming, so the last two years have been spent cleaning up the code. Small teams of people have been made responsible for the look and feel, or user interface, the printing side, the resource editing and so on. Teams are now responsible for their part of the code."

SOFT TALK

What programming software does Compo use? "Primarily *Pure C*, which has the best debugger, and *Interface*,

WHICH COMPUTER?

Most of the development work is carried out on TTs with fast hard drives and 8Mb of memory to save on compiling time. A program like *That's Write* can take up to half an hour to compile on a MegaSTE and has to be recompiled after each change!

Various computers are available for software testing: two Falcons (4 and 14Mb versions), a MegaSTE and a Mega ST, with switchable TOS between 1.02 and 1.04. Programs are no longer tested on TOS 1.00.

Jörg's personal set-up is a TT with a 19-inch mono monitor, Epson EPL7500 laser printer, which has various different emulations, and a 425Mb Quantum hard drive. Autoload programs include one that copies the ROM to the TT's FastRAM, serial port enhancers for reliable modem operation, *NVDI* and *NoDesk*, Compo's replacement desktop.

A screenshot showing Jörg's use of NoDesk, Compo's desktop replacement program. This man has some serious programs on his hard drive...

a resource construction set. Editors are a personal thing; some use the one with *Pure C*, other have a Micro Emacs version. Personally, I use *DevPac* for assembly programming.

It is critical not to lose touch with the fact that most ST owners have small memory machines. How do Compo address this? "A feature of the next generation of our programs is the sharing of code. If you are using more than one Compo product, the second one can share the code of the first so saving at least 100Kb of memory on programs whose size is around 180Kb.

"Another advantage of having a team using shared code is that some parts of programs take very little time to write. For instance, the printing part of *That's Address* took just one day!"

NEW PRODUCTS

Compo releases many programs that never see the light of day outside of Germany, *NoDesk* being just one example. Can Jörg divulge information on any others? "We have a very neat program for the Falcon called *TeaTime* which is a speaking diary! For instance, three days before my wife's birthday, it can give me a reminder by a custom voice message. It can keep reminding me, say, every five hours and then every twenty minutes the day before. If it gets to the day after, it can pipe up with 'oh, you forget again'!" laughs Jörg. "Because it's using the Falcon with its

digital CD quality audio, a nicely recorded cuckoo clock sounds very good. Anyone standing outside of the room ends up looking around for the clock!"

TeaTime will be a cheap, fun product with helpful tools. "This might be expanded in the near future to a real-time management system, a more serious product." enlarges Jörg.

"Another Falcon-specific program has a working title of *Total Recall*. It's an intelligent telephone answering machine which includes the hardware to connect the Falcon to a normal telephone line. In a typical day, you might have a certain message before the day begins, disconnect from eight until twelve, an 'out to lunch' message from twelve until two, disconnect again in the afternoon and an 'our offices are open at such and such times' message after hours. Christmas, New Year and other holidays can all be programmed in advance. There's even a remote answering facility. It's nothing that you can't buy now, but it's cheaper and you can use your existing hardware. In the future, there may also be software for a modem, using the Falcon's DSP."

It sounds like Compo are looking to support the Falcon in quite a big way. With a nod of his head, Jörg agrees. "We were one of the first developers to get a Falcon and appreciated that it was a totally new machine. The DSP and sound system give amazing quality, but to find new products and build them takes time. With the Falcon, we had to do quite a lot of things from the beginning – we have toolboxes for word processors and so on, but not for such a sound system. We spent last year creating

the tools we need to work with the DSP; development this year will be much faster."

CRYSTAL BALL

And what of the future? "Last year when Atari was struggling, the team met and talked for a couple of days. There are half a million people in Germany, half a million in the UK and another half a million worldwide who are not going to just throw their Atari away – at least not on the same day!" Jörg laughs and then continues. "We have customers who want products and will support them in the future with the continued development of easy-to-use programs that incorporate innovative features."

That's Write 3

- Bitstream Scalable Fonts
- Gem Fonts
- Printer Internal Fonts
- Calamus Fonts
- Text and pictures side by side
- Falcon030 Enhanced

That's Write 3 will be far more of a document processor, with scalable fonts, mixed pictures and text, and support for internal printer fonts.

THE 1993
BIRMINGHAM & MANCHESTER
ATARI SHOWS
Sponsored by

ATARI ST USER **ATARI ST REVIEW**

*euro*PRESS ENTERPRISE

We are please to announce not just one, but two Atari shows, building on the success of last month's 1993 London Atari Show. Birmingham and Manchester are the venues, on the 5th and the 12th of December respectively. Yes, it's true, these two shows are taking place outside of London. Having recognised that Atari users and supporters don't all live by the M25, we are pioneering to bring you these two local Atari shows. Needless to say the more support we receive, the more local Atari shows we will be able to bring you. Again, all the top UK Atari companies will be there, including representatives of some of the big German software houses. With the the backing of *Atari ST User* and *Atari ST Review* these shows are set to be the biggest Atari event for years.

ADVANCED TICKET
HOTLINE

0277 211051

Who'll be at the show?

**All the leading ST publishers of course!
These exhibiting will include:**

**16/32 PDL, Atari ST User,
Atari ST Review, CGS,
Compo Software,
Douglas Communications,
Falcon Fact File,
Gasteiner, Goodmans,
HiSoft, Network ST,
ST Club,
System Solutions/Atari Workshop,
Titan Designs, Warpzone PDL**

Birmingham show venue details

**National Motorcycle Museum
Sunday December 5
10am to 6pm
Tickets £5, £3 for entry after 2pm**

Nearest train station: Birmingham International
By car: One mile from the NEC, M42, Junction 3

Manchester show venue details

**Haydock Park Race Course
Sunday December 12
10am to 6pm
Tickets £5, £3 for entry after 2pm**

Nearest train station: Newton-le-Willows
By car: On the A580, one mile from the M6, Junction 23

Organised by David Encill, Neal O'nions and Ray Cross

GAME PLAY

HUCKLEBERRY HOUND IN HOLLYWOOD CAPERS

Richard Barton takes a look at two games aimed at a younger audience. Huckleberry Hound and Thomas the Tank Engine entertain...

THOMAS THE TANK ENGINE 2 – THOMAS'S BIG RACE

Cartoon characters are always an attraction for young people. Couple that with the mysteries of the computer, and you have something that is bound to hold their interest for a while. Alternative Software have licensed the character of Huckleberry Hound from Hanna-Barbera to create a game that even the grown-ups can play.

Huck has just completed a major film that won an arm-ful of Oscars. The problem is that Wee Willy, a naughty chimp, has stolen them and hidden them all over Cartoon World. He also removed a collection of imitation diamonds, which are needed for Huckleberry's next movie.

Your job is to guide Huck through the different cartoon worlds and help him find all the diamonds. Each world has five levels and a bonus round. The reward is one of the lost Oscars, but only when all of the diamonds have been found.

Baddies will drain Huck's power and too many hits will cause him to lose a life. The scenery can be hazardous, too – one wrong step can make him stick, turn upside down, give him a shock, bring on a dizzy spell or transport him to another area. There are various other surprises, some helpful, some a hindrance.

The controls make this a difficult

Nothing new in this platformer featuring Huckleberry Hound.

game to play and the graphics are far from ideal. A youngster playing this one is likely to get frustrated and give up fairly quickly. Not the ideal game for entertainment or learning – a child's patience is likely to wear thin. The music is annoying and the baddies are not worrying enough to even draw you to the game...

> "Nothing special – kids won't like it and adults are far too old for it."

NAME: HUCKLEBERRY HOUND IN HOLLYWOOD CAPERS

COMPANY: ALTERNATIVE SOFTWARE

CONTACT: 0977 797777

PRICE: £9.99

RELEASE DATE: OUT NOW

MIN MEMORY: 0.5MB

GRAPHICS	✪✪✪○○
SOUND	✪✪✪✪○
VFM	✪✪✪✪○
PLAYABILITY	✪✪✪○○
OVERALL	**51%**

✔ Lots of levels
✔ Cute main character

PROS AND CONS

✗ Difficult to play
✗ We've seen it all before

The race is on! Thomas is out in front, but he needs to keep an eye on the fuel gauge.

Thomas, Gordon, Bertie the Bus, the Fat Controller and all of their friends are set for the big race. The Reverent Christopher Audrey's books are brought to life in this challenge for the 4-8 year-olds, although I suspect that the adults will be playing after the kids are in bed!
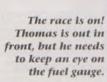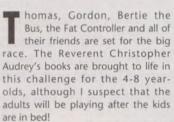
The engines (and Bertie) are racing to find out who is the fastest. Even Bertie gets in on the act with his own course to follow, so Thomas can race against him, too. The track is not a simple "start and fly to the finish" job – it has dead ends, crossings and signals that must be obeyed. Other engines and carriages are being shunted around and can easily get in your

way.

There's a water pump for the engines and Bertie gets his own garage for fuel. During the course of the game, there are bonuses to be found as well. Graphically appealing with good sound and playability, this is bound to be a firm favourite with the kids – and mum and dad...

> "Good fun for the young – of all ages."

NAME: THOMAS THE TANK ENGINE 2 – THOMAS'S BIG RACE

COMPANY: ALTERNATIVE SOFTWARE

CONTACT: 0977 797777

PRICE: £9.99

RELEASE DATE: OUT NOW

MIN MEMORY: 0.5MB

✔ Colourful graphics
✔ Plenty to amuse the children

PROS AND CONS

✗ Too few levels
✗ May be a little difficult for the very young

GRAPHICS	✪✪✪✪○
SOUND	✪✪✪✪○
VFM	✪✪✪✪✪
PLAYABILITY	✪✪✪✪✪
OVERALL	**83%**

Curly Colin returns, but is he any better than before? Dave "Quaver Cruncher" Jones munches his way through...

GAME PLAY
ONE STEP BEYOND

O nce upon a time, you could buy a packet of crisps without getting a new character thrust down your throat along with the reconstituted potato. Nowadays, it's not enough to supply us with a snack – we also get a television cartoon figure and a promotional computer game to go with it.

Curly Colin initially gained street cred due to the fact that his voice was provided by Lenny Henry. Not content with that, Smiths worked with Ocean to come up with *Pushover*, an average puzzle game. Most companies would have been content with that but, with the aid of Red Rat Software, they've taken it a stage further.

The story? Well, Colin is close to completing the puzzle game he's playing on his computer late one night and is also running out of Quavers. When he reaches the final level, two things happen at once – he finishes the game and pops the last Quaver into his mouth. This results in him being digitised and curlified (*interesting addition to the English language... Ed*) into his computer. By completing a series of challenges, he has to try to escape – needless to say, with your help. And what awaits him at the end of each level? A giant packet of Quavers! What a surprise...
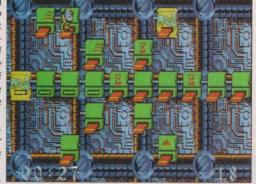
This time, he has boldly gone where no dog has gone before – *One Step Beyond*!

PLAYING THE GAME

At the start of every puzzle screen, Colin somersaults out of his Quavers packet onto the first of a series of platforms. His challenge is to get from here to the exit packet by jumping from one platform to the next, but he can't go back – they disappear once he jumps off them. He can only escape the level if all of the platforms have been closed. Some

The play area. Work out your route and watch for the up tiles, in/outs and delays.

This is the screen that greets you at the start of each level – a chance to show you what Quavers look like...

Every tenth screen completed sends you to another Quaver Zone – another excuse to get a pack shot in!

platforms have special properties and some are numbered, in which case they have to be closed in the right order. A completed level is rewarded with a token that can be used to continue a puzzle when you lose instead of having to start from scratch each time.

The level is completed only if all of the platforms have been closed within the allotted time. If not, or if Colin falls too far, you have to play the level again. You are warned if your position is impossible; alternatively, you can press the Escape key to give up and restart the same level again.

Puzzles are easy to start with but progress to quite a difficult standard, although all are essentially the same.

The special platforms include Bounce up, down, up/right and up/left, which throw you in the said direction after you've landed on them. Others will open or close rows of platforms, cutting off your escape route. Three other types of special platform offer you: safety, a 15 second delay and one that continually moves in and out, needing expert timing to survive.

At the end of each level, apart from another unashamed plug for Quavers, there is a level code. Note these down and you can return to the game where you left off without having to start from the beginning again.

One Step Beyond is not another *Lemmings*. It's appeal is limited and the nauseating music and sound effects will have you reaching for the volume control within five minutes of loading. While it offers short term entertainment, it is unlikely to have you rushing home from work or school to complete it.

✔ **Colourful graphics**
✔ **Puzzles are of a reasonable level**

PROS AND CONS

✘ **Tedious sound**
✘ **Limited gameplay**

"While One Step Beyond may appeal to the young, it has no real lasting interest."

NAME: ONE STEP BEYOND
COMPANY: OCEAN
CONTACT: 061-832 6633
PRICE: £19.99
RELEASE DATE: OUT NOW
MIN MEMORY: 1MB

GRAPHICS	✪✪✪✪✪
SOUND	✪✪✪✪✪
VFM	✪✪✪✪✪
PLAYABILITY	✪✪✪✪✪

OVERALL **59**%

VFM

Dave "Cheap 'n' Cheerful" Jones takes another dip into the budget jamboree bag and comes up with a fine trio...

THE SECRET OF MONKEY ISLAND

KIXX XL • £16.99 • 021-625 3366

IN BRIEF: This Lucasfilm adventure won high acclaim when it was released and quickly became a firm favourite. Now it's been repackaged and is available for a lower price – and it's worth every penny.

Playing the part of Guybrush Threepwood, you have arrived on Melée Island with the sole purpose of becoming a pirate. To do this, you have to complete The Three Trials. Once you've done this, you can go on to solve the *Secret Of Monkey Island*.

ST REVIEW COMMENT: "This is a beautifully designed adventure with challenging puzzles to keep you going. There are many scenes to watch while you proceed through the play area, but if you wish you can cut them out by hitting the <escape> key. Plus points include the ability to load the game onto your hard disk drive to speed up play and remove the disk swapping, which can be a drag for floppy users as the game comes on four of them. Protection comes in the form of a "Dial-a-Pirate" wheel supplied in the box. A great game, well worth adding to the collection.
✪✪✪✪✪

ATARI ST BUDGET BUY *REVIEW*

Discover the Secret of Monkey Island in this top-notch adventure.

THE ADVENTURES OF ROBIN HOOD

KIXX XL • £12.99 • 021-625 3366

IN BRIEF: Robin Hood, Robin Hood, riding through the glen... Sherwood Forest is offered to you in bite-sized chunks in this historic adventure from Millenium. You play the part of Robin himself and wander through the woods building up your band of merry men and fighting the Sheriff of Nottingham. Your task is to avoid being captured, rob from the rich and give to the poor, and try to regain your rightful inheritance by recovering the castle.

The play area is a 3D "slice" of the scene and options available to you include hand-to-hand combat, shooting your bow and arrow and running or walking, as well as the usual look, take and give. The icons for these facilities are located along the left hand side of the screen, along with some more that you may find while on your travels.

ST REVIEW COMMENT: This game is difficult to play and movement is awkward. Robin moves on his own if you don't watch him and you spend your time when you start the game wondering what you are doing. The play area will be familiar to anyone who plays "god" games like *Populous* or *Sim City* but it tends to be a little too small to get involved in the action.
✪✪✪

Robin wonders around trying to find out who Maid Marion is!

WORLD CLASS RUGBY

AUDIOGENIC • £14.99 • 081-424 2244

IN BRIEF: Since computer gaming began, there have been sports simulations. We've seen the full range – soccer, snooker, American football, golf, cricket, motor racing and even the Winter and Summer Olympics.
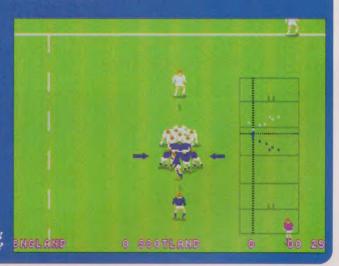
The latest budget release from Audiogenic, who recently offered us Graham Gooch World Class Cricket, is World Class Rugby. It was originally released in 1991 to coincide with the actual World Cup, but was updated last year to include the Five Nations Championships too.

The game offers three different views of play, highlights and action replays, and a radar display to show you where you are on the pitch at any time.

ST REVIEW COMMENT: This is one for fans only and is unlikely to win many friends outside of the rugby playing community. The play is complex and, as such, is quite a good simulation, but I'm afraid it didn't make me want to keep playing.
✪✪✪

Who's grabbing who in the scrum?

PD SCENE

Into the wild blue yonder as Nial Grimes searches the scene for the best PD...

ABOMBINABALL

ATARI ST BUDGET BUY

FLOPPYSHOP • DISK NO: GAM.3736 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: *Abombinaball* is yet another arcade-action brain teaser. The object of the game is to defuse a series of bombs by bouncing on them with your joystick controlled rubber-ball. As certain pieces of the tiled play area are crossed they disappear into space, so a good degree of forward thinking is needed to avoid cutting off your escape route!

The first few stages are child's play, but difficulty slowly builds to a level that will tax even hardened games players. A password is given after every five screens, so you don't need to replay conquered levels, and there's a rather sneaky "skip level" option, which can only be used once per game. Digitised sound effects complement the colourful graphics nicely and none of the samples are annoying enough to see you diving for the volume knob. All in all, it's the sort of game that will take you by the throat and won't let you go until it's completed.

Nail-biting gameplay and swish presentation make Abombinaball thoroughly playable from start to finish.

ST REVIEW COMMENT:
"Yet more proof that the best brain-teasers are public domain! *Abombinaball* is well presented, challenging and thoroughly addictive. Only one question remains – is fifty levels really enough?!"
✪✪✪✪✪

Later levels include jumps, traps and plenty more surprises to keep you on your toes – only 45 more levels to go!

SHOCKWAVE

NEW AGE PDL • DISK NO: BY NAME • £2.95 • MEMORY: 0.5MB • LICENCEWARE

IN BRIEF: *Shockwave* is a revamp of the Atari classic, *Asteroids*. The idea of the game is to move your ship around the screen, blasting rocks into ever smaller pieces until they disappear completely, leaving a juicy bonus in their wake. In play it's very close to the original, although the twist-and-thrust control system has been ditched in favour of a more standard joystick approach.

Marauding aliens are the game's only attempt at originality and there's also a shop screen that can can be used to

Shockwave is an enjoyable Asteroids-style romp, although the lack of a twist-and-thrust control system limits its appeal.

POWER CUT

LAPD • DISK NO: L.51 • £3.00 • MEMORY: 1MB • LICENCEWARE

IN BRIEF: Yep, it's another platform exploration game, but don't stop reading – this one's actually quite good! You play the role of a futuristic space explorer whose mission is to destroy twenty five power bases located in a maze-like underground complex. A strict time limit rules out any sightseeing and ammunition is in short supply, so *Turrican*-style annihilation is a no-no.

Extra lives, weapons and fuel pods are all to be found scattered around the complex and a helpful map is displayed every time you lose a life. The graphics are small but detailed and flip-screen scrolling keeps the action well up to speed. Sonically it's a big let down, but strangle the speaker, stick on a suitably upbeat CD and it's close to perfection!

ST REVIEW COMMENT: "*Power Cut* is very reminiscent of the *Commander Keen* series on the PC, and that's no bad thing! In terms of graphics and playability it's on a par with some commercial games, although the sound lets things down badly. Dedicated platform fanatics might find it a bit on the easy side."
✪✪✪✪

Lose a life and you'll be rewarded with a map of the complex, showing the exact location of all remaining targets.

Power Cut is a big improvement over previous Powerfist productions, boasting cute graphics and accurate collision detection.

boost the power of your ship. Apart from that, it's all depressingly familiar. The presentation is pretty good and the sampled sound effects add to the atmosphere, but ultimately you're left wondering what all the fuss is about.

ST REVIEW COMMENT: "*Shockwave* is a nice little game, but the programmer destroyed its soul by ditching the *Asteroids*-style controls. It's still well worth a look, but I think I'll stick with the real thing – probably."
✪✪✪

Shop screen allows you to boost the power of your ship to cope with yet another level of hectic arcade action.

WALLS OF ILLUSION

ATARI ST REVIEW BUDGET BUY

LAPD • DISK NO: G.308 • £1.50 • MEMORY: 1MB • SHAREWARE

IN BRIEF: There's no doubting where the inspiration for this corking little German RPG came from – it screams *Dungeon Master* from the very moment you load it up! But can it ever hope to live up to such a reputation? Quite frankly, yes!

The first thing that hits you are the superb graphics but dig a little deeper and you'll find that the real ace up *Illusion*'s sleeve is its control system. Instead of a mass of uninspiring icons, you interact with the view screen itself. To pick up an object, click on it; to use an object, just point where you want it to go – it's that simple! Navigation around the maze is accomplished through a panel of large arrows and the screen update is instant. Unfortunately, all prompts are in German, but the game is totally mouse controlled and most messages are self-explanatory.

ST REVIEW COMMENT: "Forget the language barrier – if you're an RPG fan you need this game! The graphics are quite simply stunning and it dashes along at a pace that puts its commercial competition to shame. English version please!"
✪✪✪✪

Walls of Illusion is the best shareware RPG ever released, although be prepared to battle with German prompts!

An intuitive control system makes the game a joy to play and the graphics are more than a match for most commercials.

KABOOM

16/32 PDL • DISK NO: LW.007 • £2.50 • MEMORY: 0.5MB • LICENCEWARE

IN BRIEF: *Minefields* is the digital equivalent of an executive toy. The concept made its first appearance under Windows 3 on the PC and as you've probably guessed by now, *Kaboom* is an out and out clone.

Clicking the left mouse button on any square in the tiled minefield equates to treading on it. If the square contains a bomb you die; if it doesn't, the number of mines touching that square will appear. The object of the game is to deduce the position of all the mines using the information given by the numbered squares. Easy innit?
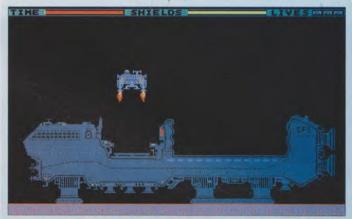
The width and height of the play area are both fully adjustable to suit beginners or experts.

The game concept doesn't present many opportunities for flash graphics, and *Kaboom* doesn't put itself out to provide any. The colour scheme is quite relaxing to look at and the size of the grid is fully adjustable, but overall it isn't anything to shout about.

ST REVIEW COMMENT: "*Kaboom* is the third version of *Minefields* to arrive on my desk, and not one has added anything new to the genre. Alongside ultra-boring PC spreadsheets it must look exciting, but put up against the likes of *Power Cut* it's a non-starter."
✪✪✪

Find the bombs and win the game – it's as simple as that. Once you get the hang of it, Kaboom is reasonably addictive.

A near-perfect gravitational control system is used to navigate your ship, although it does take a while to get used to.

COCOONS OF JUSSE

EMERALD CITY • DISK NO: SE.51 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

IN BRIEF: Earth is on the point of destruction yet again! All light is about to turn into darkness (yawn!) and the only way to save the people of the planet (double yawn!) is to fly a little blue spaceship around your ST's screen collecting protective cocoons (snore...).

Naff plot firmly in the back of your mind, *Cocoons of Jusse* isn't half bad. True, visually it's not outstanding and the sound effects are all chip-produced, but both are well above the acceptable level. Your ship is gravitationally controlled via joystick and the directional laser can be adjusted with the cursor keys. It's a battle against the clock, shield levels and nasties although thankfully, ammunition is unlimited. There are plenty of different rooms to visit and it's not overly difficult.

ST REVIEW COMMENT: "*Cocoons of Jusse* isn't technically or graphically outstanding, but the beautiful control system just about saves the day. Long term playability is assured because the cocoons change position every time you start a new game!"
✪✪✪✪

The graphics lack polish but the Cocoons of Jusse is quite involved and very playable.

66

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!

ST UPGRADE

12 REASONS TO BUY FROM ATARI ST REVIEW...

All the products offered by ST Review have been carefully selected by us as the best in their class. But top quality does not mean top price. Thanks to our huge buying power we can deliver top value for our readers too.

✓ *All memory boards are populated with memory*

✓ *All memory boards are individually tested*

✓ *All STFM upgrades use the Marpet connector system, acknowledged to be the easiest way to upgrade an STFM*

✓ *Support from a top ST engineer is just a telephone call away*

✓ *Prices include VAT and postage & packing – the price you see is the price you pay*

✓ *No minimum order and no credit card surcharges*

✓ *Memory upgrades carry an exceptional five year warranty and other products a full 12 months*

✓ *28 day no-quibble money back guarantee*

✓ *24-hour order hotline*

✓ *Because we only sell a few items, your order will normally be supplied straight from our large stocks*

✓ *Your credit or debit card will not be processed if the item you order is not in stock*

✓ *Experienced technicians are available for advice before placing an order*

ALL MEMORY UPGRADES INCLUDE FREE DISK!

Each memory upgrade comes with a free disk including memory test software, RAM disk, print spooler and disk copier, all to ensure you can make the most of your new memory upgrade...

MUCHO MEMORY...

As we at ST Review have started to sell memory upgrades above the essential 0.5 megabyte, we've discovered the bonanza an STe owner can reach – 2.5Mb!

Conventional belief is that an STe can have 0.5, 1, 2 or 4Mb of memory, but this is not the case. When you upgrade an STe using our 2Mb memory upgrade, you can still use two of your existing 0.25Mb SIMMs to give you a whopping great 2.5 megabytes!

The software to allow you access to the full 2.5Mb is included on our free disk. Everyone who buys one of our memory upgrades gets this jam-packed goodie, which includes other useful memory upgrade tools like a RAMdisk, print spooler and disk copier.

As you have probably gathered, we think that keeping the extra 0.5Mb is worthwhile. Programs like Timeworks don't access the disk drive as often if you have more memory in your ST. Other programs that claim to need a hard disk will run very efficiently from a RAMdisk if you have extra memory.

With memory-hungry system software now appearing such as MultiTOS and SpeedoGDOS, upgrading your ST's memory is essential to keep pace with the fast moving ST scene. We also want to continue to bring you blockbuster cover disks and while you will never need more than one megabyte to run them, a memory upgrade will certainly help you to get the most from them.

Thanks to the ST Club for supplying the public domain software for our free disk – including the 2.5Mb memory fix from its UTI.270 disk. If you've already upgraded and have your old SIMMs lying around, call the ST Club on 0602 410241 for a copy.

Is there any ST upgrade that gives you more flexibility than increasing the RAM? We think not, which is why our upgrades have such low prices...

FREE DELIVERY!

MOUSE/JOYSTICK EXTENSIONS

Either a single or twin joystick adaptor will save you from the ST's most common hardware fault – a broken mouse port. Changing from mouse to joystick is that much easier if you have extension cables.

from £3.99!

£9.99!

MOUSE

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.

CLOCK CARTRIDGE

Who sets the time each time they switch on their ST? If like many thousands of ST owners you don't, then you are missing out. Every time you save a file it gets stamped with the time and date – invaluable when you are hunting for a file. Get a clock cartridge and the time will be set automatically each time you switch on your ST.

FMCII Cartridge TOP

from £12.99!

ST REVIEW BINDER

ST Review is *the* essential ST magazine – and our custom binder will help you to keep your back issues in pristine condition. No more searching under the bed for last month's issue! Our green and gold beauties will accept up to 12 issues and allow you to read any issue of *ST Review* without having to remove it.

ATARI ST

£6.49!

£29.95!

FREE DELIVERY!

£7.99!

NEW – VERSION 5.9 NOW DETECTS THE BEILSTEIN VIRUS

UVK

Everyone knows about viruses, but far too many ST owners think it can't happen to them – it can! Despite the fact that you never get disks from "friends" and only buy commercial software, a virus could still infect you. And when the gremlins get at your disks, life becomes an absolute misery.

Don't let this happen to you. UVK detects and kills more viruses than any other virus killer. We use it at *ST Review* – so should you!

EXISTING USERS CAN UPGRADE – CALL FOR DETAILS

TRACKBALL

Do you use your ST for art, graphics, DTP or music? Then you really should consider our state-of-the-art, 162 dpi trackball, as used by the editor of this magazine. Movement from one side of the screen to the other is effortless and cursor motion is rapid and smooth, far more so than with a mouse. The feel is superb thanks to the high quality micro switches under the buttons. There's also a third button that acts as a locking left button – ideal for continuous scrolling, painting or line drawing!

IMPROVE YOUR KNOWLEDGE THE ST REVIEW WAY!

Learn more about your ST, DTP or programming with our great new book offers

❶ THE ATARI ST EXPLORED

BY JOHN BRAGA AND MALCOLM McMAHON • £9.95

Ideal for the beginner to computing with the ST. It covers the operating system including GEM, GEMDOS and BIOS, and has a very useful guide to choosing a programming language. Essential reading for anyone who owns, or is considering using, an ST or STE.

❷ THIS IS DTP! – A YOUNG PERSON'S GUIDE

BY TERRY FREEDMAN • £9.95

Designed to ease you into the real world of desktop publishing. It shows you how to take advantage of a range of packages from shareware to commercial and covers practical exercises as well as a full explanation of the general principles of DTP. An invaluable addition to the manual that comes with your software.

❸ ATARI ST BASIC – PROGRAMMING BY EXAMPLE

BY DR GRAHAM McMASTER • £14.95

Every ST owner has a copy of *ST BASIC* – it comes free with the computer! Here's a book that will help you get the most out of the program. No previous programming experience is required.

❹ C-MANSHIP COMPLETE

BY CLAYTON WALNUM • £14.95

All of Clayton Walnum's tutorials, previously written for *Analog Computing* magazine in the USA, have been compiled into one volume, edited and updated. If you've ever wanted to program in C or improve your skills, then this is the book for you. Almost 400 pages of instruction, explanation and education.

❺ THE ST ASSEMBLY LANGUAGE WORKSHOP. VOLUME 1

BY CLAYTON WALNUM • £14.95

Starting from the basics, Clayton takes the reader through the art of 68000 programming from the most commonly used instructions all the way to handling disk files, printers, graphics and more.

❻ THE COMMERCIAL GAMES PROGRAMMER'S GUIDE

BY DAVID GIBBON • £9.95

So you want to be a successful games programmer? Then this book is a must – it's a complete guide to producing and marketing your mega game!

❼ A PRACTICAL GUIDE TO TIMEWORKS ON THE ATARI ST

BY TERRY FREEDMAN • £16.95

A complete guide to getting the most out of *Timeworks* on the ST. The book has step-by-step guides explaining design techniques and specific project ideas to help you improve the appearance of your work and advance to more detailed projects.

❽ THE MIDI SURVIVAL GUIDE

BY VIC LENNARD • £6.95

Want to get started in music on the ST? Then here's the perfect book for you, written by Vic Lennard, editor of *ST Review*. It's filled with over 40 informative diagrams of how to set up a MIDI system, and written in a friendly, down-to-earth manner.

MANUALS AND UPGRADES

Yes – you can still get the manuals and upgrades from our super cover disk offers...

Easy Money manual £7.99
Easy Money Plus upgrade ...£19.99
The Biz Plus upgrade..........£79.99
Prospero C Programming in C/
          Using the Libraries
          manuals £24.99
Prospero C AES/VDI
          manuals £24.99
Prospero C All four manuals £39.99
Easy Draw 2 manual £12.99
Easy Tools 2 manual.............£9.99
Write On! manual £14.99

THE ATARI ST EXPLORED....................................£9.95	
THIS IS DTP! – A YOUNG PERSON'S GUIDE......................£9.95	
ATARI ST BASIC – PROGRAMMING BY EXAMPLE.............£14.95	
C-MANSHIP COMPLETE.....................................£14.95	
THE ST ASSEMBLY LANGUAGE WORKSHOP £14.95	
THE COMMERCIAL GAMES PROGRAMMER'S GUIDE.........£9.95	
A PRACTICAL GUIDE TO TIMEWORKS ON THE ATARI ST....£16.95	
THE MIDI SURVIVAL GUIDE.................................£6.95	
EASY MONEY MANUAL.....................................£7.99	
EASY MONEY PLUS UPGRADE £19.99	
THE BIZ PLUS UPGRADE...................................£79.99	
PROSPERO C: PROGRAMMING IN C/USING THE LIBRARIES...£24.99	
PROSPERO C: AES AND VDI £24.99	
PROSPERO C: ALL FOUR MANUALS..........................£39.99	
EASY DRAW 2 MANUAL £12.99	
EASY TOOLS 2 MANUAL....................................£9.99	
WRITE ON! MANUAL £14.99	

✔ **DELIVERY – FREE**

CREDIT CARD ORDER LINE – 0480 891171 OR FAX YOUR ORDER – 0480 890787

TO: *ST REVIEW* BOOK OFFERS, PLEASE RUSH ME THE ITEM(S) AS TICKED IN THE BOX OPPOSITE.

I ENCLOSE TOTAL PAYMENT OF £_____

PAYABLE BY: ☐ CHEQUE ☐ P.O. ☐ CREDIT CARD

NAME: ....

ADDRESS: ....

....

POSTCODE:......................... TEL (DAY): ....

VISA/ACCESS/MASTERCARD/DELTA/SWITCH NUMBER:

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐   EXPIRY DATE: /

SWITCH ISSUE NO. /

SIGNATURE: _____

ORDERS FOR BOOK OFFERS RECEIVED BY GO DIRECT BETWEEN NOVEMBER 27 AND DECEMBER 17 REQUIRE AN EXTRA PAYMENT OF £3 TO GUARANTEE DELIVERY BEFORE CHRISTMAS

IMPORTANT!

Paying by CHEQUE or POSTAL ORDER – please make payable to GO DIRECT and write your cheque card guarantee number on the back. All prices are inclusive of postage & packing and VAT. Please allow 28 days for delivery from when we receive your order. For non-receipt of goods phone 0480 891171, Monday to Friday between 10am and 6pm.

Send your order to: ST REVIEW BOOK OFFERS, 7 VINEGAR HILL, ALCONBURY WESTON, HUNTINGDON PE17 5JA

PD ZONE

ST NEWS 8.1

ATARI ST BUDGET BUY REVIEW

THE ST CLUB • DISK NO: MGN.81 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

IN BRIEF: *ST News* has been around since the very dawn of the ST. It's written in Holland by a team of dedicated Atari freaks and is rightly regarded as the touchstone for all ST disk magazines. A lightening fast pseudo-GEM shell provides access to all the articles and some demo-style music is used to back up the proceedings.

Issue 8.1 includes reviews of the latest games, GEM programming tutorials and plenty of articles that bear no relation to computers whatsoever. A wacky sense of humour permeates the whole thing and there's plenty on offer for games players as well as business users. The display program runs in medium or high resolution, although it defaults to 60Hz in colour which could cause problems for TV users.

ST REVIEW COMMENT: "A swift display program, interesting articles and perfect grammar put *ST News* in a league of its own. There's a good balance between serious and entertainment coverage, plus you get to hear the latest gossip from far flung countries."
✪✪✪✪✪

ST News covers every aspect of Atari life in its own unique style and comes complete with a trendy cascading menu system.

INSIDE INFO 64

THE ST CLUB • DISK NO: INI.64 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

IN BRIEF: Australia has never been known as a stronghold for Atari, but despite its relatively small user base, the ST is kept alive and kicking by a band of dedicated enthusiasts. *Inside Info* is the official publication of the New South Wales Atari Club and aims to provide the Ozzie ST community with all the latest reviews, previews and gossip from around the world. Once again, the emphasis is on the serious side of ST life and some of the articles can tend to be a bit "techie".

Inside Information is some way behind the competition presentation-wise, but the articles are very good.

Most of the products covered are US sourced and often you'll find extracts from American on-line magazines included in articles. This issue takes a look at software in development for the Falcon, Spectre news, information on joining ACE and plenty more besides. A page-by-page GEM shell is used to display the text, although the capital letter menu entries and hesitant scrolling combine to make it feel a little bit tacky.

ST REVIEW COMMENT: "Inside Info is a nice diskzine that is let down by slightly lacklustre presentation. It's a good way of keeping up with Stateside ST developments, although some of the "articles" are press releases, so don't expect totally unbiased information all of the time!"
✪✪✪✪

STEN 13

ATARI ST BUDGET BUY REVIEW

FLOPPYSHOP • DISK NO: DMG.3609 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

IN BRIEF: *STEN* – the ST Enthusiasts Newsletter – is aimed at the more serious ST user. It covers everything from desktop publishing to programming and runs from a slick, custom written GEM shell.

Highlights of issue 13 include interviews with two top ST personalities, a comparison between the ST and PC, *PageStream 2.2* enhancements and some tips on setting up your own PD library. There's even an article on goldfish breeding, which says something

STEN is angled firmly towards the serious side of the ST market. It's superbly written and very informative.

about the scope of the editorial, and all are very well written! Readers are encouraged to submit their own scribblings, giving the whole thing a very "clubby" atmosphere.

Every issue comes complete with a folder full of carefully chosen public domain and this month's star program is *Stonk*, a new psychedelic pattern generator from *Kozmic* Author Dave Henniker.

ST REVIEW COMMENT: "*STEN* is a corking good read and ideal for anyone interested in the serious side of their ST. It's always packed to the brim with articles and the freebie programs are usually of a high standard."
✪✪✪✪✪

STOSSER 6

GOODMAN INTERNATIONAL • DISK NO: BY NAME • £2.75 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: *STOS* must be one of the most successful programming languages ever released. It's been responsible for hundreds of top quality PD titles over the years and now boasts its very own diskzine called *STOSser*.

Although the magazine is aimed primarily at *STOS* users, it also includes several games reviews and general interest articles. There's a letters page to answer all of your specific questions and the tutorial sections are well put together. The standard of English isn't quite up to *STEN* or *ST News*' standards, but it's all readable and not bad enough to be annoying.

A chip-produced rendition of Madonna's "Get Into the Groove" bops along in the background and the text display program is very lively.

ST REVIEW COMMENT: "Don't be put off by *STOSser*'s title – even non-programmers will find something of interest to read. The shell itself is a model of STOS programming and the reviews are brutally frank."
✪✪✪✪

STOSser's articles are all selected from a mouse driven menu, which comes complete with musical accompaniment and starfield!

NUTWORKS

GOODMAN INTERNATIONAL • DISK NO: GD.1972 • £2.75 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE
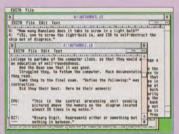
IN BRIEF: If you think PC users have their sense of humour extracted at birth, think again! *Nutworks* is a collection of zany text files from the USA, which take a look at the funny side of computing life. There's the creation according to IBM, a parody of an instruction manual, humourous exam answers, dozens of non-computer related jokes and plenty more besides. There's even one or two lyric sheets, although singing "A Clone of my Own" to the tune of "Home on the Range" as instructed is likely to get you certified!

Twelve issues are included on this disk and if you don't get on with the supplied display program, all can be viewed from within a word processor. There's a little bit of bad language, but it's not offensive by any means.

ST REVIEW COMMENT: *"Nutworks is unique and if you have any sense of humour at all, it will have you in stitches! None of the text is ST-specific as such and you do have to put up with US spelling, but apart from that it comes thoroughly recommended."*

OOOO

If you're looking for something just that little bit different, give Nutworks a try – it's bound to raise a smile.

ST CLUB DISK MAG 35

ATARI ST REVIEW BUDGET BUY

THE ST CLUB • DISK NO: DMG.35 • £1.45 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: Far from being a magazine in the traditional sense of the word, the *ST Club Disk Mag* is a monthly collection of quality public domain and shareware. Everything from games to educational software can be found on the disk, although the emphasis is usually on useful utilities.

ST Zip 2.2 leads the line-up this month, with guest appearances from the *Mega Depack, Dynaram, Disk Kit, Mandala, Master Browse* and many more. Particularly handy is a utility to convert *First Word* text files into Fax '.IMG' format for use with programs like *Tele-Office*. And that really sums up the beauty of the magazine – namely, variety. No utility is too small to be included and the quality is very good. Every program is archived to save space and the extraction program is fully GEM driven.

If you're looking to source the latest useful utilities, look no further than the ST Club Disk Mag.

ST REVIEW COMMENT: *"In terms of value for money, the ST Club Disk Mag is very hard to beat. Every issue is packed to the brim with mouth-watering goodies and each program is hand picked for quality."*

OOOOO

Most of the contents are application oriented, but there's usually a little something to keep games players happy as well...

TOP TEN DISK MAGAZINES

1 ST NEWS 8.1 • THE ST CLUB • DISK NO: MGN.81 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

A near-perfect diskzine from Holland that strikes a good balance between serious and games reviews. The editorial is written to a very high standard and every issue is absolutely packed to the brim with entertaining articles.

2 STEN 13 • FLOPPYSHOP • DISK NO: DMG.3609 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

STEN is a UK written diskzine that is widely regarded as the best choice for the serious ST owner. Most of the articles are linked to computers in some way or other and the interviews section makes a really good read. The shell lacks *ST News'* sophistication, but it's nippy and easy to use.

3 DISKBUSTERS DISK MAG 6 • DISK NO: DMG.3422C & DMG.3423C • £2.50 • MEMORY: 1MB • PUBLIC DOMAIN

A general interest European disk magazine that is quick off the mark for German product releases. There are a good range of articles included and the shell is both fast and slick. Once again, there's a little bit of bad language, so steer clear if you're easily offended…

4 STOSSER 6 • GOODMAN INTERNATIONAL • DISK NO: BY NAME • £2.75 • MEMORY: 0.5MB • PUBLIC DOMAIN

STOSser serves the *STOS* community with programming tutorials, reviews of the latest games and all sorts of other general interest articles. It's now in its sixth issue and is getting better all the time!

5 ATARI EXPLORER ON-LINE • FLOPPYSHOP • DISK NO: DMG.3608 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

Atari Explorer is a Stateside magazine that features regular appearances from top ST personalities including "Mr Atari" himself, Sam Tramiel. As a result, most of the information is correct and it's a great way to keep up with news from the other side of the pond. Three issues are included on this disk.

6 LEDGERS 10 • LAPD • DISK NO: F.26 • £1.50 • MEMORY: 0.5MB • SHAREWARE

A quality disk magazine from demo crew The Untouchables. It's a good choice for those in search of programming information although the standard of editorial isn't as high as it might be. On the bright side, there's never any lack of articles and the intro screens are worth the price of the disk!

7 INSIDE INFORMATION 64 • THE ST CLUB • DISK NO: INI.64 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

If you're looking for technically oriented articles and US press releases, *Inside Info* should be your first port of call. The display program isn't up to much, but it's an improvement over early issues.

8 FORTNIGHT • TUMBLEVANE • DISK NO: MISC.4 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

Not so much a diskzine as a walk-through guide to the creation of the Earth. It includes a brief animation and explanation of each of the six creative "days" and tries very hard to stick to the Bible account. Quite entertaining and certainly different.

9 NUTWORKS • GOODMAN INTERNATIONAL • DISK NO: GD.1972 • £2.75 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

Nutty by name, nutty by nature! *Nutworks* is living proof that not all computer users lack a sense of humour. Twelve issues are included on disk, together with a viewing program, and you're bound to find something that tickles your fancy. Go on, give it a try – you might like it!

10 MAGGIE 9 • LAPD • DISK NO: F.25 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

Another high-quality demo biased diskzine which is written and compiled by the Delta Force. *Maggie* is usually the first place to look for explanations of new programming techniques, although watch out for the language in some of the later issues – it really does get beyond a joke.

PD ZONE

FORTUNE

GOODMAN INTERNATIONAL • DISK NO: GF.4 • £2.75 • MEMORY: 1MB • SHAREWARE • FALCON ONLY • HARD DISK REQUIRED

IN BRIEF: For years, UNIX workstations have given their users a witty quote or thought for the day on boot-up. *Fortune* brings this idea into the nineties by allowing your Falcon to literally recite a quote to you, instead of just printing it on screen!

The program works as an AUTO folder utility by default, playing a random sample when the machine is switched on. If you'd prefer to choose a specific "cite", you can do so by holding down <Shift> when you run the program. Most samples can be used, including those produced with *WinRec* and a good selection are included to get you kicked off. The only drawback is the amount of space consumed by the cites. The four demos alone take up over 700K – start to build up a decent collection and you're looking at several megabytes!

Gone are the days of dull text messages – wake up your Falcon with a crisp sound sample, courtesy of Fortune!

WinRec samples are directly compatible with Fortune, so dig out that microphone and get recording!

ST REVIEW COMMENT:
"If you reboot your machine every few minutes, *Fortune* quickly becomes annoying, but otherwise it's a complete riot! The supplied samples suit the task down to the ground and very soon you can't bear the thought of living without your Falcon's wake-up speech!"

Banish Atari-green from your desktop forever with Deskpic. Dozens of stylish GIFs are included to get you kicked off.

DESKPIC

FLOPPYSHOP • DISK NO: UTL.3698 • £2.50 • MEMORY: 1MB • SHAREWARE • FALCON ENHANCED

IN BRIEF: *Deskpic*, as the name suggests, gives the Atari desktop a picture background. Unlike older programs along similar lines, it uses the flexible GIF format and is thoroughly compatible with Falcon screen resolutions.

The program is controlled through a desk accessory from which point it's possible to change the background "on the fly" and save the default picture. It's also possible to "tile" smaller sections to form a whole background, meaning the GIFs themselves take up very little disk space. There's a good selection of examples included, many ported directly from Windows, and they add a touch of class to even the most boring desktop. Although it runs on the ST, you really do need a Falcon to make the most of those juicy 256 colour GIFs.

ST REVIEW COMMENT: "*Deskpic* is wonderful in colour resolutions, but it rapidly loses its appeal in mono. The amount of time it takes to depack the picture every time you reboot may also put you off, but it's an interesting toy all the same."

If a picture contains too many colours, it's automatically greyscaled to suit the current resolution.

POV-SHELL

FLOPPYSHOP • DISK NO: UTL.3835 • £2.50 • MEMORY: 1MB • SHAREWARE • FALCON ONLY

IN BRIEF: There's no doubting the power of the *POV Raytracer*, or the sheer beauty of the pictures it produces, but deep down we all know it's a real pig to use. *The POV-Shell* is an integrated working environment designed to link a text editor and the raytracing program itself, removing the need for a command line interpreter altogether.

The shell runs as a task under *MultiTOS*,

Every single switch is adjustable through pop-up menus, although the French prompts could cause problems.

communicating directly with "miniwin" to provide output in a window. All of the command line switches can be adjusted from a single dialogue box, and although the prompts are in French it's all very straightforward to use. The *POV Raytracer* is available on Floppyshop disks ART.3615 & ART.3616 and now all we need is a GEM scene editor!

ST REVIEW COMMENT: "This shell is a big step forward for the *POV Raytracer* in terms of usability. Designing the scenes themselves can still be a tortuous process, but the actual compilation process is completely transformed. It's nice to see *MultiTOS*-enhanced packages making their way into the public domain."

POV-Shell's beautiful GEM interface certainly beats fiddling around with command line interfaces!

FALCON SOFTWARE

A FULL RANGE OF SOFTWARE FOR THE ATARI FALCON COMPUTER IS NOW AVAILABLE ON HD DISKS, INCLUDING:

HD.32   NETHACK: Huge fantasy role playing game, 2Mb+ (£1.75).
HD.1   POV RAYTRACE: The best raytrace program around. Unzips to 3 x HD disks. (£1.75).
HD.9   JPEG COLOUR PICTURES: True colour pictures (£1.75 per disk).
HD.19   JAPAN: Photo quality slide show of XGA pictures (2 disks/£3.50).
HD.21   HUMANS: Demo of the commercial game (2 disks/£3.50).
HD.2   UTILITIES: Includes programs to run STE/STEM programs. (£1.75).
HD.12   MAINLY MUSIC: Includes Desktracker, Pro-Tracker, Star Player, etc. (£1.75).
HD.13   MORE MUSIC: Includes Winrec, a direct to disk recording system (£1.75).

Our full range of software for the ST/STE is currently undergoing compatibility testing for the Falcon. If you are considering any title from our ST range contact us and we'll let you know if it's compatible. (Ask for our FREE Falcon catalogue)

All disks below, £1.50 unless otherwise stated
** BUY 11 OR MORE £1.50 DISKS FOR ONLY £1.25 EACH!! **

GAMES

ARCADE

G.322   TRACKERBALL: A puzzle game requiring fast thinking and quick reactions. 1Mb.
G.316   H-MEC 2: Sequel to the tremendously popular H-MEC. (1Mb STE or Falcon).
G.314   IT'S A MUG'S GAME: Fun one or two player boxing game.
G.302   REBOUND: A bat & ball game requiring determination, stamina and patience!
G.293   H-MEC: The ultimate Pac-Man? (1Mb, STE only)
G.292   CASTLE CAPERS: Superb platform arcade action across 10 screens. (1Mb).
G.285   KUBES: Falling block game with a novel twist.
G.286   ROCKFALL SPECIAL EDITION: Tunneling/diamond collecting puzzle game.
G.281   PSYCHO PIG: Platform shoot 'em up with Rambo-esque pig. (2 disks, £3). S/W.
G.279   OPERATION GARFIELD: Frantic "Operation Wolf" type shoot 'em up action. (STE).
G.268   MEGALINE: 1Mb. 'Tron' light cycles game for 1-4 players. (STE only)
G.250   CYBERNETICS: Good, challenging 'Defender' type arcade game. S/W.
G.80   TETRIS & PILE UP: Two very good versions of the 'Tetris' arcade game.
G.171   HACMAN II: 1 megabyte version of Pacman, 100 new levels!
G.221   GRAV 2: Follow up to highly praised 'Oids' type rotate and thrust arcade game.
G.110   LLAMATRON: 100 levels of fast arcade action with wicked sound FX. (S/W).
G144   REVENGE OF THE MUTANT CAMELS: More fast arcade action Jeff Minter mayhem (S/W).
G.150   COLUMNS: An impressive relative of the Tetris tumbling block game. (1Mb).
G.201   BLAT!: Tetris style three in a row, falling blocks with many aded features.
G.208   FAST FREDDY: Cute arcade action as you help Freddy rescue his girlfriend.
G.239   BLOX: An excellent variation on the falling block, Tetris, theme.

FANTASY/ROLE PLAY

G.288   DARKLYTE: 'Space Crusade' type droids wargame.
G.284   BIO-HAZARD: Two levels of brilliant Sci-fi 'Dungeonmaster/Captive' game. S/W.
G.197   DUNGEON LORD: 3 levels of 'Dungeonmaster' type adventure from the States. 1Mb.
G.262   ALIENS!: Space Marines v. Aliens strategy game.
G.198   OMEGA: A large and complex wilderness and dungeon exploration game.
G.308   WALLS OF ILLUSION: The ultimate Dungeonmaster clone … but it's in German. A knowledge of the language is a distinct advantage but not compulsory.

PUZZLE

G.323   SPOT IT: An electronic version of the Spot the Difference puzzle.
G.318   BRAIN DAMAGE (S/W): Trivia/puzzle game. 15 stages in 8 games.
G.315   SKULLS: Addictive up to date reworking of Landmines/Minefield (1Mb STE).
G.306   LOGIC PROBLEMS 11: Three more logic problems from Ben Weston.
G.310   DOMINOES: Playable demo version of a domino playing program.
G.311   JIGSAW: A computersed jigsaw puzzle. (1Mb).
G.294   ROLL-IT: Challenging German rolling-ball puzzle game. (1Mb).
G.280   COLOR CLASH: Adventure/Maze game with puzzles by Animalsoft. S/W.
G.269   QUIZMASTER: Multi-choice answer genergal knowledge quiz. (1Mb).

ADVENTURES

G.321   INVESTIGATION (2 disks/£3.00) Graphic adventure in the style of Sierra On-Line.
G.200   ANARCHY ACADEMY: 3D adventure to blow up the school!
G.140   A NIGHT ON THE TOWN: An adventure with the opportunity to meet the girl of your dreams and … well, the rest is up to you.
G.222   GRANDED AND THE QUEST…: 3D graphic adventure by Ian Scott. Shareware 1Mb.
G.303   GRANDAD AND THE SEARCH FOR THE SANDWICHES: Sequel to 'Quest for the Vest' (1Mb 2 disks/£3.00).
G.215   BLACK DAWN: The Earth is under threat (again) and it's up to you to save it.
G.99   DRAGON SLAYER: Can you, a lowly beggar, gain riches by slaying the dragon.

G.156   THE AWE CHASM: An adult adventure featuring Snatch and Crunch (over 18's only).
G.167   SUSAN: An adult adventure (over 18's only).
G.91   QUEST FOR THE HOLY GRAIL: Pythonesque madcap humour.
G.163   ALICE: Take a trip through the looking glass.
G.202   UNNKULIAN UNDERWORLD: Highly rated large scale text fantasy adventure.

STRATEGY & OTHERS

G.131   STAR TREK – THE GAME: Defeat the Klingon threat to the galaxy. (1Mb).
G.299   TERRAMOON: Shareware demo version of a detailed 'STAR TREK' type game.
G.287   THE COURSE ANGLER: Angling simulation game. (1Mb).
G.237   CHAOS: Madcap game of battling wizards by Martin Brownlow (1Mb or .5Mb).
G.324   IMPERIAL CONQUEST: Complex ancient Mediterranean game of conquest (S/W).
G.325   SOCCER MANAGEMENT: C complex simulation of soccer management (S/W).
G.290   SOFTWARE PROJECTS: Manage a software house in this business sim.
G.217   THE MAZE: 3D adventure game loosely based on 'The Crystal Maze'.
G.173   PENGUINS: Move your penguins around the screen 'Lemming' fashion.
G.10   VEGAS: Roulette, poker, blackjack and slots … without the Nevada sand!
G.118   COMPANY: Business simulation that puts you at the head of a corporation.
G.124   SPECTRAL SORCERY: An excellent spellcasting game of battling wizards.
G.147   THE MANAGER: Manage a top football team through a tough season. (S/W).
G.152   TAIPAN: A trading game set around the Orient. (1Mb).
G.54   CHESSNUT: A multi level chess playing program.

LICENCEWARE/GAMES

L.22   GRAND PRIX MANAGER: Grand Prix management simulation. Employ drivers, mechanics, etc., test cars, then race in a full grand prix season! (2 disks/£4.00).
L.31   THE CURSE OF AZRIEL: Fantasy trading/adventure game. (2 disks/£4).
L.61   3D ASTEROIDS: Fly through asteroid fields and destroy them. (£2.50).
L.60   CONQUEST: A 'God' game in the style of 'Populous' (£3.00)
L.19   THEY SOLD A FEW: Three games from Ben Weston. Logic Problems, Wild West Shoot Out and Clan, a Kingdom game. (£2.50).
L.58   NICE BYTES #1: Gridword, a word game & Rega, a tile flipping game (£2.50).
L.50   DEMON: Fantsy game with 3D view, monsters, magic, teleports, traps, secret walls, etc. (£3.00).
L.51   POWER CUT: Arcade action from Powerfist in a subterranean complex. (£3.00).
L.52   ENERGETIX: Puzzle game from Nice Bytes. Save the nuclear reactor (£2.50).
L.48   DELUXE NOSTRAM (1Mb): Arcade platform action through 70 rooms. (£3.00).
L.45:   HUNCHY 1066: Arcade action with the Hunchback, multi-levels, traps, puzzles, etc. (£3.00).
L.41   MURDER ON THE ORION EXPRESS: Murder solver game set on an interstellar cruiser. (£3.00).
L.21   DEAD OR ALIVE …?: Large, complex and challenging text adventure. (£3.00).
L.59   ARTHUR OF THE BRITONS: Ancient British strategy/role play game. (£3.00).
L.11   PI SQUARED: Challenging puzzle game with increasing difficulty levels (£3.00).
L.33   QUEST KNIGHT: Fantasy quest for the Rose of Questoria. (£2.50).
L.42   OUTWORLD: Take control of a space colony arcade/strategy game. (£2.50).
L.53   HOT DOG: Greyhound racing and betting game for 1 to 9 players. (£2.50).
L.38   MARIO'S QUEST: Cute platform game to rescue the princess. (£2.50).

FOOTBALL TACTICIAN 2
(1Mb) – £22.95

The ultimate football management game!

1 to 46 manager multi-user capability. 900 players accurately named with real ages, aptitudes, skills, playing positions, caps and market valuations. 88 League referees with true to life behaviour, built in intuitive team editor, intelligent behaviour of computer controlled sides, etc., etc.

If you think you could survive in the premier league or division one this program will test you to the limit!

DEMOS

YES, WE DO DEMOS – NOT ALL PD LIBRARIES ARE THE SAME – LUCKILY

D.371   TRAOU'N INT KET BET…: Stunning demo by Adrenalin. (2 disks/£3.00 1Mb).
D.373   DREAMS: Dentro by Animal Mine of Holland.
D.372   REALITY IS A LIE: Good first demo from Psychonomix. (1Mb).
D.374   BURNING ILLUSION: Sequentially running demo by DNT.
D.367   EXTREME RAGE: Sinecurves, Shodowbos, etc. from Anatomica of Sweden (1Mb STE).
D.363   GROTESQUE: Psychedelic techno music demo. (1Mb, STE).
D.366   BIRDS OF PREY: Intro to the commercial game that never made it to the ST (1Mb STE).
D.360   DREAMZONE: Mega-demo from the Wild Boys (2 disks, £3.00).
D.347   COSMIC JAM: Good multi-vector demo from Imagina of Finland D/S.
D.324   CROSSBONES: STE demo (also known as RED SECTOR DEMO)
D.287   HARDCORE DANCEFLOOR: Sampled house music by The Wild Boys. D/S
D.323   SLAM - HARDCORE DANCEFLOOR II – More house music from the Wild Boys.
D.364: DIGITAL EXTAZY: Mega-demo by TTK.

D.322   MENTAL HANGOVER: Scoopex demo converted from Amiga. (STE).
D.306   TOM & JERRY: Animated cat and mouse cartoon sequence.
D.291   LIGHTNING: Mega-demo from the Pendragons.
D.236   ELECTRA: The biggest re-set demo ever.

MUSIC

S.4   YAMAHA PSS: Patch editor and facility to print tablature music.
S.144   EKSEQ 1: A rack, 240ppqn dequencer with many features.
S.145   OPTRONIX MUZAK: Rip and play music from other programs.
S.8   NOISETRACKER: Soundtracker .mod player with eight starter tunes.
S.141   REAL TIME MIDI ANALYSER: Indicates MIDI event occurence.
S.73   BAD STARS SAMPLES #1: Over 80 .SPL samples for use with Noisetracker.
S.95   HIGH FIDELITY DREAMS: 8 super pieces of music from Auro.
S.87   IMAGE FACTORY DIGI-SYNTH 1: Ripped mods with 'Lemmings' menu.
S.85   LONE WOLF SAMPLES: Voice and instrument samples for the TCB Tracker.
S.70   MAD MAX CHIP MUSIC: 35 pieces of sound chip music from Mad Max.
S.7   ACCOMPANIAST: 16 Voice Henry Cosh sequencer (full instructions on disk).
S.19   ALCHIMIE JR.: Impressive Swiss multi-windows, multi-task sequencer (1Mb).
S.13   TCB TRACKER PLAYER: Display your own picture whilst playing Tracker Mods.
S.117   RIPPED MUSIC: Over 50 pieces of interrupt driven music.
S.54   ESION SOUNDTRACKER: Player for .MOD files with ST & STE versions.

MOD FILES

S.41   AUDIO WIZARDRY #1: Apology, Imagination Flight, Outrun, Megamix, Titan.
S.56   MOD FILES: Axkold, Follow, Dreaming, JJaclson, Radio & The Edge.
S.90   HAYNES MODS #1: Legend, So Hard, Madmix, Pandora, Surburban C & C (1Mb).
S.104   PRITCHETT MODS: Airwolf, Barock, Gaslight, Jacknife, Legacy, Pyrax, Retro.
S.132   SL MOD COMP #7: Benny Hill, Bruce, Humanoid, IMF, Technotronic Insp, etc.

Many, many more available, see our catalogue for details

UTILITIES

U.62   MENU-HACKER: Replace a picture in almost any menu/demo/game/intro.
U.60   ST TOOLS: An exhaustive collection of Atari ST utilities, including MiNT.
U.20   FASTCOPY 3: Excellent disk copier for cover disks.
U.53   TERADESK (1Mb): Replacement desktop for the ST/STE.
U.48:   PREMIER PACKERS: 13 of the best program packers, plus a de-packer. D/S.
U.42   PICTURE HUNTER: Rips picture screens from other programs.
U.44   THE DUPLICATOR: High speed copier program.
U.47   PROBE ST: Handy utility. Grabs music/graphics, disk/memory editor, etc.
U.35   PICTURE CONVERTERS: Convert any format to just about any other format.
U.34   SAGROTAN: Super virus killer to protect your disk collection.
U.52   VAULT & TURTLE: Fast hard disk back-up utilities.
U.30   GEMINI: Good alternative desktop from Germany. (1Mb).
U.57   ALICE: A GEM based text editor.

ART & GRAPHICS

A.79   FRACTAL ENGINE 2.1: Multi-functional fractal image generator.
L.16   ARTIST FREEHAND: Excellent art package, multiple screens. (£2.50).
A.52   ROYAL PAINT: Finnish art package with all the usual features.
A.46   ELECTRIC IMAGE ART PACK: Drawing/painting program with full manual on disk.
A.78   MINI-PICS: Reduce images up to 64 to a screen! Ideal for cataloguing.
A.45   CRACK ART: Demo version of the excellent German art program.
A.19   PRINTMASTER PLUS: Loads of art work for DTP (2 disks/£3.00).
A.36   KOZMIC 4: Latest version of stunning psychedelic pattern creator.
A.37   PAD V2.4: Comprehensive mono art program with English documents.
A.75   POLYFILM by Martin Brownlow. Make films from multiple 3D polygon objects.
A.70   COMIC BOOK HEROES: 22 Neo pictures of your favourite superheroes.
A.62   ART OF DUNGEONS & DRAGONS: Superb collection of pics from Dragonlance. D/S.
A.1   ANI ST: Commercial quality animation program (once cost £60.00 to buy!)
A.30   FULL SCREEN: Display your pictures in stunning fullscreen format! 1Mb. D/S.
A.44   FANTASY SLIDESHOW: Spectrum 512 pictures on fantasy theme (over 16's only).
A.58   ART TUTOR: Demo of tutor program for computer artists.
A.47   PICTURE CONCEPT: Do wierd and wonderful things with your pictures.
A.64   ATARI IMAGE MAKER: Experiment with digital image processing.
L.26, L.27, L.28   TYPEWRITE CLIP ART: 4 disk sets of quality clip art in 1Mg format. £10.00 per set with a free printed catalogue of the art work on the disks included.

PROGRAMMING

P.44   GFA BASIC V.2: Full version of popular language with extensive tutorial. (N.B: this disk is not P.D. – L.A.P.D. have permission to distribute it).
M.107   RAMWORLD 2: Three dimensional object creator and viewer program.
P.37   HEAT'N'SERVE SOZOBON: A friendlier sort of Sozobon.
DSP.1   SOZORON C: A complete C compiler with documentation.
P.24   MENU-MAKER: A French program that allows you to make your own menus with music, sprite and scrolling message. Excellent.

PD ZONE

KOZMIC 4

FLOPPYSHOP • DISK NO: ART.3874C • £2.50 • MEMORY: 1MB • SHAREWARE

IN BRIEF: *Kozmic* is a digital kaleidoscope on your desktop. It requires no experience or artistic flair whatsoever and its uses range from game title screens to album covers. In fact it's even been used in the production of a pop video!

The main advantage version four offers is a new interface. Gone are the days of tacky buttons and weird colour schemes; you now control the program through a classy, grey icon panel. The function of each button is displayed on a central view screen as you move the mouse, and there's a full selection of stereo sound effects for STE owners with more than one megabyte.

Naturally, one or two extra surprises await in the effects department. Particularly nice is the distort icon, which uses variable speed scrolling to achieve some truly stomach-churning effects. Last but not least, you can now limit effects to a user-defined rectangle within the screen.

ST REVIEW COMMENT: "*Kozmic* just gets better and better. Version four is far easier to use than earlier incarnations and the new distortion effects are fantastic. Now all we need is a Falcon true colour version!"

✪✪✪✪

Generations like this are just a few seconds' work and look spectacular once the colours begin to cycle.

An all-new interface heads up Kozmic 4 and it's a total breeze to use thanks to on-line help.

The latest version allows Degas pictures to be linked to pages for that ultra-nineties look (ahem!).

ATARI-TEXT

EMERALD CITY • DISK NO: SN.37 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: Here we stand in the computer produced nineties and yet the majority of digital information is still distributed in ASCII format – how boring! *Atari-Text* aims to remedy this situation by providing a way to distribute text in a more colourful format – Teletext style!

The first step is to produce a source file containing the information you want displayed and the colour control codes. If high quality graphics are required, a Degas picture can be assigned to a screen number or the hash character can be used to create Ceefax-style blocky graphics. Once your basic text files are prepared, it's just a case of using the runtime program to display your pages. A version is supplied for ST low and medium resolution.

The author sees the program being used for public domain catalogues and disk magazines, but in reality it lacks the speed or flexibility required for these and most other applications.

ST REVIEW COMMENT: "*Atari Teletext* is certainly a step up from plain ASCII, but it's painfully slow. Some form of mouse control and the ability to handle text deeper than the screen would improve things considerably."

✪✪✪

If you've got an urge to turn your ST into a BBC clone then Atari-Text could be just what you're looking for.

SIFT

GOODMAN INTERNATIONAL • DISK NO: START 5/89 • £2.75 • MEMORY: 0.5MB • EXCLUSIVE-WARE • FALCON-COMPATIBLE

IN BRIEF: As you'll no doubt know if you've tried it, transferring word processed files between two different computers is one big headache from start to finish. Even if you go down the ASCII

SIFT handles the three most popular ST word processor formats and its WordPerfect files can be read by most PC packages.

Every text file has to go via ST Writer format, but it's still far quicker than editing ASCII files manually.

path – losing all formatting in the process – there are usually plenty of unwanted spaces and hyphens to edit out.

Sift is a program written by the author of *ST Writer* to combat the problem. It transfers files produced by *1st Word Plus*, *Word Writer* and *WordPerfect* into *ST Writer* format and vice versa. *WordPerfect* files are accepted by most Mac and PC word processors, so you're laughing – at least, that's the theory.

Fortunately, *Sift's* attempt at translation appears to be quite – loading into *MacWrite Professional* without problems – although it does manage to lose italics every now and again.

ST REVIEW COMMENT: "*Sift* is definitely the best way to transfer *1st Word Plus* and *ST Writer* files to other machines. OK, it's not 100% successful, but it beats manually editing out control codes and unwanted spaces!"

✪✪✪✪

THE A.I. DOCTOR

GOODMAN INTERNATIONAL • DISK NO: START 2/90 • £2.75 • MEMORY: 0.5MB • EXCLUSIVEWARE • FALCON-COMPATIBLE

IN BRIEF: Feeling a bit under the weather? In that case, put yourself in the *A.I. Doctor*'s capable hands for an on-the-spot diagnosis.

The program starts by taking you through a series of fifty questions covering every aspect of your health from that pain in your chest to the colour of your... well, you get the idea. It then searches through its database of over eighty diseases and comes up with the most likely cause for your affliction. Naturally, any diagnosis it gives is only a means of confirming what you really ought to do – go and see the doctor!

The whole shebang is completely mouse controlled and very easy to use. If you grow tired of the standard data file, you can always attack it with a text editor and add some more interesting diseases – just don't distribute it afterwards!

The A.I. Doctor is completely mouse controlled and trained to recognise over eighty common diseases.

ST REVIEW COMMENT: "The *A.I. Doctor* is fun for a few minutes, but loses its appeal once the novelty has worn off. Besides which, you're hardly going to feel like sitting in front of your ST answering questions if you've got chronic appendicitis, are you?"

ooo

Over fifty detailed questions lead the program to its diagnosis, but it's no substitute for a real doctor.

ASSEMBLER 2000

EMERALD CITY • DISK NO: SJ.2 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: Basic and C are fine for programming business applications, but when it comes to demos or games, assembly language is the only sensible option.

Assembler 2000 is a text-based code cruncher designed to break newcomers into the complex world of 68000 assembly language. The interface is reasonably nippy, although keystroke controls are used throughout and it's not the most intuitive package on earth. The problem isn't helped by an almost complete lack of documentation, although plenty of examples are provided on disk. This includes one or two "ground level" tutorials and source code for a complete *Pacman* clone called *Evasion*. Assembly times are extremely fast and the editor does feature one or two nice touches, such as line highlighting as you move down the source file.

ST REVIEW COMMENT: "With *Turbo Assembler* on the market, I can't see many reasons for using *Assembler 2000*. Mind you, considering it includes source code for a complete game it's got to be worth £2.50 of anybody's money!"

ooo

Evasion is included as a demo of Assembler 2000's abilities and it's an ideal tutorial for prospective game programmers.

TOP TEN UTILITIES

1 KOZMIC 4 • LAPD • DISK NO: A.36 • £1.50 • MEMORY: 1MB • SHAREWARE

The world's best pattern generator just got better! In addition to a brand new interface, there have been several tweaks in the features department although Falcon compatibility is still sadly missing. The shareware version limits you to one save per session.

2 BREAK UP • FLOPPYSHOP • DISK NO: UTL.3884 • £2.50 • MEMORY: 0.5MB • FREEWARE

Break-Up's sole function in life is to split files into several parts and reassemble them on request. This makes transferring enormous image files between two machines a doddle and the size of each chunk is user definable to suit different floppy disk formats.

3 CROSSWORD CREATOR • GOODMAN INTERNATIONAL • DISK NO: START 6/90 • £2.75 • EXCLUSIVEWARE • FALCON-COMPATIBLE

A very stylish crossword generator which is worth its weight in gold to and other amateur publications. An intuitive shell coordinates the production of the puzzles, although you're on your own as far as examples are concerned.

4 DISK FORMAT CPX • FLOPPYSHOP • DISK NO: UTL.3879 • £2.50 • MEMORY: 0.5MB • FREEWARE • FALCON-COMPATIBLE

A rather snazzy disk formatter which operates as a CPX module from within *XControl*. It uses virtually no memory and handles HD disks perfectly. German prompts for this one, but it's not difficult to grasp.

5 PRIORITY • NEW AGE PDL • DISK NO: FALC.2 • £2.00 • MEMORY: 2MB • SHAREWARE • HD DISK DRIVE REQUIRED • FALCON-COMPATIBLE

Keep your foreground applications running at full speed with this handy *MultiTOS* utility. It gives you complete control over every task currently in memory and priority is adjustable through GEM sliders.

6 GFA PRINTER DRIVER CREATOR • GOODMAN INTERNATIONAL • DISK NO: START 1/90 • £2.75 • MEMORY: 0.5MB • EXCLUSIVEWARE • FALCON-COMPATIBLE

Having trouble putting together printer drivers for you GFA programs? In that case, give this program a whirl. Just enter the control codes, click "Save" and out will pop a ready-to-run procedure to do the job for you.

7 CLIP IT VOLUMES 1 & 2 • THE ST CLUB • DISK NO: SSM.114 & SSM.115 • £2.90 ALL IN • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

Public domain clip art isn't always wonderful, but this collection is well above average. As usual, several pieces let things down badly, but the three motorcycle shots are worth the price of the disks on their own! Plenty of topics are given an airing and the resolution of the images is very good.

8 ASSEMBLER 2000 • EMERALD CITY • DISK NO: SJ.2 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

A competent assembler which loses out to the competition in terms of usability. Keyboard keystrokes are used throughout and there's not a file selector in sight, but good example programs go some way to make up for its deficiencies.

9 GFA GDOS ROUTINES • GOODMAN INTERNATIONAL • DISK NO: START 1/90 • £2.75 • MEMORY: 0.5MB • EXCLUSIVEWARE • FALCON-COMPATIBLE

A set of ready-made procedures to ease handling GDOS from *GFA BASIC*. There's no documentation as such, but the source is commented and usage is very similar to C. The routines are usable with any version of GFA.

10 FONTEER • FLOPPYSHOP • DISK NO: F.3982 • £2.50 • MEMORY: 1MB • FREEWARE • FALCON ONLY

FontEer replaces the naff Atari system font with a Macintosh-style Chicago clone. It makes screen displays much more pleasing and is compatible with all applications. The only niggle is that Fuji has been replaced with a bomb – tacky !

PD ZONE

SECOND WORLD WAR

LAPD • DISK NO: M.153 • £4.50 ALL IN • MEMORY: 0.5MB • PUBLIC DOMAIN • MONO ONLY • FALCON-COMPATIBLE

IN BRIEF: *Second World War* is a pool of information designed to provide school children with an insight into wartime Britain. *TCOS* is used to present the information and the stack is complemented by a huge range of pictures scanned from 1940's newspapers.

The collection is spread over three disks and the vast majority is taken up by picture files. The stack kicks off with a look at the

Over a hundred scans from period newspapers add a multimedia flavour to the Second World War disks.

national curriculum and then goes on to present a quick overview of life in the early forties. It's quite well written, but you tend to get the impression that the author was only interested in scanning photographs and the text was added as an afterthought. In short, much more could have been made of the hypermedia aspect.

TCOS is mono only and the pictures are also high resolution, but an emulator is included for those with a colour monitor.

ST REVIEW COMMENT: "*Second World War* is quite interesting, but ultimately there's just not enough text. True, the pictures do make an enjoyable afternoon's viewing, but they're not going to teach you an awful lot."
●●●

The information included in the stack is good, but unfortunately there's not nearly enough of it.

HYPERLINK STACKS

THE ST CLUB • DISK NO: UTI.319 & UTI.320 • £2.90 ALL IN • SHAREWARE • HARD DISK RECOMMENDED • FALCON-COMPATIBLE

IN BRIEF: *Hypercard* is a way of life for Macintosh users, and *Hyperlink* aims to do the same thing for the ST. This collection of stacks has been compiled by JMG Software to show exactly what their superb hypermedia package is capable of doing.

Over fifteen stacks are included, ranging from software databases to a wheel designer (I kid you not!) and most feature plenty of "linked" graphics. The pick of the bunch is probably the STATT disk magazine demo, which really makes the most of the hypermedia environment. Every stack comes with on-line help and once you get the hang of *Hyperlink*, they're all very straightforward to use.

A runtime-only version of the *Hyperlink* package is supplied, which allows you to use all of the stacks, but obviously you can't create your own.

ST REVIEW COMMENT: "You can't help falling in love with the package itself, but these stacks don't really harness *Hyperlink*'s real strength –

1900'S USSR

THE ST CLUB • DISK NO: EDU.45 • £1.45 • MEMORY: 0.5MB • FREEWARE

IN BRIEF: Very few countries have had such a turbulent past as the USSR and this disk aims to provide an overview of the last ninety-three years of Soviet history.

The program is controlled through an icon driven interface, which displays text or graphics in a window on the right hand side of the screen. Information covering everything from population figures to the cold war is included, although quite a number of options are unavailable at the moment.

1900's USSR makes an interesting read, although paper cannot convey how truly awful this colour scheme really is.

However, any positive things you could say about the program are made completely void by a truly awful colour scheme. The bright red on sandy brown combination is virtually unreadable on any monitor and likely to induce dizziness if viewed for more than a minute (yes, it is that bad!).

ST REVIEW COMMENT: "*1900's USSR* is a reasonably good program, but it's completely spoilt by the worst colour scheme you have ever seen in your entire life! If you're interested in Russian history it might be worth a look, but sunglasses are essential!"
●●

A separate program gives an overview of Russian history from 1900 to the present day.

information presentation. Mind you, they are well presented and could come in handy if you are thinking about buying the package."
●●●●

Variety is the name of the game – from software databases to cycling logs, this collection includes something for everyone.
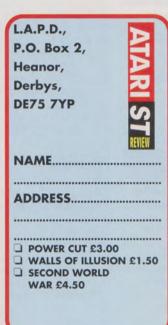
The STATT diskzine shows off Hyperlink's abilities very well. If only the same could be said for some of the other stacks.

CUT OUT 'N' SEND COUPONS

Read our reviews, fill in the relevant coupons and have some of the best PD winging its way to you... courtesy of ST Review!

The ST Club,
2 Broadway,
Nottingham,
NG1 1PS

ATARI ST REVIEW

NAME..............................

....

ADDRESS..........................

....

....

- ❏ HYPERLINK STACKS £2.90
- ❏ 1900's USSR £1.45
- ❏ ST NEWS 8.1 £1.45
- ❏ INSIDE INFO 64 £1.45
- ❏ DISK MAG £1.45

L.A.P.D.,
P.O. Box 2,
Heanor,
Derbys,
DE75 7YP

ATARI ST REVIEW

NAME..............................

....

ADDRESS..........................

....

....

- ❏ POWER CUT £3.00
- ❏ WALLS OF ILLUSION £1.50
- ❏ SECOND WORLD
     WAR £4.50

Floppyshop ST,
PO Box 273,
Aberdeen,
AB9 8SJ

ATARI ST REVIEW

NAME..............................

....

ADDRESS..........................

....

....

- ❏ ABOMBINABALL £2.50
- ❏ STEN 13 £2.50
- ❏ KOZMIC 4 £2.50
- ❏ DESKPIC £2.50
- ❏ POV-SHELL £2.50

16/32 PDL,
173 High Street,
Strood,
Kent,
ME2 2DH

ATARI ST REVIEW

NAME..............................

....

ADDRESS..........................

....

....

- ❏ KABOOM £2.50

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

ATARI ST REVIEW

NAME..............................

....

ADDRESS..........................

....

....

- ❏ STOSSER £2.75
- ❏ NUTWORKS £2.75
- ❏ THE A.I. DOCTOR £2.75
- ❏ SIFT £2.75
- ❏ FORTUNE £2.75

New Age PDL,
P.O. Box 30,
Leigh-on-Sea,
Essex,
SS9 4AD

ATARI ST REVIEW

NAME..............................

....

ADDRESS..........................

....

....

- ❏ SHOCKWAVE £2.95

Emerald City,
P.O. Box 28,
Southampton,
SO9 7HS

ATARI ST REVIEW

NAME..............................

....

ADDRESS..........................

....

....

- ❏ COCOONS OF JUSSE £2.50
- ❏ ASSEMBLER 2000 £2.50
- ❏ ATARI TEXT £2.50

SHORT CUTS

Four more essential products reviewed this month...

SCORING

PRODUCT NAME	RATING
SPEEDOGDOS FONTS PACK	✪✪✪✪
MODERN ATARI SYSTEM	✪✪✪✪
COMPUTER PROTECTION GLASSES	✪✪✪✪
ULTIMATE RIPPER/ SUPERMON 1.03	✪✪✪

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...**

The Designer's Pack – well worth buying.

PRODUCT:	SPEEDOGDOS FONT PACKS
CONTACT:	HISOFT
TEL:	0525 718181
PRICE:	£59.95
RATING:	✪✪✪✪

SPEEDO FONTS

Review by Andrew Wright

The fourteen fonts that come with SpeedoGDOS are all very well – and a big improvement on the spectacularly mediocre bundle that Atari supplied with the original GDOS package – but they won't provide much variety for desktop publishers.

With this in mind, HiSoft have put together two extra font packs for SpeedoGDOS users, called the Writer's Pack and the Designer's Pack. As you can probably gather, they're aimed at different people doing different things. The Writer's Pack is aimed at those producing long documents or newsletters, perhaps with a document processor like *Wordflair*. The Designer's Pack, on the other hand, is more likely to be of use to those involved in design-oriented DTP or graphics using packages such as *TruePaint* or *Silhouette*.

The packs each contain 25 Speedo format fonts which brings the cost down to around £2.40 per font. If you were to buy these from Bitstream individually, they'd cost somewhere in the region of £30 each, so the packs are no mean bargain.

The Writer's Pack contains only nine different typefaces but many of them have regular, italic, bold and bold italic variants. There are two serif body text faces, Classical Garamond and Zapf Calligraphic (equivalent to Palatino), with two flexible sans serif faces, Futura and Zapf Humanist (similar to Optima), that could be used either for

Aachen bold
Revue regular
Poster Bodoni
BALLOON BOLD
Souvenir Bold
P.T. Barnum regular
Formal Script regular
Zapf Chancery medium
Bodoni Book/*Italic*

headings or for short passages of text. There are several other faces, mainly for headings and titles, including a script typeface and Eras, a solid and very attractive sans serif headline typeface in medium and bold weights.

The Designer's Pack is a much more varied affair, with 21 different typefaces, only one of which is suitable for use as body text, a modern serif typeface called Bodoni in book (regular) and italic forms.

The remainder include five script typefaces, ideal for use in invitations or less formal documents such as memos, menus and occasional leaflets.

The remaining typefaces are split into headline and display types. Headline types include the strong and very authoritative Aachen, the loud and attention-grabbing Poster Bodoni and several more informal styles such as Bremen Bold, Informal Roman, ITC Souvenir Bold and Revue regular, the latter being a very popular one for logos and catchy posters.

There are some very trendy typefaces that will enhance a wide range of designs, from newsletter mastheads to leaflets and posters. Blippo, Balloon and Hobo are all widely used designs and there are some less common ones like Impress, Engravers' Roman and P.T. Barnum which will help you create some original designs. P.T. Barnum is particularly good for posters advertising shows and fun fairs and was taken from a famous circus design.

These two packs are extremely attractive and will certainly provide a broad starting point for budding designers as well as those looking to expand their font collections. It's a shame you can't convert them to work with other applications (Speedo is a closed, encrypted format) but that doesn't detract from two thoughtfully selected bundles. If you're using SpeedoGDOS, you'll need one or the other of these.

MODERN ATARI SYSTEM SOFTWARE

Review by Ofir Gal

Atari have introduced both the Falcon and *MultiTOS* over the last twelve months, along with a whole host of new hardware and Operating System documentation. Unfortunately, this was only made available to registered developers and the lack of proper documentation for the majority of independent authors and enthusiasts can be very frustrating. HiSoft have taken up the task of making this

information available to all. Written by Tony Racine and Alex Kiernan, the book sets out to explain all of the new features.

It's over 250 pages long and divided into eight chapters. The first of these discusses the Falcon030 hardware, video and audio sub-systems. Most of the chapter is dedicated to the DSP, outlining how it works and, more importantly, how to write DSP sub-routines and programs. The second chapter takes a brief look at *MultiTOS* and *SpeedoGDOS* while the next five cover all of the new Operating System calls. Each chapter is dedicated to a specific part and lists every call with a concise explanation of the function and the calling convention for *HiSoft BASIC*, *Lattice C* and *DevPac*. The areas covered include the video, audio and DSP sub-systems, *MiNT* and the new GEMDOS calls.

Chapter 7 is dedicated to the new features of the Falcon and *MultiTOS* AES. It starts with a discussion of the new features including how to inquire the system for the availability of these features and how to use them.

Each call is clearly explained and the required AES version for the call is also documented. This includes the new menu system and the shell and window library extensions. The last chapter covers *SpeedoGDOS* in similar detail.

No less than nine appendices follow. The first should be of interest to many programmers as it contains the first freely available style guidelines for the user interface. This lays out some GEM interface conventions such as keyboard shortcuts, menu layouts and the general appearance of a program. Better late than never... The other appendices cover object file formats, the cookie jar, Speedo font header format, *MultiTOS* configuration and a list of *MiNT* signals and error codes. A list of all Operating System calls and their binding numbers is also included.

As the authors assume prior knowledge, the book is certainly not a tutorial.

Nevertheless, it is certainly a welcome addition especially as good quality TOS programming information is hard to come by. And unlike the Atari documentation, it is well laid out, easy to follow and even includes an index...

Two hundred and fifty pages of techie stuff...

PRODUCT:	MODERN ATARI SYSTEM SOFTWARE
CONTACT:	HISOFT
TEL:	0525 718181
PRICE:	£24.99 (Free with Lattice C 5.60)
RATING:	✪✪✪✪

COMPUTER PROTECTION GLASSES

Review by Jane Plessey

Screen filters have been available for many years and come in different forms; wire mesh, glass and so on. The various designs are intended to enhance the screen clarity and protect your eyes from unnecessary damage. Another approach is to wear filter

PRODUCT:	COMPUTER PROTEXTION GLASSES
CONTACT:	OPTIX WALES
TEL:	0269 845826
PRICE:	GLASSES £9.95, CLIP-ONS £8.95
RATING:	✪✪✪✪

glasses rather than place something in front of the screen itself.

These new glasses from Optix Wales do just that. They are non-prescription spectacles that look like sunglasses but have a coating that cuts down glare and reflection. It is claimed that they help reduce the risk of eye strain and damage associated with using a monitor.

Wearing them in the office may lead to comments like "is it too sunny in here?" or "are you still on holiday?", but the immediate feeling is one of relaxation. Scoffing will soon die down when others in the office try them and find that they do, in fact, help to relax the eyes. This is mainly due to the reduction of glare, possibly the result of a polarising

effect. The glasses are available as full spectacles or clip-ons – if you are short-sighted, you can still benefit from them. One big advantage is the non-distortion of colours; if you work with colour graphics, your colour vision isn't affected.

Compared to standard spectacles, these cost a very reasonable £9.95 (£8.95 for the clip-ons) and are available from Optix Wales, Erw Fynydd, Carmel, Llanelli, Dyfed, South Wales SA14 7SG. Tel: 0269 845826.

SUPERMON

Review by Tony Kaye

Combining two utilities into one is always a good idea if they complement each other. That's just what has happened with *Supermon* and The Ultimate Ripper from Power Computing.

The Ultimate Ripper cartridge has been around for some time. It lets you take screenshots of games, root around in the computer's memory, pull out music and generally play with any program in memory. It will do a similar job on disks as well.

Such functions make this a powerful add-on to your ST if you need to get inside the programming of software, although using such facilities on commercial software is, of course, highly illegal. On PD disks, it can be used to add lives and make you indestructible if you must cheat, or generally enhance or improve a game by adding or changing features.

Supermon is an accessory that takes over some of the basic functions of the computer when you boot up. It does a complete four-way virus check and offers an extensive menu of features. These include a screen snapshot facility, custom formatter, reset-proof RAMdisk, print spooler, virus checker and many others. This has a much higher strike rate than most other "compilation" programs.

One rare feature is the ability to switch between two tasks. If you have enough memory you can, for example, run *1st Word Plus* and *Timeworks*, switching between them using a key combination. This is not multi-tasking, as the program that is not in use freezes until activated again and you cannot have both in view at the same time. However, this means that each program runs at near enough normal speed. I failed to get the feature working with TOS 2.06, although I had no problems with TOS 1.62.

There are many more facets to this package that will keep you amused while you find out what it can and can't do. If you want the extra functions in one package and you're even a little curious to find out how programs work, then this is for you.

PRODUCT:	ULTIMATE RIPPER/ SUPERMON 1.03
CONTACT:	POWER COMPUTING
TEL:	0234 843388
PRICE:	£39 (£25 WITHOUT SUPERMON)
RATING:	✪✪✪

Eye protectors that allow you to make a spectacle of yourself...

Don't know a TIFF from a GIF? Let Ofir Gal take you through a layman's guide...

When ST programs began to use graphics, various ST file formats emerged. A similar situation existed on most other computers, all leading to the current state of affairs where there are simply too many file formats, making image file conversion programs quite a popular item...

WHAT ARE IMAGE FILES?

Anything that appears on your computer screen is a "mirror-image" of the computer memory. An image file saves that portion of memory to disk. When loading such a file, the contents are simply copied into the same section of memory and the image reappears on the screen. This is a rather simplified version of a more complex story. To be able to cope with different colour modes, the memory's organisation differs greatly between machines such as the ST and Amiga, for example, hence the sheer number of different formats.

COMPRESSION

The Falcon, and many other graphically-enhanced computers, can now display true colour images which tend to use astounding amounts of memory and disk space. For example, a true colour snapshot of the Falcon screen will not fit on a double-sided floppy disk!

Consequently, file compression known image format is Degas which comes in three varieties – PI1, PI2, or PI3. Degas Elite added a compressed variety which uses the PC1/2/3 file extension.
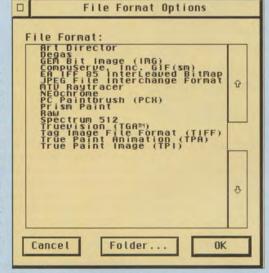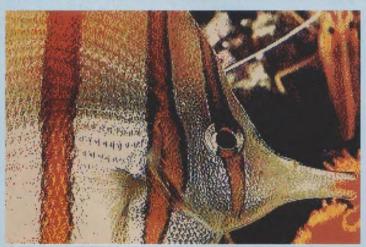
Each file extension denotes the screen mode the file is suitable for – 1 for low resolution, 2 for medium and 3 for high. The start of the file contains the colour palette information and the image is stored in a very simple way. For the technically minded, this is a direct copy of the screen memory.

This simple approach has disadvantages. The Degas file format is ST-specific as it only allows for three fixed screen modes. In fact, it is so inflexible that it is of little use on a TT or a Falcon, let alone an Amiga or

SPITTING

True Paint supports several file formats and is one of very few that can load and save JPEGs. As the program uses special drivers that can be added at any time, HiSoft are currently working on additional drivers to support even more formats.

```
┌─────────────────────────────────────┐
│ □        File Format Options         │
│ ┌─────────────────────────────────┐  │
│ │ File Format:                    │  │
│ │ Art Director                 ▲  │  │
│ │ Degas                        █  │  │
│ │ GEM Bit Image (IMG)          █  │  │
│ │ CompuServe, Inc. GIF(sm)     █  │  │
│ │ EA IFF 85 InterLeaved Bitmap █  │  │
│ │ JPEG File Interchange Format ⇧  │  │
│ │ MTV Raytracer                   │  │
│ │ NEOchrome                       │  │
│ │ PC Paintbrush (PCX)             │  │
│ │ Prism Paint                     │  │
│ │ Raw                             │  │
│ │ Spectrum 512                    │  │
│ │ Truevision (TGA™)            ▼  │  │
│ │ Tag Image File Format (TIFF) █  │  │
│ │ True Paint Animation (TPA)   █  │  │
│ │ True Paint Image (TPI)       ⇩  │  │
│ └─────────────────────────────────┘  │
│ ┌────────┐  ┌──────────┐  ┌──────┐   │
│ │ Cancel │  │ Folder...│  │  OK  │   │
│ └────────┘  └──────────┘  └──────┘   │
└─────────────────────────────────────┘
```

techniques are used to minimise the size of the files. Even Degas files have a compressed version denoted by the file extensions PC1, PC2 and PC3. IMG files are always compressed while GIF files use a very powerful compression technique known as LZW.

None of the compression methods in current use affect the image quality with the exception of JPEG files – their sophisticated technique can reduce a file to a twentieth of its original size, although you pay in terms of loss of quality. While compression can save lots of disk space, it takes longer to view such images as the files have to be decompressed, which also requires more memory...

DEGAS IMAGE FILES

The ST has three screen modes – High, Medium and Low. The best

a Mac!

Degas is quite popular, probably because it is the format used by the very popular art program of the same name. When the TT was launched, three more Degas file types were added but never caught on.

IMG

The GEM Bit Image file, or IMG as its better known, is the original GEM format and would have been a much better choice as a standard for the ST. It is used by several PC packages as well and while more complex from a programmer's point of view, it does allow for greater compatibility. However, the IMG format did not make it outside the domain of ST word processors like *1st Word Plus* or *That's Write*.

IMG is much more versatile than Degas. It can be used at any resolution and has a built-in compres-

Using clever dithering methods, even 16 colour Degas files can look impressive.

OTHER FORMATS

The Spectrum file format is used by the program of the same name to display up to 512 colours on a standard ST using palette switching techniques. The same trick is used by *Speed Of Light* which can display 256 colour GIFs on a 16 colour ST or STE.

Targa files are common on PC systems for storing true colour images while IFF (Interchange File Format) files come from the Amiga world and are normally used for images with up to 256 colours.

A newcomer to the scene is Kodak's Photo CD. The file extension is .PCD and there are now several programs that can display these including *GEMView*, *Studio Photo* and *Photo Show*.

JPEG is also gaining popularity on true colour systems thanks to its powerful compression method.
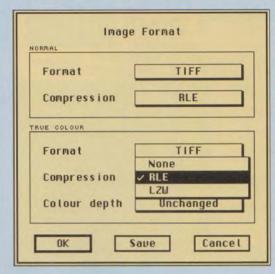
sion scheme. The XIMG format is an improved version designed for colour images but can also be used for monochrome images – there is even a true colour variant.

Most DTP and word processing programs can only load plain mono- chrome IMGs. In addition, there is no way of telling one from the other, as both use the same IMG file extension...

TIFF

Flexible screen resolutions require a more portable image file. The TIFF (Tagged Image File Format) format is now emerging as *the* multi-platform image standard. It is flexible enough to cope with anything from mono- chrome or greyscale images to true

Image Format

NORMAL

Format   TIFF

Compression   RLE

TRUE COLOUR

Format   TIFF
                None
Compression   ✓ RLE
                LZW
Colour depth   Unchanged

OK   Save   Cancel

The forthcoming ImageCopy 2.5 supports TIFFs of almost any kind. Non- compressed, RLE compressed and even LZW TIFFs can be loaded, converted and saved.

colour. The format also allows for various compression techniques that can squeeze an image file to a quarter of its original size.

Like the IMG format, it can cope with any image size.

The format is not compressed by default, but allows for two compres- sion methods: RLE (Run Length Encoded) compression, as used in IMG files, and the more effective LZW method.

GIF

Most modern computer systems support in a 256-colour mode which explains the popularity of the GIF (Graphics Interchange Format) format. Two hundred and fifty six colours is just about enough to create a realistic picture.

GIFs always use a very effective type of compression known as LZW and while normally used for storing 256 colour images, can also be used for 16, 8 and 4 colour modes along with monochrome images. GIFs always have the file extension .GIF, and the format is stringent enough to provide a high degree of portability.

IMAGE

HOW DOES COMPRESSION WORK?

The idea behind file compression is surprisingly simple and can be illustrated using figure 1.

The image was displayed in 256 colour mode which requires one disk byte for each dot on the screen. There are 5 rows of such dots, each row containing 5 dots. So, this tiny image uses 25 bytes when saved to disk.

The information on disk can be likened to a list 25 lines long, each containing a colour name. A simple compression method would be to store the image as 3 red lines, 1 blue lines, 2 red lines and so on. Instead of saving a description for each pixel, less space is required by working with groups of pixels. If a byte is required to save the number of pixels of each colour, this pattern can be described as: 3R B 2R 3G 2B R 4G 3B G 4R B, a total of 18 bytes so reducing the file size by 28%. Compressed or otherwise, the size of the picture (five by five in this case) would also need to be stored.

In the last row, there is one blue pixel in a row of red ones. Some compression techniques try to work out whether that blue dot is visually important and may replace it with a red one to improve the compression effectiveness. This principle is a simple example of a "lossy" compression technique. A rather more sophisticated scheme is used in JPEG files to great effect.
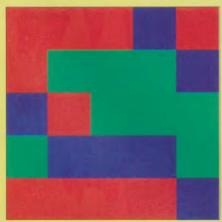
Figure 1: By using a simple compression technique, the infor- mation for this colour square can be reduced by 28%!

TIFF VS JPEG

JPEG compression can be used to reduce file sizes to less than 5% of the original, but, as always, there is a pay back...

The original screen image is a true colour one and has been saved in TIFF format, file size 330,596 bytes. As such, the picture here is an accurate representation of the original.

TruePaint's JPEG compression has been used here, reducing the file size to 24,605 bytes. However com- pression is balanced against quality, resulting in very little loss of fidelity.

In this picture, maximum JPEG compression has been used, in Photoshop on the Mac, so reducing the file to 10,616 bytes – just 3% of the original size! However, quality is now visibly poorer...

Having digested last month's introduction to TOS, you're now ready for an in-depth look at GEM. Nial Grimes takes the wheel...

GOING UNDERCOVER

Despite all the criticisms levelled at it over the years, GEM is a godsend for programmers and users alike. It's responsible for making the ST one of the most user-friendly machines available and aids the programmer in building intuitive, powerful applications. Better still, GEM-legal programs are almost guaranteed to be compatible with any additions Atari make to the ST range.

The basics of GEM programming can be understood by anyone and the best way to do it is by example. With that in mind, let's take a look at at exactly how the AES and VDI can be used to create an application...

PICTURE THIS

The AES is made up of eight "libraries" of programmer-friendly routines. They are the basis of the GEM interface and provide the programmer with an easy way to handle dialogue boxes, draw windows and manage icons.

The first routine any application will call is **APPL_INIT**. This prepares the AES for the fact that it's going to be used and returns a unique "Application ID" number. In theory this number allows inter-program communication, although it's very rarely used for that purpose; maybe the situation will change under

Handing control over to the AES through an Event call allows desk accessories to run peacefully alongside one another.

The AES Form and Object libraries work in tandem to provide easily manageable dialogue boxes.

MultiTOS. Next, an interface needs to be prepared.

This will usually consist of a menu bar, some dialogue boxes, a window or two and several icons. Most of these elements will be created using a resource construction kit (such as HiSoft *WERCS*) and loaded into memory with **RSRC_LOAD** as soon as the application is run. The exception is windows, which are created

internally by GEM on demand. When it comes to actually using dialogue boxes, two AES routines are involved: **OBJC_DRAW**, which physically displays the box, and **FORM_DO** which returns the selected buttons.

With the resource file loaded, the menu set up, the windows drawn and icons positioned, it's just a case of sitting back until the user actually does something. An "Event" call

AES LIBRARIES

Library	Prefix	Function
Application	APPL_	Application calls are used to initialise the AES and to pass information to other running programs.
Window	WIND_	Window creation, drawing, movement and sizing are all controlled through this library.
Event	EVNT_	All of these routines pass program control to GEM and ask it to report when a specified event takes place.
Object	OBJC_	These calls are used to draw dialogue boxes on-screen and edit the state of elements within those boxes (for example, reverse a button when it is selected).
Resource	RSRC_	This collection of routines allows the programmer to load a resource tree from disk and locate its position in memory.
Form	FORM_	The Form library takes the pain out of dialogue box management.
Menu	MENU_	Naturally enough, this library deals with menus. It is used to draw the menu bar initially and edit the entries thereafter.
Graphics	GRAF_	The graphics library contains all of the little bits and bobs that don't fit in elsewhere, such as zoom-boxes and selection rectangles.

A BREAK FROM THE OLD ROUTINE

To illustrate just how easy using operating system routines can be, let's make a simple GEMDOS call from BASIC, C and assembler. The routine we are going to use is called **SETDRV** (number 14) – bear in mind that GEMDOS starts counting from zero, so drive 0 is A, 1 is B, 2 is C and so on.

Here's how GFA BASIC would handle things:

```
newdrive%=1              Assign drive number.
~GEMDOS(14,newdrive%)    Call the routine.
```

From C, the call would look something like this:

```
long drvmap;                  Declare the variables.
short newdrive = 1;

drvmap = Dsetdrv(newdrive);   Make the call.
```

And here it is the hard way, using assembly language:

```
chdrv:
  move    #1,-(sp)     Put drive number on stack.
  move    #0E,-(sp)    GEMDOS function number 14.
  trap    #1           Call GEMDOS.
  addq.l  #4,(sp)      Correct stack.
```

The above examples all set B as the current drive. True, it's a simple example, but the more powerful routines are just as straightforward to use. The GEM routines mentioned in the body text are called in a similar manner, but in the case of assembly language, a little more preparation is required.

It's possible to use GEM from almost any language including assembler, although you'd be well advised to use C or BASIC!

Menu programming? – easy life. Just make a MENU_BAR call and wait for GEM to report a selection!

accomplishes this task nicely, in effect handing control over to GEM and asking it to report back when something happens.

Event calls can be instructed to report mouse clicks, mouse movement, window adjustments and much more, but they also serve another important purpose. GEM is a multi-tasking system and while not as powerful in this regard as the likes of AmigaDOS, it does cater for six "desk accessories". Allowing GEM to control the inactive periods enables desk accessories to be opened by the user. You'll find that an **EVNT_MULTI** sits at the heart of most GEM applications. It's capable of reporting back any

event that occurs and is quite a monster, requiring over twenty parameters!
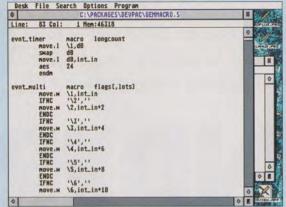
That's the top layer of the application completed. In short, the program just waits until the Event call gives it some information and then acts on it.

VIRTUALLY HASSLE FREE

If you look on the AES as the customer relations department of GEM, the VDI is the workshop. Just like the AES, it needs to be initialised and this is done by opening a "workstation" for each device that's going to be used (typically the screen and printer). In reply GEM will give

the capabilities of the VDI for that particular device, and also a unique "handle" by which it can be accessed.

As mentioned briefly last month, the VDI is device-independent, so exactly the same commands can be used to draw a circle on screen as to output it on a printer. The difference lies in the way devices are updated. The screen is always redrawn as soon as a command is issued, but obviously this wouldn't be practical for a printer, so all calls to other devices are put on ice until a **V_UPDWK** call is made.

Simply put, printing with the VDI is a three step process:

• Draw the page.
• Call **V_UPWDWK** to print.
• Call **V_CLRWK** to clear the buffer in preparation for the next page.

As you can see, the VDI sits slightly below the AES in the GEM hierarchy and calls made to it will be based on responses to AES events. When using the VDI for printer output, GDOS needs to be loaded – it's responsible for dealing with fonts too.

SMASHING WINDOWS

The above outline is the "ideal" application as far as Atari is concerned. Almost all GEM programs will use the AES exactly as described, but the VDI is often ignored; hardly surprising when you consider GDOS' history and the fact that some routines simply didn't even work under early versions of TOS! These days TOS still has its bugs, just like any operating system, but most are minor and well documented.

At first glance, it might look difficult to put together a GEM application, but that needn't be the case. When you get down to the nitty gritty, almost all GEM programs use an identical structure, so the AES code used in the production of a word processor could probably be used to front up a spreadsheet or database.
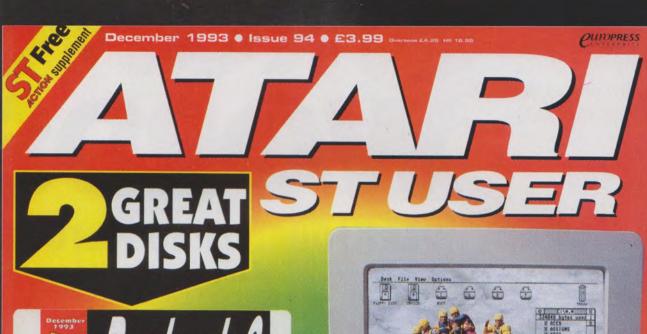
Programming GEM is not particularly difficult, but it does require discipline, plenty of good text books and just a sprinkle of luck. So when you do decide to take up the challenge of programming your ST, just remember – think windows!

If you're serious about GEM programming, C is the language to go for. it's structured, fast and FREE if you bought issue 17 of Atari ST Review!

MIND YOUR LANGUAGE

Almost any programming language will allow you to use GEM, but C is undoubtedly the best choice. C thrives on GEM's structured nature and almost all serious applications for the ST are written with it. There's a wealth of information on programming GEM in C, some of which were mentioned in last month's instalment.

If you can't get to grips with C, a modern version of BASIC comes a close second. HiSoft's implementation is particularly good and is used by many shareware and public domain programmers.

BEST OF BOTH WORLDS!

ST Free ACTION supplement

December 1993 ● Issue 94 ● £3.99 Overseas £4.25 HFl 18.95

europress ENTERPRISE

ATARI ST USER

2 GREAT DISKS

December 1993
ATARI ST USER

Protext 6
Try the very latest version of Arnor's top ST wordprocessor

PLUS A selection of essential utilities to make life easy for floppy and hard drive users

Desk File View Options

December 1993
ATARI ST USER

Exclusive
DOGFIGHT
Take to the sky in MicroProse's latest air battle

PLUS CONQUEST – Link STs and battle in this tactical war game
MIDI MAZE 2 – An addictive multi-player maze shoot-'em-up

GENLOCK GENIUS

Add computer graphics to your home videos

PLUS 32 page ST ACTION supplement

On sale now!

PLUS: Jargon busting guide and life beyond games

Tony Kaye shows you how to import pictures and use them to good effect in your word processing documents...

STRONG WORDS

PART FOUR: USING PICTURES

Word processors have many features that aren't used very often. It is a common belief that if you want pictures in your documents you need to be working with a desktop publishing program, but this is not true. Even the earliest versions of *1st Word* have the ability to import images. Of the word processors used so far in this series, only *Protext* does not offer this facility, although the latest version has had this feature added.

Using a word processor for graphics is a little like using *Timeworks* for writing a letter. Both will do the job, but one is designed for ease of working in a graphics environment while the other is easier to use in a text situation. However, it's a little pointless rushing out and spending your hard-earned cash on a desktop publishing package when all you want to do is incorporate a small picture in your letter. The answer is to use a word processor, while making the most of its comparatively limited ability to handle graphics. Although you wouldn't want to lay out a magazine page with it, the functions on offer can make a marked difference to your finished document.

READING A PICTURE

Let's take the example of importing a picture into either *Write On!* or *That's Write* as in figure 1. Find **Load IMG** in the Edit menu and click on it. From the selector, find your .IMG files and highlight the one you want to import – a click on "OK" loads the picture and displays it in a box. You can now position this box where you want it and re-size it too. To do this, double click on the picture and a box appears. From here, you can adjust the size in dots per inch. The lower the number, the larger the picture, but only within the confines of the box itself.

The ease of importing a picture varies depending on which package you use. *1st Word Plus*, for example, will only import a picture if it was created in the same resolution as the one you are working in. This is why you get a message (figure 2) telling you that TIGER.IMG

cannot be opened when you load TEST.DOC in any other mode than high resolution.

There are numerous packages in the public domain that will convert images from one format to another, so contact your favourite supplier for more information.

The French word processor,

Figure 2: This message appears in 1st Word Plus v2.02 when you try to load an image that is in the wrong resolution.

Le Redacteur is one of the most flexible when it comes to handling pictures, adding .GEM, .PI1 and .PI2 to its armoury. Although it is a little awkward to use, the cropping and scaling facilities are very powerful for a word processing package. One interesting feature is the ability to mix text and pictures on the same line. In figure 3, the image has been placed so that some of the text is in the space between it and the left hand side of the page. This is because the program treats the picture as a line of text, so you can actually place your text over a grey tone picture to give a watermark effect if you wish.

One feature you won't find in a word processor is the ability to wrap your text around an image, but using tabs and spaces this effect can be achieved with *Le Redacteur*.

WORDS AND PICTURES

Using a word processor's graphics functions may not the best way of incorporating words and pictures, but it's ideal for adding a small
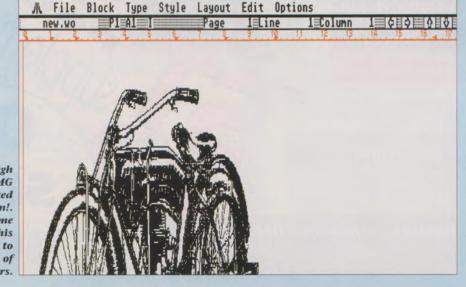
Figure 1: A high resolution .IMG picture imported into Write On!. With some modification, this can be used to enhance one of your letters.
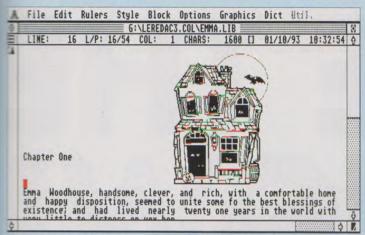
Figure 3: Le Redacteur treats a graphic as a single line of text – you can place your real text anywhere around it.

illustration or logo into primarily text-based work. A simple newsletter can be created with reasonable results, but anything more complicated will require the power of a decent desktop publishing program. Even then, your word processor can still be used to create the text files for importing into your DTP document...

FLEXTEXT

A package like *Calligrapher Gold* has a lot of DTP-like functions that give the flexibility needed for illustrating a book or thesis. Most word processors will handle .IMG and .PI1/2/3 files, but *Calligrapher* goes one step further by importing .GEM pictures as well. If you have the *Gold* version, there is an option called *FlexText*, which lets you create stylish words for headings and illustrations.

Using FlexText, you can create fancy lettering and save it as a picture (.GEM) file...
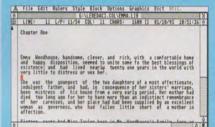
... and then import the finished picture into your work to give a different effect!

STEP BY STEP
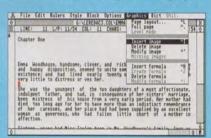
TEXT FLOW
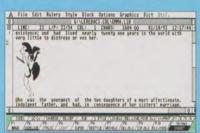
Most word processors do not allow text to be flowed around a picture. However, *Le Redacteur* treats a graphic in much the same way as a line of text, allowing you to create the effect of text flow with just a little effort. Here's how to do it:

1 *Place the red cursor where you'd like the picture to be inserted. In this case, it's between the first and second paragraph on the page.*
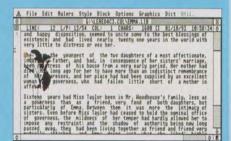
2 *Select "Insert Image" from the Graphics menu and then import a suitable picture. The one used in this example is from MiGraph's ScanArt collection.*

3 *Using the "Modify Image" option, reduce the size of the picture as necessary and delete the blank lines left under the picture. This was reduced by 50% horizontally and vertically.*

4 *Place the cursor one line below the start of the picture and delete the blank line with the <Delete> key. If you start from the wrong place, the program will warn that you are about to delete the picture.*

5 *Place the cursor at the start of the first line and, using tabs and spaces, move the text out until it clears the picture. Carry on from the top until all lines are away from the image.*

6 *When finished, the effect is quite pleasing. Leaving the foot of the dancer to disappear into the next line of text adds to the effect. As always, experimenting leads to interesting results...*

Ofir Gal continues to build up his slide show program...

SEE THE SHOW!

When we left the slide show program last month, each image file name for the slide show had to be manually entered and the number of files was fixed to three. Not much of slide show! Ideally, a slide show should scan a folder and automatically load and display all the image files it finds in that folder. So on with the show...

FILE SEARCH

BASIC provides a simple utility call that searches for a given file name. *FEXISTS* takes a single parameter which is a text string describing the file. The function returns a non-zero value if the file is found, or zero if not. The example program in listing 1 searches for the file *HBASIC.PRG* in the folder called "BASIC" on drive A.

```
Listing 1

'search for a file

fi$="A:\BASIC\HBASIC.PRG

IF FEXISTS(fi$) THEN
  PRINT "File exists"
ELSE
  PRINT "File not found"
END IF
```

This is a very convenient way of finding a file, but the down side is that you have to know which file you are after. In an automatic slide show, a more efficient method would find this for you. Unfortunately, BASIC does not directly provide such a facility. Instead, the program must call TOS, or GEMDOS to be more precise, to get a full list of files in a given directory.

FILE SEARCH – TAKE 2...

The GEMDOS equivalent of *FEXISTS* is *FNfsfirst*. This call takes two parameters instead of one: the filename as before followed by the file attributes. The latter are used to

TABLE 1

Attribute	Value	Meaning
Read only	1	Write protected
Hidden	2	Hidden file
System	4	System file
Volume label	8	Disk label
Folder	16	Folder name – not a file
Archive bit	32	File has not been backed up

describe the type of disk item you are after. Table 1 lists all the possible file attributes and their numerical values as used by GEMDOS.

The trick with file attributes is to simply add up all the file attributes you are interested in. In our case, the slide show is not concerned with folders or disk labels. So, the required file attribute will be 1+2+4+32 = 39. Listing 2 does the same thing as the previous example but this time it uses *FNfsfirst*. Note that unlike *FEXISTS*, *FNfsfirst* returns 0 if the file is found or a GEMDOS error number otherwise. For instance, a value of -33 means that the file was not found, while -34 means that the folder does not exist. A full list of GEMDOS error numbers was published in issue 18 and can also be found in various publications, including the *HiSoft BASIC* manual.

```
Listing 2

'search for a file using GEMDOS

DEFINT a-z
LIBRARY "gemdos"

fi$="A:\BASIC\HBASIC.PRG"

f=FNfsfirst(fi$,39)
IF f=0 THEN
  PRINT "File exists"
ELSEIF f=-33 THEN
  PRINT "File not found"
ELSEIF f=-34 THEN
  PRINT "Path not found"
ELSE
  PRINT "GEMDOS error"+STR$(f)
END IF
```

FILE SEARCH – TAKE 3...

But that's not all GEMDOS can do. *FNfsfirst* allows you to use wildcards to search for less specific items. If you replace the file name definition with A:\BASIC*.PRG, it will look for any

file that has the extension .PRG. The actual file name that GEMDOS finds is placed in a special memory area called the **Disk Transfer Address** or DTA for short. The file name is not stored as a BASIC string but as a sequence of bytes. Each byte represents one character in the file name and this can be of any length up to 12 characters including the file extension. For this reason a byte with a zero value is used to terminate the string. This is normally referred to as a "null terminated string". The maximum length of such a string in this case would be 12 characters + null byte = 13 bytes.

The best way to handle this is via a BASIC function that takes the memory address of the DTA and steps through the bytes, constructing the string. The DTA size is 44 bytes and the file name starts at byte 30. Listing 3 shows how such a function works.

The DTA memory address now needs to be obtained. This is done via another GEMDOS call – *FNfgetdta&* which takes no parameters and simply returns the DTA address. The location of the DTA does not change while the program is running, so one call of *FNfgetdta&* at the beginning of a program is sufficient. Listing 4 shows how to use *FNfgetdta&* and *FNget_fname$* together with *FNfsfirst*.

```
Listing 3

'retrieve file name from DTA


DEF FNget_fname$(VAL dta&)
STATIC a$,i,char
a$=""                          'initialise a$
FOR i=30 TO 43
  char=PEEKB(dta&+i)           'read dta
  IF char=0 THEN EXIT FOR      'if 0 then end of string
  a$=a$+CHR$(char)             'add character to a$
NEXT i
FNget_fname$=a$
END DEF
```

```
Listing 4

'using the DTA with FNfsfirst

DEFINT a-z
LIBRARY "gemdos"

'insert the function definition
'from listing 3 here

dta&=FNfgetdta&

fi$="A:\BASIC\*.BAS"

f=FNfsfirst(fi$,39)
IF f=0 THEN
   PRINT "File found"
   PRINT FNget_fname$(dta&)
ELSEIF f=-33 THEN
   PRINT "File not found"
ELSEIF f=-34 THEN
   PRINT "Path not found"
ELSE
   PRINT "GEMDOS error"+STR$(f)
END IF
```

The program will look for the first
*.BAS file on the disk; in other words,
it will find the first file with a .BAS
extension.

MY PRIVATE DTA

Using the DTA directly is not
recommended. Instead, GEMDOS
provides a call to create a temporary
DTA for program use – *fsetdta* takes a
single parameter, namely the new
address for the DTA. This may seem
confusing and pointless, but in the
long run it prevents data corruption
and crashes. Setting up a private DTA
is achieved by creating a small array
for the new DTA, obtaining its
address via *VARPTR* and passing this
to GEMDOS. Before the program
ends, it must restore the original
DTA. The code in listing 5 demon-
strates how this is done – note that
BASIC arrays contain two bytes per
element and so you only need an
array with 22 elements.

FIND NEXT

The program is now capable of locat-
ing one file without knowing its full
name by simply specifying the file
type. This is ideal for a slide show
where the file mask could be *.PI1 for
low resolution Degas files. But a slide
show with a single slide is not very
entertaining so what is needed now
is a way of finding all the files that
match the *.PI1 mask. Needless to
say, there is a GEMDOS call to do the
job – *FNfsnext*. This requires no
parameters and can only be used
after calling *FNfsfirst*.

The return value of *FNfsnext* is 0, if
it is successful, or -49 which stands
for the GEMDOS error "No More
Files". A simple loop can be
constructed to build a list of all the
files that match the mask. This is
shown in Listing 6 where the file
names are simply displayed on
screen. This only shows the
applicable portion of the program, so
don't forget to include all the
relevant code and DTA setup
information from listing 5.

BACK TO THE SLIDE SHOW

You can now merge the code from
last month with this new file
search routine, effectively producing
an automatic slide show. The
sub-routine *load* can be simplified
since it does not need to check
whether the file is there. Listing 7
shows the relevant sections of code
necessary to produce a fully working
slide show. The full program is also
included on the cover disk for your
reference.

```
Listing 6

'obtain a full list of files

fi$=A:\*.PI1

f=FNfsfirst(fi$,39)
IF f=0 THEN
   PRINT FNget_fname$(mydta&)
   DO
        f=FNfsnext
        IF f=0 THEN PRINT FNget_fname$(mydta&)
   LOOP UNTIL f<>0
END IF
```

```
Listing 5

'startup code for setting up a private DTA

DEFINT a-z
LIBRARY "gemdos"

DIM mydta(21)                'define an array with 22 elements
mydta&=VARPTR(mydta(0))      'obtain memory address of array

olddta&=FNfgetdta&           'obtain GEMDOS DTA

fsetdta mydta&               'set new DTA

'program goes here...

'restore DTA before quitting

fsetdta olddta&              'restore DTA as before
```

```
Listing 7

SUB load(VAL fi$)
SHARED image_pal(),res
STATIC fhandle,dum&,dum
fhandle=FNfopen(fi$,2)
dum&=FNfread&(fhandle,2,VARPTR(res))
IF res=FNgetrez THEN
   dum&=FNfread&(fhandle,32,VARPTR(image_pal(0)))
   dum&=FNfread&(fhandle,32000,FNlogbase&)
ELSE
   PRINT "This file does not match current screen resolution"
END IF
dum=FNfclose(fhandle)
junk=INP(2)                  'wait for user to hit the keyboard
END SUB

INPUT path$                  'allow user to enter path
fi$=path$+"*.PI1"

f=FNfsfirst(fi$,39)
IF f=0 THEN
   fi$=path$+FNget_fname$(mydta&)
   load fi$
   xsetpalette image_pal(),sys_pal()
   DO
        f=FNfsnext
        IF f=0 THEN
                fi$=path$+FNget_fname$(mydta&)
                load fi$
                xsetpalette image_pal(),sys_pal()
   LOOP UNTIL f<>0
END IF

xsetpalette sys_pal(),image_pal()
```


*Just
imagine
– your
slideshow
program
can have a
selection of
your
favourite
pics...*

*... flashing past
before your
very eyes!*

PRINT 'EM ALL!

Jon Ellis continues with his tutorials for the powerful language of C...

Welcome to another install-ment of the *Prospero C* tutorial. In last month's issue we looked at a file deletion program that could process filenames contain-ing wildcards. We parted with a challenge – to alter the program so that it prints the name and size of each file, and adds up the total number of bytes in all the files.

This is a fairly straightforward task – replace the lines of code that do the file deletion with something to print out the information about each file. This might look something like:

```
printf("File %s (%ld bytes long)\n",dir_info.filename,dir_info.length);
```

The **%ld** in the **printf()** line tells **printf()** that the file length is a "long" integer rather than the normal "int". If you leave the "l" out, there will be no complaint from the compiler, but the printed output will not be what you expect, because **printf()** is trying to process a "long" as an "int".

This is an example of a run-time error, or bug, which can be very difficult to spot. **printf()** is quite a complicated library function, and it's well worth spending some time reading through its entry in the

Prospero C manual. To complete the modifications to the program, we simply add an extra long integer variable to the declaration list at the start of **main()**. The variable should be initialised to 0 before the start of the search for files. As each file is located, its length can be added to the total. At the end of the program, the total can be printed using **printf()**. You'll find a suitably modified version of the listing on the cover disk as *ANSWER.C*.

STRIDING ON!

Our next steps in C are going to be to delve deeper into string handling and pointers, subjects that we touched on last time. To help us, we'll develop a more evolved version of our multiple deleting program that actually does something useful!

As a starting point, look at the listing (on the cover disk as *DIRLIST.C*). The program receives a path specification from the user, and then prints the name of every folder on that path, including folders within folders. To see the program in action, load *DIRLIST.C* into the C workbench, then compile and link it with the libraries. Run the program, and input:

C: (or A: if you have no hard disk)

when prompted.

There are quite a few new things

NEW LIBRARY FUNCTIONS

The new library functions introduced in this tutorial are all part of the ANSI string handling suite. To use this functions in your programs, you'll need to #include <string.h>.

strupr(text): This function takes in a null-terminated string, and converts any lower-case letters to upper-case. The modifications are written back to the input string. The function returns a point-er to the start of the string.

strcpy(to,from): strcpy() is used to copy a string from one vari-able to another. Notice that the first input to the function is the destination for the copy – perhaps not what you might expect. The function does not check that the destination area is big enough to take the string. It's up to you to make sure this is always true – if it isn't, your program will probably crash... The function returns a pointer to the start of the destination area.

strcat(to,addition): This function is used to add a copy of one string onto the end of another. As in strcpy(), the first argument to the function is the destination for the copy. Once again, it's your responsibility that the destination array is big enough to hold the additional characters. The function returns a pointer to the start of the destination area.

strlen(string): This function is used to determine the length of a string. The result excludes the null character used to terminate the string. Since the numbering of array elements in C starts from 0, you should be able to work out that if:

```
len = strlen(text);
```

then text[len] will always be "\0" for any valid C string.

strcmp(string1,string2): strcmp() compares the two strings sup-plied as input. If they are absolutely identical, the function returns 0. A non-zero return indicates a difference.

in this listing, so we'll cover the ground in two goes. Much of the new material is to do with strings and pointers, which you can read about in this tutorial. The remaining items will be dealt with next time.

You'll remember from the second tutorial that in C a string is simply an array of characters, with a zero (or NULL) byte used to mark the end of the string. The ANSI standard C library provides a large suite of functions that manipulate strings, and this program uses most of the common ones – more details are in the "New Library Functions" box.

POINTING THE WAY FORWARD

Most C programs that do any sort of string handling use a type of variable called a character pointer. We mentioned pointers in the last column as a method that C uses to pass bulky variables from one

POINTERS AND HOW TO USE THEM

Creating a pointer variable in C is very easy. The variable declaration contains the type of object that our variable will point to, an asterisk to signal that the variable is going to be a pointer, and the name of the variable.

```
char *name;          /* Declare a pointer to a character */
int *total_addr;     /* Declare a pointer to an integer */
```

The type of the object that a pointer points to is important. The compiler will complain if you try to process an integer using a character pointer, or indeed any other sort of pointer except an int pointer!

Creating a pointer is only the start. Before we can do anything useful with it, we must give it a value. The value of a pointer must be an address (remember, pointers tell you where something is, not what its value is). You've already come across the C way to find the address of a variable: the variable name is prefixed with a "&" character. Obviously, it's no good knowing where data is if you can't get at it. C provides a simple way to do this too. If "p" is a pointer, then "*p" is the value of the item that it points to.

As usual, writing this out in words makes it seem much more complicated. Here's a simple example:

```
int total;        /* An integer variable */
int *iptr;        /* A pointer to an integer */

total = 5;
iptr = &total;    /* Point at the variable "total" */

printf("The value of total is %d\n",*iptr);
```

will print out the value 5, as you might expect. As well as reading data out using the asterisk operator, we can also use it to change the value of variables. Using the example above,

```
*iptr = 77;
```

will put 77 into the int that "iptr" points to. In other words, it changes the value of "total".

```
printf("The value of total is %d\n",total);
```

will now produce 77. Of course, this example is rather contrived: we could have just written

```
total = 77;
```

and got the same result! However, the power of pointers lies in their flexibility. There are many programming problems which are far easier to solve using pointers rather than any other method. You'll come across some of these in later tutorials.

---

function to another. A pointer contains information about where to find data, rather than containing the data itself. More details on pointers can be found in the two boxes.

Armed with this new-found knowledge, you should be able to figure out most of what the get_dirs() function is doing to process folder names. Here are two tips that may help. First, you already know that the backslash "\" is used in C to introduce untypable characters like new-line (\n) and tab (\t). To actually put a backslash character into a C program, you have to type it twice: \\. Just as before, the two characters are compiled into one, so only one backslash is actually produced.

Secondly, on the ST's disks, each folder automatically contains two items with the filenames '.' and '..'. These are used by GEMDOS to

manage its folder system. They are always there. Our disk searching functions **findfirst()** and **findnext()** will come across these odd objects, so the program includes code (the two **strcmp()** calls) to ignore them.

THE FINAL BIT...

Can you use your knowledge of pointers and strings to write an equivalent of the **strcat()** library function? As a hint, use **strlen()** to find the end of the destination string, and then use **strcpy()** to add on the second string.

In this tutorial you've learned some more about pointers and how to use them. You've also been introduced to some of the ANSI standard string library functions. In the next one, we'll finish looking at the folder-listing program.

POINTER MATHEMATICS

You've seen how to create and initialise pointers, and how to use them to read data and change it. The last major operation you can do with pointers is to move them around. This is useful for dealing with arrays, and especially for processing strings.
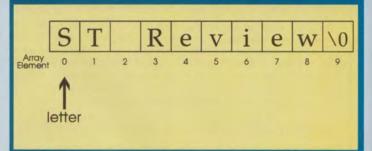
Let's look at an example:

```
char line[64];       /* A string with room for 63 characters */
char *letter;        /* A pointer to a single character */

strcpy(line,"ST Review");   /* Put some text into "line" */
letter = &line[0];          /* Set pointer to start of the string */
```

Those of you with particularly good memories may remember from last time that there is a shorthand way of writing &line[0], and that is simply "line". So the last line of code could have been:

```
letter = line;   /* Set pointer to start of the string */
```
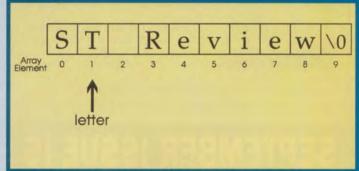
Most experienced C programmers will use this latter form. Since "letter" now points to the start of the string, *letter is "S":

We can move along the string by adding to the pointer value:

```
letter = letter + 1;       /* Move pointer along 1 character */
```

Now *letter is "T":

Easy isn't it? As you might be able to guess, we can move backwards along a string by subtracting from the pointer's value. Obviously, we don't have to creep along the string one character at a time. The code:
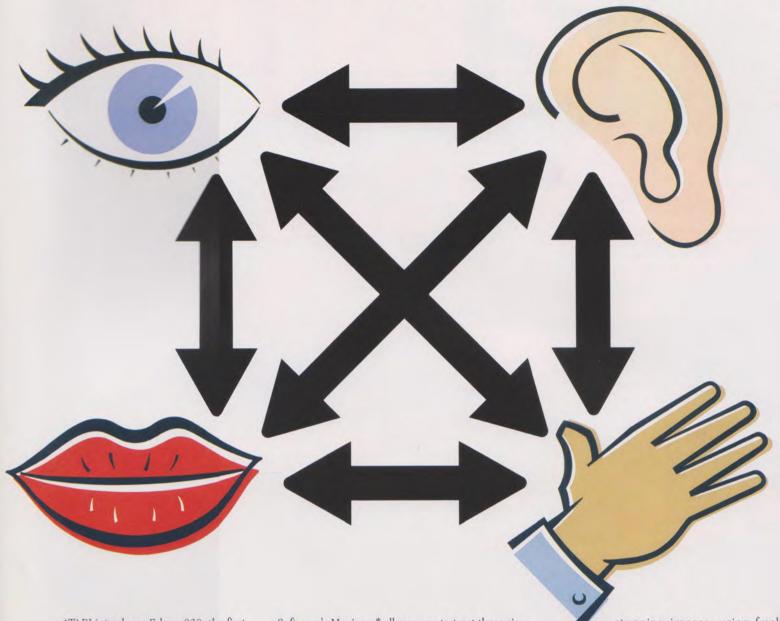
```
letter = line + 4;
```

sets our pointer to the fifth character in the array, "e" (remember, array elements are numbered from 0). There is another way of writing this which has the same effect:

```
letter = &line[4];
```

A final word of warning though – there's nothing to stop you running a pointer off one end of the string or another. Nothing will happen until you try to read from or change the character that the pointer happens to address. Since this is outside your array, it could be anything – a vital part of your program, or something important to the system and so on. In short, this is a good way to make your programs crash!

If you understand this, you understand the Falcon.

ATARI introduces Falcon 030, the first ever micro computer which instantly communicates with all your current and future audio-video equipment. Now, TV, Monitor, HiFi, CD, CDV, R-DAT, DCC, VHS, telephone, synthetizer, photo CD, camcorder, printer, modem, ... communicate with each other, allowing you to get the most out of each piece of equipment. A true technological revolution, Falcon 030 is operated by a 68030 processor working in parallel with a DSP, which is able to treat digital data at a very high speed. **Falcon Audio, the universe of Direct to Disk:** Falcon 030** offers, as standard, "Direct-to-Disk" recording, from a microphone (voice or instrumentation), a Walkman or a HiFi, via a simple stereo plug and also through its MIDI interface. Compo

Software's Musicom* allows you to treat these signals at better than CD quality: equalizer, Digital Delay (echo), harmonizer, flanger or even karaoke. **Falcon Video, manipulating images:** Falcon 030 can be connected to almost any

FALCON 030
ЉATARI

video source. With OverScan's Overlay* and Genlock* you can add titles, animations, sound to your videos and generate presentations combining a slide show with sound. **Falcon Graphic, a choice of 65,536 colours per pixel:** With Hisoft's True Paint*, you can produce

stunning images, using freehand drawing, lines, shapes, patterns, perspective, colours, and even create animations which can be stored on video. **Falcon Photo, a personal computer studio:** Thanks to Studio Photo* from Euro-Soft, the Falcon 030 treats digital photos in all formats, including Kodak CD, allowing special effects and retouching. **Falcon Software:** Falcon 030 already benefits from a wide range of innovative software and now, using Falcon Speed* from Sack Electronics you can run MS-DOS programs on your Falcon 030. For more information write to: ATARI Corp. Ltd, Railway Terrace SLOUGH - BERKSHIRE·ENGLAND SL2 5BZ. Software by Compo, Euro-Soft, OverScan Sack Tel.: 0480 891819, by Hisoft Tel.: 0525 718181.

Now, all that communicates communicates.

Comms

So you want to get onto the local bulletin board? Graeme Rutt gives you the low-down on dialling out...

COMMS COACHING

After last month's fast blast through the more common Hayes commands, it's time to look at how to dial out!

In its most basic form **ATD** is a simple beast. For instance, to telephone the CIX BBS, you would type ATD0813901255. So, why is there a "Dialler Modifier" box-out full of the weird and arcane such as "hookflash", "reverse mode" and the like? As I mentioned last month, a lot of comms runs to the esoteric, and dialling up other modems can certainly be that.

So how and why are these modifiers used? All are typed immediately after **ATD** on the same line. They are acted on in order, which usually means sending them before the telephone number.

GETTING THE PULSE...

P and **T** allow for the two different types of dialling available on the UK telephone network; pulse and tone. ATDP[telephone number] uses the first and ATDT[telephone number] uses the second.

Along with tone dialling, Mercury is another recent addition to the telephone system. To access this, you need to ring 131, followed by an ID code and then the telephone number. In modem terms this is equivalent to typing in ATD131,1234567890[telephone

number]. Note the use of the comma pause modifier – Mercury always needs a pause after the "131" to give it time to connect.

The **W**, **@** and **!** modifiers are of use to those of you dialling through private exchanges. **W** waits for a dial tone before continuing with the dial string, **@** waits for five seconds of silence before continuing and **!** sends a hookflash. A typical dial string would look something like: ATD@12345,9,W0123456789. This waits for 5 seconds of silence, dials in "12345" as an ID code, requests an outside line "9", waits for a dial tone and finally dials the number.

Using **;** as a modifier returns the user *immediately* back to command mode after dialling. This is often used for either dialling up non-modem services or on-line systems that expect some sort of ID code before connecting.

Finally, we come to the **R** modifier. This is only useful if you're calling up a modem that can only originate calls. Although your modem is actually doing the calling, it sends a carrier signal as if it was answering.

PLAIN AND SIMPLE

If you use your modem solely from home, the chances are that the

DIALLER MODIFIERS

Modifier	Explanation
0-9, A, B, C, D, #, *	telephone numbers/codes
P	pulse dialling
T	tone dialling
,	pause
!	hookflash
@	wait for silence
W	wait for dial tone
;	return to command state after dialling
R	reverse mode, for calling originate-only modems

standard **ATDT** and the pause modifier are all you'll ever need.

Most modems have a speaker which is useful for monitoring calls. The default mode (**ATM1**) leaves it on during dialling and then switches off once a connection is made, but there are three other modes: **ATM2** leaves your speaker on permanently and **ATM3** only switches the speaker on during connection – useful when continually re-dialling an engaged BBS as dialling is silent until the screech of the two carrier signals. **ATM0** switches the speaker off, perfect for the odd hours a lot of us comms types keep...

If switching the speaker off seems drastic then try the **ATLn** command. **n** is a number between 0 and 4 and

controls the volume, low to high respectively.

The last command this month breaks the usual rule of being preceded by **AT** and sends you back into command mode when you're on-line. After typing in +++, you should see an "OK" flash up on screen and you can then type in any Hayes command. To get back into data mode, type **ATO**.

Next month I'll be delving even deeper into your modem's capabilities by looking at its S-registers and at some commands that deal with error correction and data compression standards. If you have any problems with comms, you can get in touch with me by E-mailing sabbath@cix. compulink.co.uk.

In Connect, Mercury-users insert a line like this into the default dial options dialogue box...

```
Initialization Strings
Modem Initialization:
Atz~~(Ok)Ate10BV1M1&C1&D2&Q5S7=200~(Ok)
Modem Reset String:  (Sent when exiting FzDSTerm.)

Dial #1:  (INSERT puts in Number.)    Abort Dial:
Atdt131,1234567890m~                  ~(No Carrier)~()
Dial #2: - Different Area Code         Current US/Canadian Ar
Atdtm~                                 (___) xxx-xxxx
Hangup:                                After Baud Change:
~+++(Ok)Ath0&C1~(Ok)                   ~At~(Ok)
```

```
Autodialer Setup
Connect #1:            Connect #2:            Ringing:
Connect                Connect                Ringing
No Connection #1:      No Connection #2:      No Connection #3:
No Carrier             Busy                   Voice
Error (Abort Dial) #1: Error #2:              Error #3:
Error                  No Dial                Delay
```

```
Init: Baud Change   Free Format Fone #   Dial Delay: 2s    Char Delay: 0ms
Auto Change Baud    No Dial With DCD     CD Loss TOut: 2.5s  '{...}' TOut: 1.5s
                              Exit
```

```
                                    Dialing
Dialing Defaults
  Modem Reset:  ATZ|~~~~_____
         Init:  _____
     Dial. Seq. : ATDT131,1234567890#|_____
     Timeout   :  60_ sec

Logout Command (CoSHy)
_____

Fee Warning Bell at        Delay for Dialing
    *.[89]*_                50_ ms per character

                    [ OK ]   [ Cancel ]
```

... while Fizz-Dizz users change dial string 1 in the Initialisation box to something similar to this.

ALL ABOARD!

By popular request, ST Review introduces a series of Atari-specific bulletin boards. Mark Baines starts you on the path...

There's nothing worse than dialling onto a BBS and finding that it has less to offer for your Atari than a PC magazine! With this in mind, the next four or five issues will bring you an accurate list of all Atari-specific boards with brief details of each...

<FORTRESS>

INFO: *Dial-in: 081 244 9825 (Plumstead)*
Sysop: Kevin Osborne
Times: 24 hours
Speeds: Up to 14400 bps with V42bis
NeST 90:102/0
TurboNet 100:101/12
FidoNet 2:440/105
AtariNet 51:502/0

The <Fortress> is an extremely popular board with one of the most helpful and knowledgable sysops in the business. It provides one-stop comms, being very active on all four major networks, and is the London Host for NeST and AtariNet. Kevin provides an excellent service to new users, supplying all necessary software on a disk already set up to use. QWK off-line mail and Jekyll is supported.

As Kevin is the file-echo coordinator for TurboNet, the <Fortress>has one of the biggest and up-to-date file areas around. This board is highly recommended!

THE HOBBIT'S BURROW

INFO: *Dial-in: 0245 358667 (Chelmsford)*
Sysop: Andy Styles
Times: 24 hours
Speeds: Up to 14400 bps with V42bis
NeST 90:102/103
FidoNet 2:257/403
AtariNet 51:501/5
Mystic Net 69:200/108

An excellent *QuickBBS*-based board with a strong bias towards messages and quite a few files thrown in for good measure!

Particular message areas include *International Cooking, Dreams, Music, Games Help, Driving* and *Police Enquiry*.

Andy is a friendly sysop, helpful to all users especially new ones. He offers the *Space Empire Elite* on-line game, QWK off-line mail support via AMail and an on-line story. The Hobbit's Burrow is also in Mystic Net and VNet.

THE TAVERN BBS

INFO: *Dial-in: 081 445 6514 (London)*
Sysop: Paul Baker
Times: 24 hours
Speeds: Up to 14400 bps with V42bis
NeST 90:102/140
TurboNet 100:1011/0
FidoNet 2:440/108
AtariNet 51:502/100

The Tavern is a well established and popular board, and one of those taking all four of the major networks. Paul is well known for his helpfulness, especially when welcoming new users. There are no file download ratios and the board specialises in interesting small-sized files for download by lower speed users.

There is the usual QWK off-line mail support with prepacked packets available on request. The Tavern runs at 16MHz which should give faster compression of packets.

Subscribers can also have their own username giving them Internet EMail capability with access to the Usenet newsgroups as well. One stop comms indeed!

STATIC2

INFO: *Dial-in: 031 556 9734 (Edinburgh)*
Sysop: Kevin Norman
Times: 24 hours
Speeds: Up to 14400 bps with V42bis
NeST 90:105/0
TurboNet 100:106/0
FidoNet 2:259/29

STatic2 provides support for the three major networks (being the NeST and TurboNet hosts for Scotland) and takes an extensive list of message areas. The files area is large and includes Mac and Amiga software. There is the usual support for QWK off-line mail readers, Jekyll and many games including *Space Empire Elite*.

Kevin is a friendly and very helpful chap who will get new users up and running in no time.

<<<INTERNET>>>

INFO: *Dial-in: 0296 395935 (Aylesbury)*
Sysop: Ben Van Bokkem
Times: 24 hours
Speeds: Up to 14400 bps with V42bis
TurboNet 100:100/0

As the central hub for the whole TurboNet network, <<<InterNet>>> is at the forefront of new developments within TurboNet and the networks in general. All new software and updated versions are sure to be found here and the sysop is very knowledgable about all comms matters.

ASK THE EXPERTS

Once again, our panel of experts take on all-comers and win by a knockout!

ITALIAN CONNECTION

Surely at least one of you should be able to answer the question that intrigued me since the first time I put my hands on my Mega STE: How fast are the STs in terms of MIPS? I have asked this question for over a year, without an answer. Somebody say that a standard ST/STE is capable of performing about a quarter of a MIPS, some say about one MIPS – which is accurate?

Talking about speed, I'd be very grateful if you could answer a further pair of questions:

● Which IBM compatible hardware can be compared with the STs? Perhaps one equipped with an 80286 processor?

● How fast is the Falcon in comparison with a standard ST/STE?
Lorena Purrini, Trieste, Italy

It always concerns me when people ask questions like this because it is very dangerous to compare computers in this way. Much depends on what you want to do and what software you are running. For instance, ST Doodle running on a standard 8MHz STE has been seen to be more impressive than a similar program on a 386DX40 PC. But in answer to your question, the STE is rated at up to 2 MIPS (Million Instructions Per Second) at its fastest.

The same applies to your question about the PC. As the two computers are designed for different purposes, speeds vary depending on the application you are running. The PC was not designed to manipulate graphics in the same way as the ST, so it
is generally slower unless it has a fast graphics card. By the same token, the clock speed of the PC is faster than the ST, so a PC is faster when handling direct processor commands. On average, the standard 8MHz ST is roughly equivalent to a 386SX25 PC. Tony Kaye

WHERE'S MINI OFFICE?

I wish to enquire if you happen to know where I could obtain a copy of *Mini Office Graphics* and *Database* packages for the Atari 1040 STE, as I have tried numerous computer program outlets and branches of companies such as the likes of Dixons, within my local area and in Liverpool.

Also, do you know what format to use, and would it be possible to transfer graphs from the above program for inserting into a *1st Word*
Plus document. I use this program on a very regular basis and have a number of disks with data in its standard file format, some of which I shall need shortly for incorporation in a course of study which I am about to undertake at postgraduate level.
D P Jefferies, Runcorn, Cheshire

The Mini Office series, published by Europress Software, was discontinued some time ago.

There are, however, various options. KGraph is a commercial package that was given away on the cover of our sister magazine, ST User, in August 1993. This supports .PI2 and .PI3 formats, both of which can be converted to .IMG format via various PD utilities.

Another possibility is either Opus 2.2 or BStat, a pair of PD programs. The former saves in .GEM format, the latter as a .PI3. Again, these can be converted to .IMG with the relevant utilities.

KGraph is probably your best bet. A call to Database Direct on 051-357 2961 should be

---

SPEEDOGDOS AND TIMEWORKS

The article by Nial Grimes in the September issue of *ST Review* (page 15), indicates that *Timeworks Publisher 2* will work with *SpeedoGDOS* but requires some fiddling to get it to work.

I tried both *Timeworks Publisher* 1 and 2 with *FontGDOS* but had no success, so I am wary about *SpeedoGDOS*. Can someone please give a straightforward reply to the question: "Will *Timeworks Publisher* 1 and/or 2 work with *SpeedoGDOS*?". In the meantime I will stick with GDOS.
George Hogg, Londonderry, Northern Ireland

Could you please provide more information on how to set up *Timeworks DTP* to work with *SpeedoGDOS* on my Mega 4 STE? Despite following Nial Grimes' instructions faithfully, I cannot get either *Timeworks V2.01* or *V1.12* (*ST Review* coverdisk version) to run with it. When I run FONTWID.APP v2.02, I get a message saying: *found Speedo configuration, id 59 cannot match size.* If I go on to run PUBLISH.APP then it crashes in 'get_jfont' and gives up. I have also tried V1.12 where FONTWID runs satisfactorily, but *Timeworks* crashes with 'fatal font error'.
Graham Curtis, Derby, Derbyshire

Thanks for your letters and apologises for any confusion caused by the SpeedoGDOS feature. Most of the problems you mention are due to differences between version 2.00 and version 2.01 of the Timeworks package. The good news is that 2.01 can be persuaded to run with SpeedoGDOS and you'll find a complete description of the procedure below.

So, in direct reply to your question George: yes, Timeworks 2 will run with Speedo, although if you're using version 2.01 I wouldn't recommend buying it specifically for that purpose. A far better idea would be to wait for some Speedo specific packages to appear – and believe me they're not that far away! News of an enhanced version of Easy Text Professional (boasting fully scalable fonts and text rotation) has just reached my ears, and other software houses are bound to follow zzSoft's lead. Nial Grimes
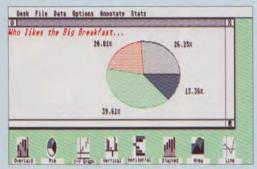
Timeworks and SpeedoGDOS – two into one can go!

NEW INSTALLATION PROCEDURE

Users of Timeworks DTP version 2.01 will have experienced some problems following September's step-by-step installation guide. Here's the solution:

1) Follow the first three steps in September's tutorial and just before you save the Outline Fonts settings, remove the Times 801 Bold Italic typeface.
2) Next, copy the appropriate ".SCR" and ".PUB" file for your printer from this month's cover disk to the PUBLISH folder. Rename the ".PUB" file, PUBLISH.WID and the ".SCR" file, SCREEN.WID. If your printer isn't named, choose files that match the output resolution. For example, LaserJet owners should use the DeskJet files, LC24-10 owners should use the BJ10 files and so on.
3) Now run *Publisher* and choose "Set Document Defaults" from the "Options" menu. As soon as the dialogue box appears, click the OK button and quit the program immediately. This process will create a PUBLISH.DEF file in your Timeworks folder.
4) Open the PUBLISH.DEF file with a text editor (*1st Word Plus* with WP mode switched off will do) and change the FONT_HIDING TRUE line to read FONT_HIDING FALSE. Save the file as ASCII.

Publisher 2 is now ready to run. Unfortunately, version 2.01 won't allow you to add your own fonts, but the width files supplied do provide a reasonable selection of point sizes...

A commercial graphing package – for the price of a back issue...

followed by another to a PD library for a .PI3 to .IMG converter... Vic Lennard

WHICH WORD?

I am writing to you on the subject of word processors. I have tried several different programs since acquiring my STE about a year ago and I have to say that I really have not been impressed with any of them except the one I am using now, namely *Word Writer*.

I found *1st Word Plus* far too "amateurish" in its application, and frankly *Write On* was just bizarre. Is there really no system screen font? (even Atari's standard boring one would do) or have I missed something? I have also just recently tried a demo of *Redacteur 3* from the ST club and I was baffled. Why do people have to try and cram so much into a word processor when all it does is slow down the system. Let's face it – the ST is no match for a PC when it comes to word processing.

So I come back to *Word Writer*. It is a product I have not seen advertised, though I notice my version 2 is copyrighted in 1986 and I have only been an ST owner for one year. It is only basic in its facilities but I have not found a "solid" processor with which to work with. It is a great undiscovered programme that has been sorely under-estimated? Or do magazines like yours (which I rate very highly) just not like it?

But (there had to be one!) I have a problem. I have to confess that my copy of *Word Writer 2* was given to me by a neighbour. I do not condone that sort of software copying generally, being a Steinberg user for one thing, and thus I am not writing

for sly "tips". But I would like to know the following:
1) Can I buy a copy of *Word Writer 2*?
2) Is it likely to have printer support for the Canon BJ10sx?
Steve Coe, Horsham, W Sussex

Just about everyone has a word processing package, irrespective of computer. The "best" package depends on what you get used to and exactly what you require; graphics, text-only and so on. While programs like Word for Windows and Word Perfect on the PC are certainly very powerful programs, only you can decide whether you need that power; if text is all you want to work with, then a straight-forward text editor will give you a simple solution.

In answer your questions, Word Writer 2 was given away with the October 1993 issue of our sister magazine Atari ST User (yes, another plug...) and the manual is available for £14.95. Contact the back issues department (051-357 2961) to get hold of your copy, which also has the order details for the manual.

Word Writer 2 does not have a printer driver for the Canon BJ10sx but, bearing in mind that the program only handles text, you should be able to run your printer in its Epson LQ850 emulation mode and set the codes within Word Writer 2 accordingly. Vic Lennard

WOBBLY WORD

I have been using the ST Review copy of *1st Word Plus*, from issue 5, since my original threw a wobbler, but find that it won't save to a blank disk. All the long files, which are already on other disks, work perfectly with the program, but when I

Word Writer – one man's meat...

try to save new files, I get an alert box which reads: "Unable to read or write file. See if the file or directory exists, or see if the disk is write protected or missing."

What do you think the problem is? The program or me? By the way, I've looked through the back issues dealing with *1st Word Plus* and I was surprised to see that the illustrations don't match the screens which appear in the program. Were they from a different version to the one given away with the *ST Review*? And can I get the manual for *1st Word Plus*? My original isn't very comprehensive and some pages are missing.
L Pickering-Cookes, Stockport, Greater Manchester

Assuming that the disk is formatted, the saving problem sounds like you may have saved defaults that point to a folder that does not exist. For instance, you may have created a folder called "work" in the past on one disk which does not exist on your current disk. If this is the case, check where the program is trying to save to and change it to the correct path.

The tutorial that appeared in the magazine at the time of the 1st Word Plus cover disk was based on the latest version 3.20 of the program.

The publishers of the program are the best people to approach with regards to obtaining a new manual although they may not supply the manual on its own. Call GST on 0480 496789 for more details. Tony Kaye

I WANT TO BE... A PROGRAMMER

First I would like to say congratulations on producing an excellent magazine – keep up the hard work.

I would like you to give me some advice on getting into a computing career. I have been interested in programming since the age of ten, starting with the old Spectrum. I started by using BASIC by copying listings from the Spectrum manual, such as games like *Hangman*. From that moment I've always wanted to program my own games.

After spending many a late night typing in what seemed to be endless lines of code and then trying to run the program, more often than not it wouldn't work. Unfortunately in those days, I had little knowledge of BASIC and would be unable to make the program run.

However I wasn't discouraged by my unsuccessful attempts. I was still determined that a computer programmer is what I will become.

At 15 I studied for a GCSE in Computer Studies for two years.

Unfortunately this did not improve my career chances in programming, because there was very little programming involved and the use of a BBC 32K computer was not exactly state of the art technology (I've seen more chips in a frying pan).

From there I went to Solihull College of Technology to study for a National diploma in Computer Studies which is a two year course. The Course covers different areas from Numeracy and Accounts to Quantitive methods of course programming in BASIC and COBOL.

I am now in my final year and so far scheduled to achieve an ND in Computer Studies. My knowledge of BASIC has greatly improved and I am able to write programs with hardly any help and solve most of my programming errors.

When programming in BASIC on a PC (great improvement on a BBC) at college, I can complete the program on my ST by saving the listing as ASCII and loading it into First BASIC. Apart from some of the incompatible commands between the two machines it seems to work well.

Could you help me with the next steps to take once I have finished college (June 1994), hopefully with an ND in Computer Studies. Is there some kind of training centre or course which teaches games programming? I would be really grateful if you could help a 17 year old student to fulfil his ambition of producing his own games.

If I should become one of the top programmers in the country due to your advice I would gladly buy you a Ferrari F40, or maybe you would prefer a copy of *Lemmings*.

I am sure your advice would help any other youngsters out there who also want to become programmers.
Mark Deffley, Yardley, Birmingham

We get many letters such as yours, Mark, but the thought of an F40 appeals to me. Joking aside, the programming game is not overflowing with money as perhaps it may have been at one time. Top programmers make a good living, but there aren't that many millionaires around...

If you have good ideas, you may get taken on by a software house, so the best thing to do is to send samples of your work to as many as you can, following up with letters. In the meantime, practice your skills and produce as many ideas as you can, possibly releasing them into the public domain. Try to get other people's opinion of what you do by giving them copies of your latest masterpiece. Note their views and improve the programs accordingly.

If this advice is successful, just open a numbered Swiss Bank account and send me the details! Tony Kaye

Your letters – my replies! If you want to express a point of view, just drop me, Vic Lennard, a line and you may find £25 winging its way to you...
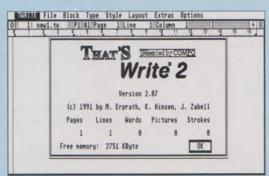
LETTERS

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; 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.

I KNOW THAT MAN!

With reference to the picture at the top of the review of the "Le'ST Get Serious Show" on page seven of issue 18 of *Atari ST Review*, I thought that you might like to note the following facts about the person in the middle of the picture wearing a plain blue shirt and jeans with something under his arm:

● He owns a 520 STFM, upgraded to 2.5Mb, with an external floppy drive and a Philips CM8833-II monitor. He also owns a Mega 4 STE with an Atari SM144 monitor, connected to an HP Deskjet 500.
● He uses his computers for games, graphics, music, word processing, databases, spreadsheets and DTP.
● He was at the 1993 London Atari Show on Sunday 26th September.
● He has been a reader and subscriber of *Atari ST Review* since issue 1.

I know – I am that man! Keep up the good work with the magazine.
Chris Odell, St. Albans, Herts

Nice one Chris! It's a shame you didn't introduce yourself at the London Atari Show, but there will always be another chance...

FASTER FONTS

Tony Kaye, in his brief run-down of word processors in the "Born Yesterday" section of October's *ST Review*, described *That's Write*'s printed output as slow. This is true if you use the bitmap fonts, but one of *That's Write*'s unique features is that you can use the printer's own fonts, saving time when you don't want the fancy ones.

If you look in the folder of printer fonts, those beginning with "X" like XPICA.FNT are "pseudo" fonts that instruct the printer to use its in-built fonts. This letter is written

with *That's Write* and printed using the Star LC10's Pica font to make use of proportional spacing, but *That's Write* or *Write On* will produce fixed space Pica and Elite as supplied.
Alan Kennedy, London

We tend to forget that many of today's printers have quite a sophisticated set of in-built fonts and that these are more than sufficient for everyday letter writing and printouts.

Also, don't forget that a print spooler can speed up printing tremendously, as can one of the public domain patches for the ST's parallel port.

I WANT TIMEWORKS!

When your magazine first came out I was the owner of a basic Atari 520 STFM. Unfortunately, I was unable to run any of your cover disks so I rarely bought *ST Review*. Recently, I have upgraded my disk drive to a double-sided model and my computer to 1Mb.

I now have two excellent, fully working coverdisk packages. The first – *Prospero C* – I bought last month and the second – *Write On* – I ordered through your back issues service. Unfortunately, I have searched high and low for a copy of *ST Review* with *Timeworks* on it. I think that this is one of the best packages for the ST and would be very grateful if you could tell me where I could purchase the above issue.

I look forward to buying your magazine in the future.
Gwynfor Rowlands, Tyngongl, Gwynedd

Nice to know that we've converted you to a double-sided disk drive. ST Review's cover disks have never supported single-sided drives because these had already ceased to be included in new STs by the

time our mag appeared.

As for Timeworks, I'm afraid I can't help you. That particular issue sold out quicker than a Madonna concert, but there is some good news. As you've probably noticed from our "Next Month" page, we have a usable version of Timeworks 2 on the cover disk next month. Chances are that this copy will also sell out, so I'd advice you, and anyone else who wants to ensure that they get the Xmas issue, to place an order with your newsagent.

Alternatively, why not subscribe? There are some splendid offers on pages 52 and 53...

MORE MEMORY

Issue 18 (October) of *Atari ST Review* made me a little sick. Why? A week earlier I had ordered and taken delivery of a Marpet 4Mb RAM expansion from one of your excellent advertisers, costing £160, and then your offer appeared for the same item at a tantalisingly low price of just £99. Oh well, one has to be philosophical about these things. You win some, you loose some.

But let me say how superbly the upgrade works in my 1040STF (bought in December 1986). Life has really begun again with this four megabyte memory. I was a little nervous during installation, but after following instructions supplied scrupulously, the gorgeous four megs were all there.

Did I say I've fallen in love with my ST all over again? Well I should have. It has always worked well but now... wow! So many small niggles have disappeared and I never get the insufficient memory message. My *Tele Office* program now runs easily (there was never enough memory to view the fax without removing the desk accessory program), although I have had no problems sending or receiving faxes through my SupraFax Modem V.32 bis.

As for my Freeze Dried Terminal comms program, I now set aside a RAMdisk of one megabyte to which all my CompuServe or CIX downloads and text files are directed, allowing me to hang up immediately the download is completed. I then copy programs and text, off-line and

That's Write lets you use a printer's internal fonts.
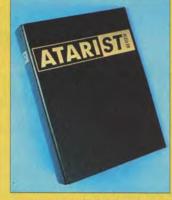
WHAT A BIND!

I have been a reader of your magazine since Numero Uno and a most entertaining, informative and cover disk-intensive ride it has been. So now I have a pile of magazines to which I make frequent reference, but with nowhere to park them.

I've searched through the back issues for a binder offer, but as far as I can see binders are reserved as optional freebies for regular subscribers, into which group, incidentally, I currently fall.

What are my chances of being able to buy three binders at a reasonable price?
R Chiswell, Edinburgh, Scotland

Now available for all – ST Review's very own binders!

We do listen to you, our readers. So Mr Chiswell, and the many others who have asked the same question, your chances of getting ST Review binders are very good indeed – they're now part of the ST Review Readers' Offers on page 68...

free of connect charges, to my disk drive. It's great!

Fellow ST'ers, don't wait – upgrade now!
Robert Shand, Seaford, East Sussex

ST Review has always endeavoured to give you the best of everything – editorial, cover disks and offers. Unfortunately, there will always be times when you buy something and then find that same item in an offer at a substantially reduced price. Such is life.

As for being pleased with your upgrade, you are preaching to the converted. I too have a 1040STF of a 1986 vintage, except that I bought one of the first Frontier XtraRAM boards, so upgrading to 2.5 megabytes. The difference was phenomenal, especially when using a one megabyte RAMdisk for temporarily saving files in the days when I didn't have a hard drive.

People doubt the point of upgrading the memory of their ST – until they actually do, at which point they wish that they'd taken the plunge years ago!

IN PRAISE OF PD

I have never written to praise a company, or a service before, but on Sunday the 20th September I sent an order to New Age PDL for a disk of printer utilities and it arrived in the post box within 48 hours.

I had purchased an Olivetti JP 350 WS printer and had stupidly disposed of my old Epson printer before I had realised that I had no suitable printer drivers.

The box contained a drivers disk (for *Windows*), a package giving me extra fonts (also for *Windows*) and a manual that gave instructions and codes to use the printer with DOS on a PC only.

Whilst I will concede that the majority of buyers will probably be PC owners, there were no details of how to connect the printer to different host systems other than the most general of information.

I was placed in a position similar to having to service a Lotus Esprit using a manual for a Robin Reliant – no insult intended to Robin drivers or owners!

New Age with their fast turn around literally saved the day and enabled me to get back into print. Their service was brilliant and I hope that you will allow this letter to be printed as my way of thanking them publicly.
D A Geoghegan, Sutton, Surrey

It's nice to know that a PD library whose products are featured in ST Review gives such exemplary service. ST Review dedicates a lot of space to public domain for this very reason.

As for your comments about the PC side of the printer, you'll find the same problem with modems. If software is included, it's invariably a DOS comms program...

FAT DISKS...

I read with great interest the article in issue 18 of *Atari ST Review* entitled "The Cheap End" by Andrew Wright

TOO MANY SYSTEMS

I understand that Gribnif is developing *Geneva*, an alternative to *MultiTOS*. While it is good to see a software house developing for Atari computers, I see problems in third parties having control over parts of the operating system. Initially Gibnif will be content to be faster, and more compatible than *MultiTOS*. However, marketing pressures based on being "outsiders" will force them to add features not present in *MultiTOS* at which point *Geneva* and *MultiTOS* will diverge and no longer have the same functionality. Other software developers will then be in a dilemma as to which to write for – *Geneva* or *MultiTOS*.

Whilst DOS (Dr. DOS and Microsoft DOS) could stand these pressures with its huge user base, I wonder if TOS can. In this particular case, I hope that the official product comes out tops.
Philip Bath, Worcester Park, Surrey

If you have a look at page 14, you'll see that we've just previewed Geneva. While the two products are similar, Geneva is more suited to being a task-switching program while MultiTOS allows you to set processor time priority for active applications. Whether this is "multi-tasking" depends on which definition you choose to follow – but MultiTOS and Geneva both allow a number of programs to co-exist and for each to take a proportion of the main processor's time.

I have to admit to sharing your concern, especially with a third product, Mag!X (see News story) about to appear. It's probably fair to say that one system will prevail – but whether it will be MultiTOS will probably depend on how quickly the software writers can speed up its operation.

Geneva – can the ST market stand the competition?

concerning Disk Formatters, especially *Fastcopy III*. As I have a copy of this, which was given away with issue 9, I decided to try a little experiment of my own. In his article, Andrew said that he formatted a disk to 86 tracks and 11 sectors. I followed his example and formatted three disks to these parameters and came up with the same. All three disks formatted "OK" with 969728 bytes free.

I then tried to install *Timeworks* on to these newly formatted disks and it did not want to know! But after re-formatting the disks to 84 tracks and 11 sectors, giving me 949248 bytes free on all the disks, I then installed *Timeworks* to these three disks suc-
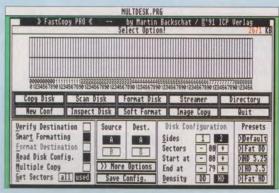
cessfully. I now have a working copy of *Timeworks* with plenty of room on the disks, especially the data disk.

Keep up the good work on *ST Review*, as I always look forward to the next issue. Also, is there a chance of increasing MIDI Monthly by a page or two as this is one of the sections that I look forward to most – music is a long term passion of mine. It was one of the reasons for purchasing an Atari with its built-in MIDI ports.
Roy Matthews, Bracknell, Berks

Be careful! Formatting disks to 84 tracks and 11 sectors is risky to say the least; if you were to try these disks on another ST, you'd probably find that they wouldn't run. The disk drives that are fitted into an ST are only guaranteed up to 80 tracks...

Some years ago, a well-known MIDI sequencer manufacturer used the 81st track for copy protection and another well-known supplier bundled said program with the ST. The latter then had to check every program with the machine it was being given away with to see that it ran...

How many tracks and sectors can you get on a slice of toast?