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ATARI ST USER

November 1992 • Issue 81

ADVERTISING
CONTACTS

ST makes the news

WITH lowest ever printer and software prices there's never been a better time to turn your ST into a printing press.

DTP experts this month show you how to join the publishing tycoons easily and cheaply with your ST.

A three-part desktop publishing special explains what software and hardware is needed to get your newsletters

See Page 18

into print, and how the professionals can now get top quality results from colour desktop publishing on the ST.



ATARI ST
November 1992
COLD REVENGE

Link STs - and battle against your friends

MINT
Multitask your ST - just like the Falcon!

Quick GIS - Online courses at the touch of a button
Shadow - Power check for Darwin's Madmen
And there's so much more!

Buyers' briefing

Hardware jargon explained - plus advice on getting the best bargains from your dealer. Page 26



Ideal storage?

We introduce you to Floptical, incorporating floppy disk convenience with hard disk capacity. Page 69

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Award winning innovative products from

Power Scanner



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- Real-time greyscale scanning
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Watch out for our regular software updates with many exciting new features, available only to registered users

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(No case cutting but must be small button version)

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LC24-200 colour	£289

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- Print speed of 6ppm
- Print superb quality text and graphics
- Ideal upgrade from dot-matrix

EPL 4000	£639
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EPL 4300

- High quality laser printer
- Print speed of 6ppm
- 1MB memory
- Expand to 6MB
- Adobe postscript option
- 100 sheet tray

EPL 4300	£799
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EPL 8100



- Prints speed of 10ppm
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- Ritech
- 27 font
- 250 sheet papertray
- Adobe postscript option
- Intelligent/remote emulation switching
- Parallel/serial interface
- Networking capabilities
- Can serve 2-3 users
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EPL 8100	£1349
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(132 Column printer)

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- Memory stores around 4 full pages of text
- Print text and graphics
- Optional sheet feeders
- Optional tractor feeder

LQ570	£289
LQ1070	£449

(132 column printer)

LQ100



- 24-pin
- 250 cps printspeed
- Space saving
- Scalable fonts
- Enhanced graphics
- 50 sheet A4 paper tray
- Dual position design
- Optional tractor feed
- LQ100 fits in anywhere!

LQ100	£209
-------------	------

Dot Matrix Cont.

LX100

- 9 pin
- Tractor feed
- Cut sheet feeder
- Cables
- Some of the LQ100 features

LX100	£189
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Monitor

Philips CM8833 MK2

- With cable
- On-site maintenance

CM8833 MK2	£199
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The Ultimate Cartridge

The Ultimate Cartridge will break into any Atari ST program. Whether you're a programmer, hacker, games player, or just curious about your Atari ST, The Ultimate Cartridge gives you the power that you need. Updates available with new software.

Features:

- Break into any program
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- Search memory
- Print memory
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- Disassemble to disk
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- Search for sprites
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- Load TOS programs
- Load and save graphic screens
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- Examine formats
- Format analyser
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- Directory editor
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- Play music
- Load and save music
- Search for soundtracker music
- Search for sound samples

The cartridge the ST has been waiting for

The Ultimate Cartridge	£25
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EUROPRESS
ENTERPRISE

For over six years Atari ST User has been the leading magazine for ST enthusiasts. As a key member of the Europress magazine group, Atari ST User promises to inform, educate and entertain its readers each month with the most dedicated coverage of the ST available.

Atari ST User • Amiga Computing • PC Today
Home Computing • Amiga Action • ST Action
• Force • Zap! • Sage Focus • GB Action
Super Action • PC Home

Dear Reader,

Welcome to the latest issue of Atari ST User, Britain's most informative magazine for every ST owner. This month we have two main themes – desktop publishing and hardware buying.

For anybody about to set up a DTP system or upgrade an existing one, our guide to software and hardware will be invaluable.

Highlighting certain needs – such as producing newsletters – it tells you what equipment is needed and the amount of memory your computer requires to do the job effectively.

And publishers who want colour will enjoy our in-depth feature about the packages which enable colour desktop publishing to be carried out on the ST, while

those planning to extend their ST in the next few months should turn to the hardware buyers' guide – a comprehensive list of most ST hardware.

Accompanying features detail what you need to look for when buying and teach you how to get a good deal from your local computer shop.

And, of course, there are all the normal regulars – a packed CoverDisk, the latest news, Aspects pages, public domain – in fact, everything you need to get the most from your ST.

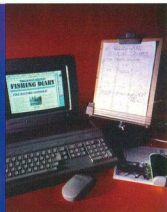
John Butters
Editor



COVER FEATURE
The software and hardware you need to turn your ST into a printing press, plus a look at colour DTP

ST makes the news

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midi and music ♦ emulation ♦ communication ♦ dtp ♦ business

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Win one of 20 copies of this latest music software from Microdeal

The CoverDisk



Try MINT - the multitasking operating system that Atari chose to develop for Falcon's MultiTOS

PLUS:

- **Cold Revenge** – a brilliant shoot-'em-up where you can link STs and battle against your friends
- **Balls** – an amazing puzzle game requiring forward planning and quick thinking
- **Misty** – 21 extensions for STOS. Fast graphics commands and extras for accessing disk drives and the keyboard
- **QuickCIS** – guaranteed to get you exploring the massive CompuServe on-line service in no time at all
- **And much, much more including Midi sequencer Sweet Sixteen**

The DISK starts on page 12

Protex is Unbeatable Value!

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"If you need a professional word processor
Protex is perfect" AMIGA COMPUTING

Amiga Format and ST Format Gold Awards

1Mb required (Amiga or ST). Free demo disk available.
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Prodata

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AMIGA COMPUTING

Database manager. 1Mb required (Amiga or ST)

Exfile

The magazine for Protex users. Packed with information to help you make the most of Protex including mail merge and macros, printing solutions and tutorials.

6 issues for £15

Announcing Lapcat...

a new easy-to-use transfer solution for sending files between different types of computer.

Lapcat was designed for the NC100, Amstrad's new Notepad Computer. To make file transfer easy something new was needed; the difficulties in sending files via the serial port are well known – the problems of different connectors, different types of leads, baud rates and the software at the other end. Lapcat is a combined software/hardware package that transfers files quickly via the parallel port.

The Lapcat software is built into the Amstrad NC100. The standard package consists of the Lapcat lead plus software on disk for the computer of your choice. This will enable you to transfer files between an NC100 and your chosen computer. Lapcat is not just for NC100 owners because you can buy software to transfer between any two of the supported computers. No technical knowledge is needed.

Lapcat prices: (Please state clearly the type of computer you are using – PC, Atari, Amiga).

With software for one computer **£40** Software for extra computers **£10** EACH



Arnor Ltd (STU), 611 Lincoln Road, Peterborough PE1 3HA. Tel: (0733) 68909 Fax (0733) 67299



Falcon lands in Britain

FALCON was officially launched in Britain at the European Computer Trade Show held in London recently, and first machines are due to be available to ST enthusiasts within weeks.

Atari predict 15,000 Falcons will be sold in the UK between now and the end of the year, and the launch price has been confirmed by the UK division as £499 for a one megabyte machine.

Another model will be sold with four megabytes of memory and a 65Mb hard disk drive. It will cost £899.

Before Falcon becomes a mass market

product next March, its case will be redesigned to give a totally new appearance. Atari then hope to sell a further 100,000 Falcons during 1993.

Meanwhile, rumours from well placed sources say that first Falcons – already available in mainland Europe – do not have a multitasking operating system or hard disk interface.

Atari's technical manager Alister Boden said: "developers' machines were not supplied with a multitasking system. It's my understanding that production models will be multitasking."



Falcon finally lands in London

Losses continue for Atari

ATARI Corporation made a loss of \$39.8 million in its second quarter of 1992, bringing the firm's losses for the first six months of the year to \$53.6 million.

Officials in California say the latest loss includes charges of \$34.1 million for the write-down of inventory and reorganisation of the business.

But second quarter sales also slumped, blamed by Atari on the weak economy and intense pressure in the video games market. They fell to \$23.3 million from \$49.2 million in the same period last year.

However, the manufacturer claim they have a strong balance sheet, more than \$60 million in cash, and will be shipping Falcon this winter.

Plenty from the club

THERE'S been plenty of activity at the ST Club (0602 410241) this month, with the firm announcing several new products.

Warp 9 is an accelerator for "dramatically" increasing the speed of screen output by intercepting TOS routines and handling them with much faster assembly language code.

Also included are a configurable mouse accelerator, Desktop pictures, custom screen fonts and files. Compatible with all programs it costs £24.95.

Identical to document processor Redacteur 3 but without certain modules is Redacteur Lite. The £79 package is supplied without the Sigma Equation Editor, AZtheque Database, Font Editor, Dictionary Editor, and French Dictionary.

Type Write Clip Art is a series of 300 dpi clip art. Containing 100 IMG files on four disks, each of the three sets are priced £8.95.

Family Curriculum drops under £300

AS PREDICTED in last month's ST User, Atari have slashed the cost of their two mass market STs, bringing the 1040STE's recommended price tag to under £300 and the 520STE to £249.99.

As part of the move to make their machines more competitive, Atari have also packed new software in their bundles. Family Curriculum II contains a 1040STE and several packages including Play & Learn, Junior School, and GCSE Revision.

A family module features Hyperpaint and ANI ST, a colour paint package and animation software, Music Maker II for music creation, programming language FiST Basic, and First Word wordprocessor, Cost, £299.99.

Discovery Xtra, the entry-level STE pack based around a

520STE, has also been revamped. Games sold alongside the computer are Final Fight, 9 Lives, Robot Monsters, and Sim City.

Starter programs sold alongside the machine are Neochrome, FiST Basic, and ST Tour, a tutorial to help newcomers become familiar with the ST's Desktop.

Two programs appear for the first time: wordprocessor First Word, and ANI ST, which enables users to animate their Neochrome pictures. Price, £249.99.



Price drop for STEs. Discovery Xtra now sells for £249.99

Publishers join forces

TIMESWORKS Publisher users can now join a user group dedicated to their desktop publishing software. Simply called Timesworks User Group, members receive a quarterly magazine, product updates and newsletters, contact with other users, advice, and software discounts.

Membership costs £23.50 each year, but the first 50 members will be offered their next subscription for £17.63. For more information call 0708 762861.

Subscribers hit by virus

THE magazine that assured its readers that it protected them from cover disk viruses last month distributed the Ghost virus to "several thousand" subscribers.

With the potential of wrecking valuable software, the most common ST virus lay low on a disk given away with October's issue of ST Format.

Discovered just before thousands of copies were due to be sent to Britain's newsgroups, publisher Future Publishing ordered the infected disk to be re-duplicated without the virus.

Subscribers were sent a letter of apology from the magazine's editor and a copy of a virus killer to clean their cover disk – it could not repair auto-booting programs such as games.

Virus expert and programmer of top virus killing software Ultimate Virus Killer, Richard Karsmakers says: "The Ghost virus is irritating and can actually cause quite a bit of damage.

Although it only manifests itself by inverting the vertical mouse movements, it does not check anything before it copies itself.

"This means that it will easily copy over a program that a game or something else needs to boot itself, resulting in the software in question ceasing to work."

ST Format publisher Stuart Anderton said: "Normally when copies of the magazine arrive back from the printer we check the cover disks for viruses before they are distributed.

"Due to a mistake this time that didn't happen, but we managed to catch it before it got out to the newsstands.

"We have tightened up to prevent it happening again."

Any ST Format subscriber with commercial software damaged because of the infected disk should telephone the magazine on 0225 442244.

Games swap shop opens

GAMES publishers can now revitalise their collection by swapping their unwanted titles with other ST owners through a new Berkshire firm.

All games sent must be originals and supplied with full documentation. It costs £16 to enrol and each exchange costs £2.75.

For more information write to The Software Exchange, PO Box 19, Newbury, Berkshire RG13 1XU. Telephone 0635 33680

C'est ADI

ADI FRENCH is the latest in a series of educational programs from Europress Software (0625 859333), makers of the top-selling Fun School.

Designed to cater for pupils in the first and second years in secondary education, two versions of the software are available, one for 11 to 12-year-olds and the other for 12 to 13s.

The space character ADI aims to entertain children as they learn with the aid of jokes, games, and rewards. Complying with national curriculum requirements the packages cost £25.99 each.

Monitor dips below £200

PHILIPS has cut the cost of their CM8833/II colour monitor to a new recommended price of £199.99.

The firm say the £30 drop is aimed as an incentive for ST users to upgrade from a shared television to a dedicated monitor.

The monitor can be bought from most computer retailers.

Big system for homes

AIMING to widen the appeal of OS/9, Cumana has slashed the price of their OS/9 68000 Professional Upgrade Kit for private ST users to £99.95 – business users pay £581.63.

The move enables people to buy OS/9 – an operating system used mainly in universities and institutes – at a fraction of the cost of buying similar software on other 68000 and PC machines.

It consists of Sculptor, a fourth generation applications development system offering a combination of fourth generation languages, database, dictionary, and utilities and Stylograph, a wordprocessor with mailmerge and spell checking facilities.

Also included are a powerful electronic spreadsheet called Dynacalc, a C compiler, a Basic interactive compiler, a screen editor, and 68000 assembler, debugger and linker.

John Simnett, Cumana's managing director, believes the package is so attractive that potential users of OS/9 might consider buying an ST in order to take advantage of the offer.

Cumana can be telephoned on 0483 503121.

Languages added to LCL courses

DEMAND for their existing ST courses means LCL are now planning to launch two new programs – Micro English and Micro German.

Micro English is for children over eight years old and takes them from simple spelling and punctuation up to understanding and appreciating literature.

Spelling is taught by pictures and "speak and spell" type programs and part of the software is based on games to keep pupils attracted to the package.

With the single European market almost here there has never been a more important time to learn a second language. Micro German takes beginners up to GCSE standard in spoken and written German.

Targetted at travellers, students, enthusiasts, and businessmen, it includes a program to generate business letters automatically.

Each package costs £24.99 and runs on any ST. LCL can be contacted on 0491 579345.



LCL speak about two new language courses for the ST

Central point eases buying and selling

A SERVICE just set up aims to help people wanting to buy or sell second-hand computer equipment by providing a central contact point.

National Second-hand Computer Exchange Service will take a list of hardware and software for sale and list it in their books – bought by people looking to buy products for 50p.

Buyers send money to the firm, sellers send equipment, and then the money and equipment are forwarded to their new owners. The cost for selling is £5 per system.

NSCES are at 8 Apsley Road, Great Yarmouth, Norfolk NR30 2HG. They ask for an sae from anyone requiring more information.

Logical driving

PEOPLE who play driving and flying games can now use Freewheel, a new steering wheel controller from Logic 3 (081-902 2211). Available before Christmas it will cost £29.99.

DO YOU KNOW SOMETHING WE DON'T?

"Although Atari ST User has scores of contacts in the ST world we need you. If you have some hot news ring John Butters on the news desk now on 0625 878888 or fax to 0625 879966. All information supplied will be treated in the strictest of confidence.



OS/9 within reach of private users

The 16 bit Breakthrough

At last from Microdeal, the first ever low cost 16 BIT sound sampler for the Atari ST range of computers. Never before has a 16 BIT sampler been available at such a low price. With the superb quality of 16 BIT technology, the completely new hardware cartridge contains 16 BIT Analog to Digital and Digital to Analog converters. The system can record sound from suitable equipment such as a portable cassette or C/D player or any 'Auxiliary' or 'Line' level source. The PHONO output provides a standard 'Line' level output for connection to a wide range of sound systems.

As you have come to expect from MICRODEAL and Audio Visual Research, the SOFTWARE provided with the package is packed with the latest features. REPLAY 16 has the latest generation EDITOR, DRUMBEAT, MIDIPLAY software, which have been radically updated and rewritten from the REPLAY PRO / STEREO packages. Just look at these features:

REPLAY 16 EDITOR

The EDITOR program provides the user with the ultimate in power and sophistication, packed with features which appear for the first time on ANY home computer. The fully DESKTOP and WINDOW styled editor allows individual samples to be loaded into the computer and edited separately. The program will allow the user to load samples of 8, 12 or 16 BIT formats and freely convert between them. Sampling rates up to 48KHz can be used and the program can re-synthesise samples to practically any other speed.

The REPLAY 16 editor supports many useful editing functions including Cut, Paste, Overlay, Clear, Fill, Hide, Insert, Loop join, Loop, Loop cross-fade, Repeat gap, Volume up / down, Fade in / out, Reverse, Sample, Play, Pre-sample, Monitor, Scope, Load sample (AVR, 85VX / IFF and AIFF), and Save sample.

The Editor can also perform more advanced forms of editing such as Sample FOURIER analysis using a 128 point 3D FFT. Special effects (including Echo, Multi echo, Flange, Reverb, Room and Hall), Digital Filtering (Band pass, Low pass, High pass, Band stop, Frequency boost). In addition to all these functions the REPLAY 16 editor now comes complete with a SAMPLE TRACK SEQUENCER, which allows you to Rearrange / Remix samples using a SAMPLE list style editor.

DRUMBEAT 16

DRUMBEAT 16 is a simple to use, full feature Drum machine with one main advantage over a dedicated unit, it is a FULLY re-configurable SAMPLING drum machine. DRUMBEAT 16 can load up to 30 samples into memory, to create a KIT. Samples can be up to 1 Meg in length, permitting the user to record sections of music and completely RE-MIX them. Patterns of BEATS are arranged on a grid style PATTERN editor. SONGS are then constructed from simple lists of patterns. Up to four SAMPLES can be played simultaneously, which turns DRUMBEAT 16 into a powerful sample sequencer. DRUMBEAT 16 has full MIDI support and can act as a MIDI SLAVE or MIDI MASTER and responds to MIDI START, STOP and SYNC commands.

MIDIPLAY 16

MIDIPLAY transforms your ST into a flexible Multivoice MIDI keyboard emulator. Samples can be assigned to any individual note or range of notes in a 9 octave range. MIDIPLAY 16 can play up to 4 VOICE / NOTE polyphonic with 3 levels of velocity sensitivity while in a single voice mode. An advanced sample loop point editor with AUTOLOOP (zero crossing) detection is also incorporated to ease loop point editing. Four separate keyboard layouts can be held in memory at any one time. MIDIPLAY 16 now has SWITCHABLE SOFTWARE FILTERING to reduce sample noise and improve sound quality.

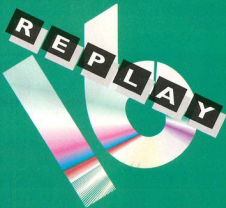
FULLY COMPATIBLE WITH BREAKTHRU FROM GAJITS

Not included with this package but fully compatible is BREAKTHRU, from Gajits - a professional quality 32 track midi sequencer with a difference. At the same time as it plays your midi instrument, BREAKTHRU will drive your REPLAY 16 cartridge to provide a four channel 16 Bit sample output! BREAKTHRU offers all the editing and arranging facilities you need to produce great music, including Gajits DIAMOND DRAG editing system.

Sample Dump Feature

As if all this was not enough - Replay 16's sample EDITOR supports MIDI SAMPLE DUMP as defined in version 1.0 of the INTERNATIONAL MIDI SPECIFICATION. This very powerful feature allows users of many rack or keyboard mounted samplers to transfer samples between themselves and REPLAY 16 for more advanced and simpler editing. These samples can be tested within REPLAY 16 before sending them back to the remote unit.

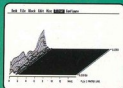
microdeal



The 16 bit sampler for the Atari



REPLAY 16 MAIN EDITOR



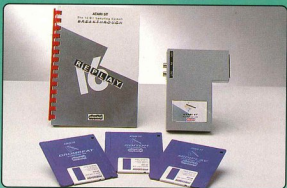
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DRUMBEAT SONG EDITOR



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THE CoverDisk



Balls

A puzzle game requiring forward planning and quick thinking

Programmed by: Simon Carter

Configuration: all STs, colour only

Filenames: X_BALLS.TOS - Self-extracting archive

This excellent and addictive game has you guiding a ball around the screen.

By using mirrors to deflect it, you must guide the ball in an effort to clear the screen of all orange pods. Once this is done, you must guide the ball to the exit hole to reach the next level.

Of course things aren't as easy as they sound and some clever planning and fast thinking is required, so that you don't run out of time.

There are also various tiles that can affect the ball. There are permanent mirrors, permanent walls, angle rotators, destroyable blocks and random angle turners, all of which can hinder or help you in your efforts in guiding the ball.

There are also various speed accelerators and decelerators and also teleports. The graphics are very well drawn to give the game a professional look to it. Sound is pretty good too with digitised effects throughout the game.

This program is shareware and if you register for the miniscule £5 you will be sent a levels editor for Balls, an extra set of levels, the STOS source code for the game and a couple of other programs, including a Kinetic Line Generator and a 3D Landscape Generator.



Guide the ball around the screen, using the deflector mirrors to knock out the orange blocks. Then guide the ball to the exit hole



This month, we have MiNT, a multitasking operating system extension for the ST, and for gamers there's a multi-computer starship combat game and a exclusive cheat routine to beef up your characters in Domark's RPG game, Shadowlands

MiNT

An operating system extension for the ST offering multitasking features

Programmed by: Eric R Smith

Configuration: all STs - all resolutions

Filenames: X_MINT.TOS - self-extracting archive

Now you can have multitasking capabilities on your ST with this extension to the ST's operating system written by Eric R Smith.

The interesting thing about MiNT, which, by the way stands for MiNT is Not TOS, is the fact that it is basically the roots behind the multitasking version of the XOS operating system that may be found on the new and exciting Falcon030 computer.

Apparently, Atari have licensed it and MiNT now stands for MiNT is Now TOS.

However, it should be noted that Atari's version of MiNT will probably display extra features to those in Eric's version.

MiNT is much like the GDOS program that installs itself

into memory and provides the user with a number of features that other programs can take advantage of.

It is not a shell program but there are a variety of shell programs in the public domain that take advantage of MiNT such as Bash, KSH and TCSH, as well as most other TOS shells.

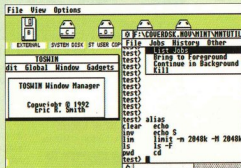
Once extracted, it should be copied to the Auto folder so that it is installed automatically at boot time.

It is quite complicated and you should read and, if possible, print the extensive documentation that is included with the MiNT files before installing it.

We have also included a collection of MiNT utilities, which includes Mintshell, which provide useful functions and these too have extensive documentation and should be read before use.

The file README.1ST gives details on how to make MiNT work, so load this file first and follow the information contained within it.

So what are you waiting for? Extract the files and get a taste of just what a multitasking system is like.



MiNT running a shell program, accessory and a bulletin board system all at the same time. The GEM Desktop is accessible even while all this is going on

CoverDisk Hotline

HOTLINE NUMBER 0625 859766,
2pm TO 5pm EVERY WEDNESDAY

If you have any other problems with the CoverDisk, our technical editor, Darren Evans, will be available on the Atari ST User CoverDisk Hotline. The Hotline number is only available within the times specified, so don't waste your time trying to ring outside of them..

Misty

21 new command extensions to the extremely popular Stos

Programmed by: Billy Allan and Colin Watt

Configuration: all STs with STOS, most extensions assume lo-res

Files: X_MISTY.TOS - self-extracting archive

STOS Basic is an extremely popular and powerful computer language, geared towards making games programming easier.

However, some of the commands within STOS are not exactly fast and could do with a little injection of speed.

The two programmers, both STOS

users, noticed this and have decided to release their hard work to all you STOS users out there.

The Misty extensions are released as shareware, which means if you use them in any of your programs, you must register with them.

You will receive lots more goodies and will be able to release any programs which incorporate any of the Misty extensions.

There are 21 new commands within the Misty collection, some are fast graphics commands for copying and testing various parts of the screen and there are also a few for accessing the disk drives and keyboard.

Sweet Sixteen

A brilliant value for money Midi sequencer

Sweet Sixteen is a Midi sequencer program for creating music with Midi instruments.

As with the majority of Midi sequencers, Sweet Sixteen is GEM-driven and as such is very easy to operate. Sweet Sixteen operates in three modes - Pattern, Song and Edit. Pattern modes is where all recording takes place.

You choose the Tempo, Time Signature and Groove. Groove is how you subdivide the quarter or eight note for various styles of music such as hip hop or funk. The recording controls are of the familiar "tape transport" style representing the play, record, rewind and fast forward of a normal tape recorder.

Song mode allows you to arrange the patterns that have been recorded in any order and length.

There are 32 positions where you can have different transpose values for the pattern and you can also mute any track. It is also possible to insert and delete various positions.

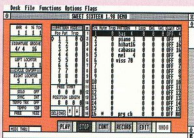
So what are you waiting for? Copy the archived file to a blank disk, extract it and make music.

Like most quality Midi sequencers, Sweet Sixteen is totally GEM-driven making it easy to use

Programmed by: Rolf Nilson

Configuration: all STs - med or hi-res (requires Midi instrument/s)

Files: X_SWEET.TOS - self-extracting archive



Single-sided service
Single-sided drive users wanting the contents on this month's disk on single-sided disks should send their original CoverDisk and a cheque for £1.50 - payable to Atari ST User - to SSD Service, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP.



Use the tactical display to get an overall picture of the battle area and the position of enemy ships



Blast your buddies out of the ether in this multi-player game of starship combat

Cold Revenge

An exciting multi-player, multi-computer game of starship combat

Programmed by: Warren L Greene.

Configuration: all STs - lo-res (for multi-computer setups you will require Midi cables which are available from most distributors and computer stores)

Files: X_COLDREV.TOS - self-extracting archive

When it comes to exciting gameplay, your average computer game which relies on computer controlled opponents is no match for one which has a multi-computer feature.

No amount of programming can simulate the reactions and strategies of a human opponent and, as such, the multi-computer game takes on a whole new dimension.

There's just no substitute for the satisfaction of outwitting your friend's strategy and blowing his ship to pieces.

Cold Revenge is such a game and is based on the TV science fiction series Star Trek. In it, you and your friends can control the starships of the Federation, the Klingon or the Romulan empires in an attempt to defeat each other. There's also the chance to control a Federation outpost which is based on a nearby planet.

There are various weapons at the disposal of each starship, including phasers, photon torpedoes and disruptors.

Klingon or Romulan starships have the added defensive capability of cloaking their ships. The cloaking device renders the ship invisible to all other ships.

Disadvantages of being cloaked are that your ship's protective shields are less effective and you have to de-cloak in order to fire any weapons.

During the game, you have access to five different viewing modes and can give one of a group of orders to your other ships as to whether they should attack or operate independently, or even assume pre-attack formations.

If your ship should sustain damage, you can issue orders to change the repair priority of certain ships systems such as shield, phasers/disruptors and to her systems.

There is also a tactical display to allow you to get an overall view of the area of conflict. Up to six players can play against each other by linking their machines via the Midi ports. This requires a Midi cable, which is plugged into the machines to form a network loop. Full instructions are given in the documentation file included with the game.

If you do not have access to Midi cables, or indeed any other players with STs, you can still try your luck against the computer by selecting the one-player mode.

So extract the file and blow away a few Klingons or Romulans before tea.

QuickCIS

A comms program to simplify the massive CompuServe online information service

CompuServe, a massive information service providing thousands of databases and a mailing service is probably the most complex online service around.

As such, new users will find navigating their way through the numerous services somewhat confusing.

There are many comms software packages dedicated to logging onto CompuServe, such as the CompuServe Information Manager (CIS) available for many computer systems such as the PC and Macintosh and written by CompuServe themselves.

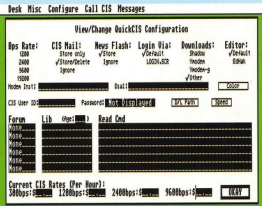
Unfortunately, there is no such software available from CompuServe for the ST, even though there is substantial support for it in the form of dedicated forums and databases on the CompuServe system.

Jim Ness has produced QuickCIS, a very good communications package which makes navigating your way through CompuServe much easier.

Programmed by: Jim Ness

Configuration: all STs med or hi-res

Filenames: X_QWKICIS.TOS - Self-extracting file



You can configure QuickCIS to your heart's content and once up and running on CompuServe, you will find moving around extremely easy

Shadow-Fix

Create superheroes out of your wimpy Shadowlands characters with this blatant cheat utility

Has Shadowlands' denizens gotten the better of you? Have your characters had their butts kicked every time you wander into the underground labyrinths?

Well fret no more because, courtesy of J E Cosby and ST User, you can now turn your characters into mighty butt-kicking superheroes.

Just take your save game disk, load Shadow-Fix and follow the on-screen instructions. In no time at all, your party will have statistics that make them look as though they have gone through three boxes of Shredded Wheat each.

You will be able to get your own back on those denizens that usually wipe you out during play.

Watch as all inhabitants gasp (then run away in fear) at the mightiness of your characters. Revenge at last is here.

Shadow-Fix achieves this miraculous transformation of your characters by directly altering your save game disk, so if you are suddenly overcome by guilt at cheating and you want to play the game honestly, you had better make a backup of your save game disk as, once transformed, the effects are irreversible.

Programmed by: J E Cosby

Configuration: all STs - lo-res requires Shadowlands and a Shadowlands save game disk

Filenames: X_SHADOW.TOS - self-extracting archive

Problems with your CoverDisk?

With thousands of disks being duplicated each month, a few will inevitably be faulty. Fortunately, we can help you. Send the faulty disk to:

Stanley Precision Data Systems, Unit F, Cavendish Courtyard, Sallow Road, Weldon North Industrial Estate, Corby NN17 1JX.

A replacement will be sent free of charge but please allow 28 days for delivery.

Copying the CoverDisk

If you are having problems copying the files on to a blank disk, follow our step-by-step guide below.

First of all, boot up your ST and format a blank disk. Then boot up again with the CoverDisk in the drive. You will see the Desktop appear.

Double click on the folder of your choice and a window will open showing the contents of the folder.

Some of the programs on the CoverDisk are archived. This means they have been squeezed so as to be as small as possible - in this way we can fit as many programs on disk as possible.

All archived filenames begin with X_ and the last three letters are TOS. If a file does not start with X_ then it is not archived and can be run as is.

Click on the file and keep the mouse button held down. A dotted line will appear around the file. Keeping the mouse button held down, move the mouse pointer to the B drive icon until the icon turns black. Release the mouse button and you will see instructions appear on the screen. Click on OK or press Return.

Follow the instructions, swapping the blank disk and copy of the CoverDisk as requested. The instructions refer to disk A and disk B. Disk A is the CoverDisk and disk B is the blank disk you formatted earlier.

When the instructions stop appearing, the process is complete. You should end up with disk A (the CoverDisk) in the drive.

Remove it and put your blank disk - now containing the copied file/s - into the drive. Open drive A by clicking on the A icon and you should now see your copied file.

If it is an archived file, double click on it and it will automatically be de-archived for you. If the file is not archived (ie it does not begin with X_) then you can run the program by double clicking on the filename.



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You haven't got a 21in greyscale monitor? Shame on you! You're using a simple hand scanner? You can't be serious about DTP! You don't have 4Mb of memory? I'll let you into a secret – nor did I until three months ago.

We're all victims of advertising and marketing hype that makes us feel we need bigger and better systems. Most magazine guides to DTP on the ST tell you all the wonderful things you can produce on a basic 520 machine, yet every other review or advert seems to urge you to pay for more expensive software or expand your ST to the limit.

Contradiction

Judging by the mailbag here at *ST User*, this apparent contradiction certainly confuses quite a few users wanting to start out in DTP.

Common questions are "Should I expand my ST to 2 or 4Mb?", "What sort of printer do I need?" or "Which DTP package is best for a monthly church newsletter?"

In this, the first in a two-part feature, continued on page 58, we'll look at choosing suitable software.

One of the longest running debates in the computer industry has always been whether to choose the software or the

Just what is it you really need for DTP?

Andrew Wright offers some pointers to choosing the right software

hardware first.

Many companies buy a particular product then a machine to run it on. Others get the best equipment they can afford and then look for something to use with it.

ST users are faced with the same problem, except that the choice of computer has already been made. So let's look at the problem from another angle.

What do you want the software to do? The box on this page looks at various applications and suitable software.

The list of requirements isn't exhaustive by any means, but it should serve to provide some pointers as to which package will suit you best.

The other concern, of course, when choosing a package is the overall quality of the package and how easy it is to use and live with.

GST's Timeworks and the brand new Easytext Professional, still starting to ship as I write, are two broadly comparable packages relying on GDOS fonts and

few frills.

The onus is on ease of use and Timeworks particularly has won plenty of followers, including me, with its superb interface and intuitive way of doing things. Newsletters, reports and leaflets are the bread and butter of these packages.

Although missing the close typographic controls found in professional systems, balancing columns isn't difficult and there is a wide range of import facilities.

Unbeatable

PageStream is proving extremely popular with ST users – its wide range of features and excellent price appears to offer unbeatable value.

Its direct support for standard Adobe Type 1 Postscript fonts as used in the PC and the ability to import a wide range of graphics files from other machines makes it look very good on paper, not how-

mention the powerful colour handling (separations and spot colour) and facilities for skewing, rotating and stretching blocks of text.

Its main disadvantage is the lack of speed and very slow screen redrawing. A year ago, Calamus – as v1.09n – was king, but the recently improved versions of Timeworks and PageStream seem to have robbed it of most of its glory, despite the remarkable drop in price.

The lack of PostScript support is the main problem for semi-professional use although there are bureaux such as CY Services in Nottingham which will out-put Calamus files onto bromide (this is a form of very high resolution printing which creates a high quality original for photocopying or commercial printing).

The top two programs, Didot Professional and Calamus SL need little description.

If you can afford either, they'll perform almost any job well, although Didot Professional is better for short, graphics intensive documents while Calamus is a better, if much slower, all rounder.

Not only do they cost more, how-

What do you want your

producing newsletters. For the best results it should be possible to vary line and character spacing (leading) by small amounts to make columns balance and eliminate widows and orphans.

A good range of quality typefaces is also important, particularly those suitable for body text (see this month's DTP Aspects for more information).

Colour is not normally a requirement although there is no reason why you couldn't use spot colour – a single uniform colour – for the masthead if it is being commercially printed.

Posters

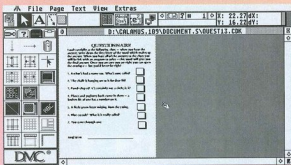
The purpose of posters is obvious – to attract attention and convey a simple message as quickly as possible. Many posters need to be read in the time it takes to walk or even drive past them in a car.

Others need to attract attention and then offer more information once the reader is up close. You need to bear in mind which type of poster you need before you design it.

Posters are created in an entirely different way to fanzines or newsletters. A poster might have very little text apart from a simple banner and could just as easily be designed in an art package such as Degas Elite. On the other hand, a poster needs a good solid display typeface and art packages with a good range of these available are quite rare.

Posters are more likely to be photocopied than commercially printed but if only a few are needed, they can be produced on your own printer, using colour if necessary.

The main requirements of a suitable DTP package are firstly that it should have a good range of outline typefaces available, and secondly, that it should be able to manipulate text both by rotating it and by distorting or tinting it.



Fill in the blanks – a form designed in Calamus

Newsletters

The prime object of a newsletter is to communicate information and ideas to a particular group of people – they can be members of the same church or special interest group, employees in a company or even a company's clients.

As such, newsletter readers are usually a captive audience, but that doesn't negate the need for imaginative design.

Newsletters generally range from single sheets of A4 to complex 8 or 12-page affairs, folded and bound by staples. As a result, they have to be duplicated in considerable numbers either by photocopying or a cheap commercial process.

Most newsletters will contain a fancy-looking masthead and several graphics, if only to prevent the thing looking too much like someone's dissertation. The rest will be text plus the odd tinted box or rule. Text handling is of prime importance

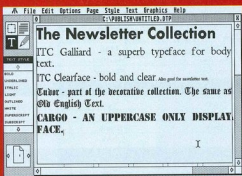
Timeworks tips

Timeworks is a superb package but sooner or later you'll get fed up with using the same old fonts in your documents. There are plenty of GDOS fonts in the public domain which work well enough but none are of sufficient quality for body text.

Nor are there very many available commercially, except the ST Club's excellent Castleton Roman and Berwent faces.

One answer comes from GST themselves - Typografica. This is a PC program that converts included outlines into GEM fonts at any size and weight. There are two excellent collections, The Newsletter Collection and The Decorative Collection, which include some high quality typefaces and the Typografica program.

If you've got a PC emulator, fine. If not, you'll have to borrow a friend's machine or use the one at work. You pick the font size and Typografica does the rest. However,



Some beautiful typefaces from GST - for those of you with PC emulators!

you will also need Jeremy Hughes' Trainfont available from the ST Club to convert them properly to ST format.

ever, but they need more hardware such as hard disks and mono monitors.

So what are the main factors to look for in choosing a DTP package? Much will depend on what it is to be used for, as we have seen.

PostScript will either be critical or irrelevant, depending on the level at which you will be working. PostScript is a page description language that controls how to lay things out on the page.

Both PostScript and Calamus outline fonts are expensive when bought commercially, but there are plenty of free

ones to download from CIX or CompuServe or order from PD libraries.

Programs which can use outline fonts can also display a far wider range than Timeworks or Easytext, making them a better bet for posters and adverts.

Sources

If you use text or graphics from several sources, you'll need to be very careful that you can actually handle them, especially if some of them originate from other computers.

The top DTP packages are quite arro-

gant about supporting "foreign" text formats - they don't bother and virtually everything has to be converted to Ascii first.

For graphics, it will depend on how they are created. If you scan your own or draw them yourself, stick to the key ST formats such as IMG or Degas and you can't go wrong.

If you are using files supplied by outside agencies, TIF support is a must. There are plenty of conversion programs however, so all will not be lost.

● Next month we have a special feature on fonts and show how to design your own

DTP software to do?

Finally, it should have very flexible graphics import as several different formats, both bitmap and vector, might be used on the same page.

Leaflets and brochures

Leaflets and brochures are like personal posters. They are designed to be placed in front of individuals and must attract attention swiftly while still carrying the required detailed information.

They do not need to be quite as bold but nonetheless, if a reader's attention wanes, it will be discarded.

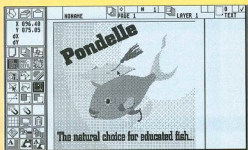
Documents in this category lie somewhere between newsletters and posters. Not quite as text heavy, they still need to be typographically accurate but with strong advertising appeal. This makes it important to use bold graphics and display typefaces alongside tidily formatted text columns.

The ideal DTP package for leaflets and brochures will have most of the necessary features for creating both newsletters and posters but it need not be overly complex.

Forms

Forms are always associated with red tape but in fact they are essential to the smooth running of many businesses, from small home operations to multinational corporations. The physical aspects of forms design are catered for by most DTP packages, but some are better than others.

A duplicate function is useful so that lines and boxes can be spaced regularly over an area without the need to measure distances. The capacity to create lines of differing thicknesses and design, bordered boxes and a good background grid with "snap to" facility is also important. Text rotation can also be handy, especially when the form is a complex one.



Didot Professional would be my first choice for a short leaflet or advert

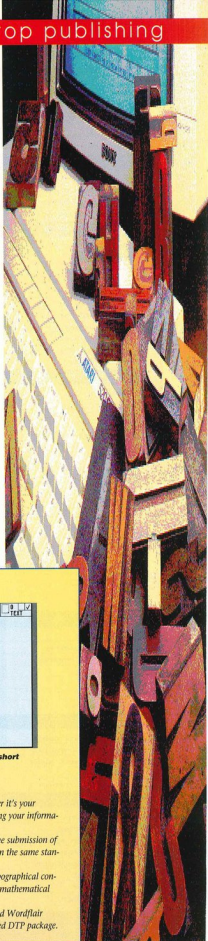
Reports and papers

Students and businessmen will be no stranger to reports. Whether it's your monthly sales figures or your end of course dissertation, presenting your information properly is the first step to success.

In the USA, in fact, some schools and colleges have banned the submission of desktop published work because it was gaining higher marks than the same standard work submitted in hand-written style!

The same features will be needed as for newsletters - good typographical control with good quality typefaces. Of course, you may need to use mathematical equations or statistical analysis.

Programs such as Redacteur with its built-in symbol editor and Wordfair with its charting features might be more suitable than a dedicated DTP package.



Software	Easytext Professional	Timeworks 2	PageStream 2.1	Calamus 1.09	Dotdot Professional	Calamus XL
Price	£39.95	£129.25	£139.99	£139.99	£499	£586.32
Supplier	zzSoft	CGS	Silica Systems	Halco	CGS	Halco
Telephone	0254 672965	0480 496666	081-309 1111	0734 441525	081-686 8121	0734 441525
Minimum RAM	1Mb	1Mb	2Mb	1Mb	2Mb	2Mb
Resolution	Med/Hi	Med/Hi	Med/Hi	Hi	Hi	Hi
Disk drive	Floppy	Floppy	Floppy	Floppy	Hard	Hard
FOUNTS						
GDOS/GEM	Yes	Yes	Blank	Blank	Blank	Blank
PostScript outline	Blank	Blank	Yes	Blank	Yes	Blank
Calamus CFN outline	Blank	Blank	Blank	Yes	Yes	Yes
Pagestream outline	No	No	Yes	No	No	No
TEXT IMPORT						
Ascii	Yes	Yes	Yes	Yes	Yes	Yes
Firstword	Yes	Yes	Yes	Yes	No	Yes
Wordwriter	Yes	Yes	No	No	No	No
ST Word/K-Word	Yes	Yes	No	No	No	No
Protext	Yes	Yes	No	No	No	No
Redacteur	Yes	Yes	Yes	No	No	No
That's Write	No	No	Yes	No	No	No
Calligrapher	No	No	Yes	No	No	No
WordPerfect	No	Yes	Yes	Yes	No	No
Microsoft Write	No	No	No	Yes	No	No
PC formats	No	Yes	Yes	No	No	No
GRAPHICS IMPORT						
IMG	Yes	Yes	Yes	Yes	Yes	Yes
GEM	Yes	Yes	Yes	Yes	Yes	Yes
TIF	No	Yes	Yes	No	Yes	Yes
EPS	No	Yes	Yes	No	Yes	Yes
CVG	No	No	Yes	No	No	No
Degas	Yes	Yes	Yes	Yes	Yes	Yes
GIF	No	No	Yes	No	Yes	Yes
NEO	Yes	Yes	Yes	No	No	Yes
Tiny	Yes	No	Yes	No	No	No
PCX	No	Yes	Yes	No	No	No
IFF	No	Yes	Yes	No	No	Yes
Doodle	Yes	No	No	No	No	No
PIC	No	Yes	No	No	No	No
Arabesque	No	No	Yes	No	No	No
Macpaint	No	No	Yes	No	No	No
STAD	No	No	Yes	Yes	No	Yes
Retouche	No	No	No	No	Yes	No
AIM	No	No	No	No	No	Yes
Targa	No	No	No	No	No	Yes
PRINTER DRIVERS						
PostScript	No	Yes	Yes	No	Yes	No
9-pin dot matrix	Yes	Yes	Yes	Yes	Limited	Yes
24-pin dot matrix	Yes	Yes	Yes	Yes	Limited	Yes
Deskjet	Yes	Yes	Yes	Yes	Yes	No
LaserJet	Yes	Yes	Yes	Yes	Yes	Yes
Bubblejet	Yes	No	Yes	No	No	Yes
Atari lasers	Yes	Yes	Yes	Yes	Yes	Yes
GRAPHICS						
Spot/process colour	No	No	Yes	No	Yes	Yes
Half-tone screening	No	No	Yes	No	Yes	Yes
Irregular text wrap	N	Yes	Limited	Yes	Yes	Yes
Autotrace	No	No	No	No	Yes	Yes
Graphics rotation	No	No	Yes	No	Yes	Yes
TEXT						
Adjust character size	No	No	0.01 point	0.1 point	0.01 point	0.001 point
Adjust leading	0.01 point	1 point	0.01 point	0.1 point	0.01mm	0.01 point
Adjust char. spacing	0.01 point	No	0.01 em	0.1 point	1%	0.001 point
Text rotation	No	No	Yes	Yes	Yes	Yes
Text manipulation	No	No	Yes	No	Yes	Yes
Tinted text	No	No	Yes	No	Yes	Yes
Text editor	No	No	No	Yes	Yes	Yes
Spell checker	No	No	Yes	Yes	No	No

Notes: The table is not meant to be a definitive guide to each package's capabilities. Rather it is meant to provide an idea of the strengths and weakness of each in relation to the others for various DTP purposes. It also indicates its "useability" - how it interacts with other software such as wordprocessors and graphics packages.

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Scanner appeal

Scanners are rapidly becoming indispensable in DTP. There is a much wider range of options available on the ST now, including full colour (see this month's feature on using colour in DTP).

At the time of writing there isn't a true greyscale hand-held scanner available on the ST; the Logitech Scanman may arrive in the near future but there is currently no interface card.

Evesham Micros supply a simple hand-held with the Daatascan software but there are better models available from Power (see our review in the September issue) and Naksha.

The new Naksha scanner is a surprisingly late arrival from a company renowned for the quality of its add-ons such as mice. The scanner head is the same shape as its competitors but it has an extra set of rollers at the rear which make for much steadier scanning. Much more accurate scans are possible as a result.

The scanner plugs into the ST's cartridge port via a small interface the size of a pack of cards which also has a connector for the external power supply. The leads from the power unit and the head are both long enough for most desktop arrangements.

A switch on the right offers four dithering methods including one for line art while a second set of switches on the left selects low, medium or high (200, 300 or 400 dpi) resolution. There is also a wheel controlling brightness.

Rubber coated rollers

If you've never used a hand scanner before, the light sensitive unit underneath the scanner head which has rubber-coated rollers to make the head glide smoothly over the scanned surface. Quite good results can be achieved with some practice and being prepared to make two or three attempts at each scan.

The Naksha is still a single bit scanner like the Evesham, Golden Image, Datel and Power models which are also available. In other words it scans greys by dithering the input to represent the various grey levels, using a 4 x 4 or even larger grid, depending on the setting.

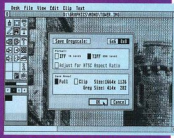
The clever part of the Naksha package is the software, a new version of Touch-Up (v1.8) which converts the dithered mono scans back into 256 greyscales. The result is an industry standard TIFF file (or, incidentally, a 16-greyscale IFF) which can be imported into any DTP package (except Easytext or Calamus 1.09).

Because it is a true greyscale image it can be resized without loss of detail or the dreaded Moire distortion patterns which normally occur when resizing scanned photographic images.

On the negative side, a 300dpi scan becomes 75dpi due to the conversion process but this is actually a small price to pay for most DTP work as typical reproduction methods such as photocopying can't handle much higher resolutions anyway.

Note that Touch-Up won't allow you to edit or manipulate the greyscale image in any way - you'll need additional software for that, such as Retouch or Reprostudio.

The Naksha software requires at least 1Mb of memory but it is without doubt the best hand scanner for the ST on the market. It comes highly recommended and at £113.62 plus VAT it won't break the bank. Naksha are on 0925 56398.



Touch-Up 1.8 in greyscale mode.

Let's assume you've decided on a DTP package to suit your needs. It might be £40 worth of Easytext Professional or it might be £600 worth of Calamus SL. What sort of hardware do you need?

We'll assume that you've got an ST - perhaps even a TT - but what kind? It makes no difference whether it's an ST or an STE as far as DTP goes. Forget the extra colours and souped up sound effects - they're strictly for games and colour graphics.

You can only run DTP programs on colour monitors or TVs in medium resolution - at lower resolutions you simply wouldn't be able to see enough of the page area to work on it properly anyway. A TV will look rather blurred especially for close up work but most people will be happy using a colour monitor.

The best bet, if you're even half serious about DTP (and the only option with programs such as Didot Professional and Calamus which only run in high resolution), is a mono monitor.

Excellent

Atari's SM124/5 and new SM144 models are excellent products - the clarity is stunning when you gaze at your favourite wordprocessor or DTP package running for the first time in high resolution.

There are twice as many pixels in hi-res mode and this makes a considerable difference for accurately positioning objects such as fine rules and lines. The SM144 costs around £140 new.

A more cost-effective alternative would be to look for a second-hand SM124 model. They are very reliable and should be a good buy.

Memory upgrades are on everyone's mind these days. The price is dropping, especially if you can handle a soldering iron, and it makes all the difference to the way programs run.

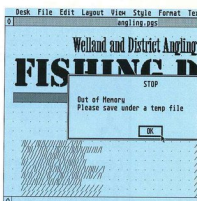
The only DTP program with a chance of running in 512K is Timeworks.

Version 1.12 will run reasonably well but the new version,

Timeworks 2, really needs more - it will run comfortably with 1Mb. Even the budget package, Easytext Professional, needs 1Mb, as does Calamus 1.09n.

PageStream will actually run in 1Mb but you'll soon run out of memory if you add a graphic or more than one font. The recommended minimum is 2Mb but I'd advise 4Mb - with this amount of spare room, fonts can be cached and the program runs a little quicker, especially when redrawing the screen.

As for Calamus SL, Halco claim



Banish these headaches with a memory upgrade

that it will run in 1Mb but I'd hate to try it. The 2Mb recommended minimum should be adequate unless you are using a lot of graphics and additional fonts. Didot Professional needs a minimum of 2Mb but quickly runs out of memory when printing complex pages. Consider 4Mb as the minimum here.

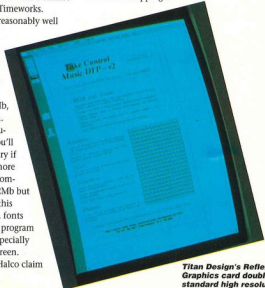
If you're looking to upgrade, though, go for the maximum you can afford. If you can stretch to 4Mb, it will open up whole new horizons - you can run programs at lightning speed using RAM disks and use as many graphics and fonts as you like.

Accessories

You can also keep useful desk accessories or AUTO folder programs loaded all the time - text editors, font editors, image viewers and screen grabbers are particularly useful in DTP.

Disk drives are another area of difficulty. Timeworks works well from a floppy disk drive and Calamus 1.09 isn't noticeably slower, although there can be confusion when changing fonts disks.

PageStream will run from floppy drives at a pinch but it needs some care with disk swapping to



Titan Design's Reflex Graphics card doubles standard high resolution



avoid crashes. Two floppy drives is a better bet but I'd advise saving the cash and putting it towards a hard disk. Hard disks are guaranteed to improve the performance of almost any area of computing.

Timeworks is a drudge to load from floppy but it loads in a flash from a hard drive (or a RAM disk for that matter).

Didot and Calamus

SL both need hard drives – don't even think about using them with floppy disk drives.

All the ST DTP packages work well with 9-pin and 24-pin printers, which is just as well as they're still the prime choice of ST users. Cheap to buy and run, yet very durable and reliable, they run almost forever and work with virtually all software, provided they are Epson FX compatible.

Photocopying

Most of the 9-pin drivers work at 120 x 144dpi resolution, which isn't too bad as photocopying will remove any extra detail. If you need to use the printed result as a master in a commercial printing process, however, then a somewhat higher resolution is called for.

Most 24-pin printers are capable of 360 x 360dpi, a higher resolution than the average laser or the popular HP Deskjet. However, because it is a high impact printer, the 24-pin tends to look somewhat rougher than laser or inkjet output but it does have the advantage of much lower running costs.

Note that a daisywheel printer is a

complete waste of time – it might look very sharp when printing text from a wordprocessor but it can't handle the graphic output from a DTP program. Be warned!

If you want to earn a little cash from your efforts, you'll have to be prepared to move up a rung on the DTP ladder. This will involve learning to handle PostScript, the industry's standard page layout system.

When a document is commercially printed by offset lithography – the usual budget method for newsletters, leaflets and forms – a high resolution master is required.

For most jobs, the output from a laser or even an inkjet is perfectly acceptable but for top results a bromide has to be obtained.

Typesetter

This is basically a very high resolution printout using a special machine called a typesetter – it prints at up to 2,540dpi (or more) on special bromide paper. An A4 bromide will typically cost £5 or £6, less as the quantity increases.

Timeworks, PageStream and Didot Professional all handle PostScript output making them suitable for hooking up to a PostScript laser or producing files for DTP bureaux to turn into bromides. The same bromides can be obtained by Calamus users but there are far fewer bureaux.

Hopefully this article will have provided a few pointers as to the hardware you are likely to need – and the hardware you'll forever lust after!

Armed with a standard ST and the right DTP package for your needs, you'll be able to produce good quality work – safe and secure in the knowledge that there will be plenty of room to expand later.

What hardware do you need to make the most of DTP? Andrew Wright looks at the options

DTP the hard way

Reflex action

Even the ST's mono 640 x 400 screen can get small, especially when you are regularly producing A4 pages. You can't display a whole page and work on it at the same time. The answer is to add a special piece of hardware that will increase the number of pixels displayed on your screen. You could then even consider buying a larger monitor.

The most widely used card is the Reflex graphics card supplied by Titan Designs now at a reduced price of £199. It will let your ST display up to 1,024 x 960 pixels, almost double the standard high resolution, on an Atari SM124/5 monitor.

You will then be able to view a full page at a time and make amendments or move graphics and text while watching the effect on the whole page. The Reflex is also compatible with most other software such as graphics programs, wordprocessors and spreadsheets.

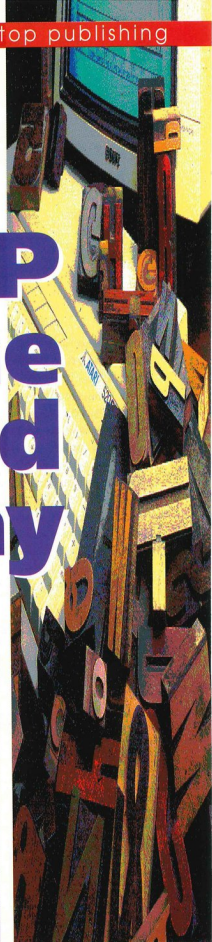
It is simple to fit – it just plugs straight into a Mega ST's expansion bus and comes with a fitting kit for standard ST/STes.

Of course, the display is a little small on an Atari monitor so there are other options. The £399 Samsung A4 15in monitor is shaped like an A4 page and provides full A4 page cover-

age at a size that's convenient for viewing. At the top of the scale is the Eizo Flexscan 21in monitor which will set you back well over £1,000, a worthwhile add-on for the professional but a little hard to justify for most of us. Contact Titan Designs on 021-415 4155 for more details.



Maximum Reflex card resolution in Calamus



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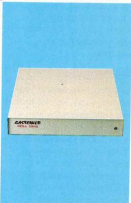
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What you see...

Whatever use you have for your ST, you'll be spending the majority of your time looking at your monitor, so selecting the right one for you is an important decision.

The majority of STs have a socket at the back which allows you to plug the ST directly into a television. You can tell whether this is the case, in principle, by the model number.

The M in STFM or SFM means that there is a modulator – the piece of hardware which allows the ST to produce a TV signal. Because of this, many ST owners still use a TV as their only monitor.

Some televisions give an excellent picture from an ST, some not so good, but in general, a TV will give a poorer picture than a monitor.

Code

The reason for this is that the modulator, which produces the TV signal, has to code the RGB output from the ST into a UHF signal, which the TV then promptly decodes back to send to the screen. With a monitor this coding/decoding does not take place, hence a clearer picture.

An element of confusion is creeping in these days with the appearance of TV/monitors. Strictly speaking, these are monitors which can also pick up TV signals.

This gives you the best of both worlds, as long as you don't want to watch TV while you use your ST! I said "strictly speaking" because there are a number of TVs being sold as monitor-style televisions, or other equally vague descriptions, which are nothing more than televisions.

Many televisions and video recorders have Scart sockets, also known as Euroconnectors and sometimes spelled Skart. The idea behind the Scart connector is a good one – a standard plug and socket which contains just about every connection you are likely to need for your audio-visual entertainment.

Problems arise when finding out exactly which pins of a particular TV are connected, and then finding a Scart cable to match it, with the correct plugs at the other end to fit your ST! Luckily a number of companies offer such cables, but check with them before you part with any cash for that good looking TV!

A colour monitor will give you a far clearer picture than a television. Even if your TV looks pretty good to you, just wait until you see the screen on a dedicated colour monitor!

A number of monitors are available from various suppliers and, to be honest, most are very similar in all aspects except for price! If you have an STE, or a Stereo cartridge on your ST, it may be worth looking out for a stereo monitor.

These monitors have two speakers rather than the normal single speaker, and will be able to take your stereo output usually using two standard audio plugs. The sound quality of such monitors is nowhere near as good as a hi-fi

system, but where space and/or money are short this can be a good compromise.

When Atari designed the ST as an Apple Macintosh beater, one thing they did exactly right was to include a hi-res mono graphics mode, as well as the lower resolution colour modes.

In order to get a very clear hi-res picture, the screen is generated at 70Hz. All this means is that the picture on the monitor screen is refreshed 70 times every second.

A normal TV or monitor picture in Britain is refreshed 50 times a second, and in America 60 times. The advantage of this higher refresh rate is a very steady picture at higher resolutions.

The disadvantage of this high refresh rate is that standard TVs and colour monitors are unable to perform, and so you need a dedicated hi-res monitor. Atari sensibly decided that, as the higher resolution itself is only black and white, they would produce a cheap mono monitor.

There have been a couple of models of the monitor from Atari, but to my knowledge no-one else produces one, so you're limited in your choice of manufacturers! That said, the monitors are excellent, giving a crisp and clear picture with good contrast.

If you want to use your ST in both high resolution, mono and colour, you have two choices. Either you plug and unplug your ST from two different monitors – or a TV and a monitor – or you buy a multisync monitor.

Multisync

A multisync monitor is quite simply a monitor which can adjust its refresh rate. So you can display a colour screen at 50Hz, then a mono screen at 70Hz. These days, most multisyncs will adjust themselves for you, but some models will need some knob twiddling when you change resolutions to get the picture just right.

A couple of points to be aware of if looking for a multisync – remember that there are colour and mono multisync monitors. Mono multisyncs work fine with the ST, but you'll only get a black and white picture even in colour modes.

You will need a special cable to connect your ST to a multisync. The cable will need a switch, which you use to swap between colour and mono modes. This will cause your ST to reboot. Although this is annoying sometimes, it is quite easy to live with in most circumstances.

One advantage of GEM-based packages is that the window size is limited only to the physical size of the screen – at least in principle.

This means that you can buy a large monitor and get a bigger Desktop (again, in principle). If you are using your ST for serious DTP work, the addition of an A4 paper white monitor, and a graphics board to allow the ST to drive it, brings a whole new meaning to the phrase What You See Is What You Get.

Before parting with cash for this type of monitor – and they don't come cheap – it is well worth checking that the software you intend to use will run successfully using the monitor.



Scanning

Even if you only use it to forge your boss' signature on the Christmas party memo, a scanner can save you hours of toiling over your art package.

If your artistic skills are limited, and DTP is your game, then a scanner could be the ideal companion.

Essentially, a scanner takes a picture, and reproduces

it on your ST as a graphic image, which you can then use in your DTP package.

A variety of scanners and scanning software are available for the ST. The cheapest option is a hand-held scanner, which you drag across a picture to scan it into your ST.

Professional

For professional work, a flatbed scanner would be ideal. This acts more like a photocopier, where the scanning is handled automatically.

Depending on the resolution of your printer, the resolution of the scanner you

choose could be important. The higher the resolution, the more detailed picture it will scan.

Make sure the scanner is wide enough to encompass the type of image you may wish to scan. Although it is possible to scan different parts of the same image, and tack them together, I certainly wouldn't recommend it!

The scanner itself may be the bee's knees, but check out the software provided with it. You will almost certainly need to touch up the pictures before putting them to use, and decent software can be expensive, if bought separately.

...is what you get

Despite claims of the imminent arrival of the paperless office, it still seems about as likely as the paperless loo! Is your printed output all it could be?

Whatever use you put your ST to, a printer is always a useful addition. The type of printer you want, however, depends a great deal on exactly what you want to do.

Whatever the printer, you are going to be using some software to print to it. Many programs come with a range of printer drivers for different printers, so make sure your software has a driver for the printer you are going to buy!

Many printers can emulate other printers, so you may find that you can still use a printer even though you do not have a specific driver for that particular model.

Try to make sure that the printer comes with a suitable cable to attach to the printer port of your ST. Most printers have Centronics ports, which simply plug into your ST, and off you go.

Capable

Some are capable of using either serial (RS232) or parallel (Centronics). Unless you want your printer to be a very long way from your ST, always use Centronics. Many printers are very noisy. Try to hear one working, printing both text and graphics, and imagine the noise in the environment in which you use your ST.

Most printer manufacturers quote the speed of their printers in characters per second. Firstly, the figures quoted are often grossly misleading, so don't imagine that a 200cps printer will actually print 200 characters in a second! If

you use a DTP package, or similar, then the page printed will, to all intents and purposes, be printed as a picture. This can take several minutes on a slow printer.



Upgrading your ST will go smoothly if you follow Marc Young's advice and look before you leap

Hard up!

Whichever model of ST you own, there always seems to be a nagging voice in the back of your mind saying "upgrade it!". Whether you listen to this voice or not is another matter, but if you do, then what should you be looking for?

Is it better to buy a second floppy disk drive or to upgrade your memory? Will a 40Mb hard disk drive be large enough? Exactly what is a multisync monitor?

Read on, dear reader, and hopefully I will be able to answer some of your questions - except perhaps for that all important query, "How do I afford it?"

Printing power

Printing by means of nine pins being forced against the paper, with an ink-soaked ribbon sandwiched between, these printers have been around for years.

Print quality is generally poor, though many now have NLQ (Near Letter Quality) modes which improve the quality sufficiently for letters. Not recommended for printing graphics, though it is certainly possible.

Quality

Using the same technology as the 9-pin printers, the 24 pins increase the quality dramatically by increasing the number of pins. Ideal for the average home user, good enough for printing text and graphics at reasonable resolution.

Inkjet printers work, as the name suggests, by firing a jet of ink at the paper. Varying methods are used by different manufacturers.

These tend to use about 48 jets, so the resolution is the equivalent of double that of a 24-pin dot matrix. The quality of many of these printers is excellent, and they have the added advantage of very quiet operation.

These printers work by writing the image to be printed onto a metal drum, using a laser. This use of lasers allows very high resolutions of 300 or even 600 dots per inch.

While this has been matched recently by the bubblejet printers - at least up to 360 dpi - the accuracy of the positioning of the dots, and the uniform size of the dots on a laser printer generally gives a slightly better quality output. Also, once the image is made up on a laser, the output is very fast indeed.

Working using the same principle as a typewriter, in that a character moulded out of metal is hammered against a ribbon and held against the paper, these printers give the best possible quality at the expense of speed and noise.





Floppy drives

Your ST comes with a floppy disk drive, but is it enough for your needs? In common with the majority of computers today, the ST uses 5.25-inch floppy disks. Except for the very early STs, every model of Atari's flagship computer comes complete with internal floppy disk drive.

Most of those built-in drives are double-sided 720k drives. There are still some out there, however, who use single-sided drives.

The obvious answer for this minority is to upgrade to a double-sided drive. This immediately doubles your floppy disk capacity, and allows you to use some software which is only available on double-sided disks (like our superb *CodeW* disk).

There are two usual ways to go about this upgrade. One is to buy an external double-sided disk drive, the other to replace the internal disk with a new double-sided mechanism.

There is also, however, a third option. This is to buy an external double-sided drive, take out the mechanism, and swap it with the ST's internal drive.

This may require a little plastic surgery to your ST – because of the unusual shape of the eject button – but leaves you with a double sided disk drive to boot from, and an external single sided disk for extra storage.

Floppy disk drives are relatively cheap at present, so it is probably worth buying from a reputable ST dealer, rather than shopping around and risking disappointment.

Correct

Most disk drives will work with the ST, but you'll need to ensure you have the correct connecting cable for an external drive.

These can be obtained separately, so you could save a few pounds by buying from one of the big PC suppliers, but don't expect too much help if it doesn't work!

The standard ST disk format has 80 tracks (a track is a concentric circle on the disk surface). All 5.25-inch disk drives (as far as I know) will format to 80 tracks, but some will go to 84, or even 89 tracks.

These drives will allow you to store more data on your floppies, but I wouldn't recommend going over 82 tracks unless you're very sure of the quality of your floppy disks.

Some disk drives cause problems on the ST by not telling the computer when the disk has been removed and replaced by another disk. At best this is annoying, at worst you'll lose all the data on the disk.

Unfortunately there doesn't seem to be an easy way of telling which disks have this problem, so again, buying from a reputable ST supplier can have its advantages.

The standard floppy disk size is rapidly becoming 1.4Mb in the PC world. A 1.4Mb disk drive may sound like a great upgrade to your ST, but it ain't as simple as that.

You'll also need a hardware upgrade, and some software to allow you to format the disks. Also 1.4Mb (high density as opposed to double density 720k disks) are somewhat more expensive.

A few external drives are powered not from the mains supply, but from the ST via the joystick port.

While this is not exactly dangerous for your ST, many people are concerned that the drives may take too much power from the ST (after all, the ST's joystick ports were designed for joysticks, and not floppy disk drives).

On the other hand, this helps keep the price of the drive down, and I haven't heard of anyone having a problem which was definitely caused by using such a drive (stand by for the deluge of letters...).

More storage space

Floppy disks are fine for most home applications, but start using your ST seriously and a hard drive must be high on the shopping list.

If you use your ST a lot, you'll probably find that quite a proportion of your time is spent waiting for programs to load, or data to be loaded or saved.

If your program collection spans several floppy disks, you will also probably spend quite some time trying to find the correct disk!

All this can become a thing of the past with a hard disk. Atari sensibly included a DMA port on the ST, which allows it to transfer data at a very high rate with external devices.

Unfortunately, there are not exactly a great number of devices which can simply plug into this port and be used – instead the ST has to plug into an adaptor, which is in turn plugged into the device (such as a hard disk).

In the computing world, SCSI (pronounced *Scoozy*, an acronym for Small Computer System Interface) is a standard for many peripherals, including hard disk drives.

Interface

There are, then, a large number of SCSI hard disk drives. This makes them relatively cheap. But the ST doesn't have a SCSI interface.

Luckily there are adaptor boards which convert between the SCSI format of the disk and the DMA format of the ST, thus allowing the ST to talk to SCSI devices.

Over the past couple of years, more and more third-party manufacturers have been using these boards to build ST disk drives, by including the board, SCSI drive and power supply in one box.

First and foremost, look for size. In the world of the hard disk, size really is everything (well, almost!). You can almost guarantee that you can expand your work to fill even the biggest hard drive.

Things which you wouldn't have done when using floppies, because of the time taken or simply the space available, will become the norm. Boot-up utilities will compete for space on your hard drive, where you wouldn't have bothered on floppy unless you wanted to wait five minutes every time you rebooted.

Noise is a very important consideration for the home user. Many hard disk drives have fans to keep them cool. At an exhibition, or in a shop, the noise probably seems like a quiet hum.

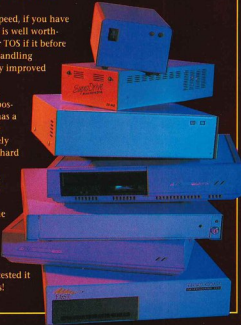
In your lounge, while your wife is trying to watch *Neighbours*, or your husband tuning in to *One Man and his Dog*, it can sound more like a 747 landing on the erm, landing!

If you buy second-hand, check that the hard disk you are buying will auto-boot. It is somewhat frustrating to be lumbered with a nice fast hard disk, and to still have to boot from floppy.

On the subject of speed, if you have a pre-ST machine, it is well worthwhile upgrading your TOS if it before v4, as the hard-disk handling code was dramatically improved with later versions.

If you own an STE, there is a very small possibility that your ST has a faulty DMA chip. The symptom you are likely to first notice is your hard disk being irreversibly corrupted after a few hours of continuous use!

Atari will rectify the problem, if it occurs, but best be safe, and put nothing valuable on the drive until you have tested it out over several hours!



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Of mice and joysticks

The mouse supplied with your ST may travel miles around your mat every day, so maybe it's time you traded it in for a new model.

The standard Atari ST mouse is not a bad little rodent, but it may well be getting a little long in the tooth. If you've had your ST for a while, you can add zest to your computing with a replacement.

Of course, you needn't necessarily buy another mouse. You can buy a track ball, which can be a great boon for the cramped desk. If you've never seen one, it's basically a larger upturned mouse, where you move the ball with your hand rather than rolling it across your desktop.

You can also get a mouse pen. This is essentially a tiny mouse, in the form of a pen. These do take a little getting used to, but can be great if you use your ST for graphics.



Strength

On the joystick front, the number of available joysticks is growing every day. The choice is a very personal thing, but if you use one a lot, it's worth spending a little more money on something sturdy, which will last.

My advice would be to avoid the gimmicky joysticks, with stop-watches, countdown timers and so on, and go for comfort and strength.

Always make sure the mouse or joystick will work with the ST, Apple, Amiga, PCs and so on all use slightly different systems – some can switch between Amiga and ST.

Mice differ in their resolution – that is, the distance the mouse moves on your desk to move the pointer on your screen a given distance. Depending on your use, a higher resolution mouse may be a boon, or a nightmare. Try it out if you can.

Avoid short cables. It's better to become entangled in yards of wire than having to hunch over your ST every time you use your joystick.



Emulating

Your ST can become a master of disguise, changing into a Macintosh or a PC lookalike at the flick of a cheque book.

If you use other computers at work, or there is a particular piece of software running on another machine which you need, then the emulator could be for you. As the ST uses the same processor as the Apple Macintosh) one of the first emulators was, unsurprisingly, an Apple Macintosh emulator.

The other obvious emulator, to turn your ST into a PC, has been somewhat longer in coming, but now several are available.

Capable

If you require a Macintosh emulator, your choices are limited to say the least, and it only remains to ensure that the emulator is capable of running the software you require.

The emulators available require the Macintosh ROMs, which are copyright. Therefore it is worth checking that the price quoted includes the ROMs, or if not, that you can get hold of the required chips.

PC emulators are more varied. Different flavours are available, from the humble XT emulator, through to 8MHz AT variants, to 16MHz. You should bear in mind, though, that the entry level PC is quickly becoming the 25MHz or 33MHz 386 PC.

If you have the desk space, then it may be cheaper to buy a small PC to use side-by-side with your ST. If power is not a major pre-requisite, then a 286-based AT emulator will probably suffice, and will even allow you to run Microsoft Windows, albeit at a horrifyingly slow speed.

In fact, it will make you appreciate the ST's GEM interface, and realise just how good Neodesk is!



Memories are made of this

Upgrading a half megabyte ST to a full megabyte can actually be cheaper than buying a 1Mb machine in the first place, so why not save some money and do it yourself?

When the ST first appeared on the scene, the average home computer had 64k of memory. If you were lucky! A computer with 512k, or even a whole megabyte seemed almost like overkill. But it didn't take long for the programmers to take advantage of all this extra memory, until even a megabyte was a constraint.

For games, the extra memory could be used for extra graphics, or sound, but because of the number of half megabyte STs, the majority of games would at least run on the smaller machines.

With serious software, such as desktop publishing, more memory meant a more professional product – more fonts, better graphics and so on.

Although many programs will still run on a humble 520k machine, 1Mb or more is becoming the minimum realistic requirement for serious use.

So what do you do if you want to increase your memory? A lot depends on exactly which ST you have. If you have an STE, then the job is a fairly simple one. Memory upgrades are available in the form of SIMMs, which are simple plug-in memory boards, allowing you to upgrade from 512k to 1Mb, 2Mb or 4Mb.

Older

Older STs, unfortunately, are not quite so easy to upgrade. There are a number of different memory upgrades available, taking a 520ST to 1Mb, 2Mb, 2.5Mb or 4Mb.

Some are one-off upgrades, which will have to be replaced if further memory upgrading is required. Others can be upgraded simply by adding, or exchanging RAM chips. Still others actually allow you to plug in SIMMs, as used in the STE.

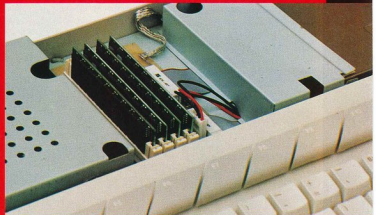
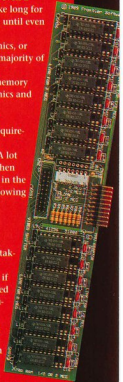
Try to work out how much memory you are going to need before deciding on the upgrade. Bear in mind that you may use some memory-resident programs which you had no room for before.

For example, if you need 1Mb to run your DTP package, upgrading to 2Mb will not only give you a little extra for more fonts, or extra graphics, but also enough for a RAM disk to speed up the whole operation too.

Try – though this may be difficult – to get a look at the installation instructions before you try to install an upgrade yourself. Some may be described as install-instable, but take a qualified electrical engineer four hours to install!

Generally, it is best to avoid non-upgradable upgrades. Assume that you will want to upgrade in the future, and you shouldn't go too far wrong.

If you're not happy about performing the upgrade yourself, try to find somewhere local who can perform the upgrade for you – posting your ST away can be a traumatic experience!



Is anybody out there?

Your ST may get lonely, sitting on the desk all day with nobody to speak to. Why not treat it to a modem so it can call up some chums?

There is an extraordinary wealth of programs and information available for the ST, all sitting on the end of a telephone just waiting for your call. If you are thinking of joining the communications revolution, you'll need a modem and a communications package.

There are a number of excellent packages available as shareware and in the public domain. Unfortunately, modems come a little more expensive!

Modem

A modem simply plugs into the back of your ST, and into the telephone line. If you have the old permanently fixed telephone lines, rather than the plug-in type, you'll need to get BT in to change them over before you can use a modem.

Speaking of BT, it is illegal for you to use a modem which is not approved for use on the BT system, so it is worth checking before you part with your money.

That said, there are few modems on sale which are not approved, and these should always have a sticker saying that they are prohibited.

Modems come in differing flavours, each having its own number. For example, a modem working at 1,200bps is a V22 modem. At 2,400bps, it's known as a V22bis modem. At 9,600bps it's V32. So what is this all about?

A modem works by taking data at a byte at a time from your ST and converting it into pulses which can be sent down a telephone line. It also receives pulses from the phone line, and decodes them into bytes which can then be sent to your machine. Obviously,

the faster a modem can do this, the less time it will take you to send or receive a file, and so the lower you will keep your telephone bills.

The speeds are expressed in bits per second. In principle eight bits per second would be one byte, or one character every second.

If a modem were as slow as this, it would take something like one and a half hours to send the text for this article from my ST! The slowest modems normally available would be 300bps, which would mean a more reasonable three minutes.

If you can afford it, buy a fast modem. Anything less than 1,200 bps is going to be frustratingly low, and worryingly expensive. These days 2,400 bps is the norm, with 9,600 or even higher becoming more popular. A number of modems are available which have MNP error correction and/or data compression. Assuming the modems you are going to be contacting also support this, this can lead to effective transfer speeds far in excess of that which would be expected given the speed of the modem.

Understanding

The huge majority of modems are Hayes compatible. This simply means that they are capable of understanding a number of standard instructions sent by the computer, for example to dial a particular number, or to hang up the phone.

As most software copes with the Hayes commands, it makes life a lot simpler to stick to this protocol.

At the very least, pick a modem which has an auto-dial facility. This allows you to type in a telephone number to your computer, and the modem will then call it for you.

The alternative of dialling the number yourself, then pressing a button on the modem and hanging up the phone, is frustrating, and also means you have to be able to get at your modem, rather than having to hide it under your desk.

Faster than a speeding bullet

It may have seemed the speediest thing since Gonzales when you bought it, but maybe your ST could do with a fresh burst of speed.

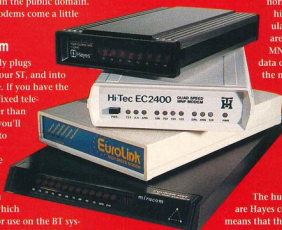
Your ST may be just what you need - you've got the software you want, the printer output is superb, you monitor fairly crackles, but you almost certainly just after a faster machine.

Luckily the hardware manufacturers of the ST community have come to your rescue and produced a number of accelerators which push your ST to its limits.

Some accelerators work by effectively replacing the 68000 processor used on the ST with a 68030 processor, as used in the TT. Others use a standard 68000 processor, but pushed to run at a higher speed than in your ST.

Make sure that the upgrade can be disabled, as there will almost certainly be software which will not run on your accelerated ST. Most accelerators will be able to be disabled, either via a hardware or software switch.

Check that the accelerator you are looking at will run the software you require! This may seem obvious, but there is no point in having a super-fast ST which doesn't run any of the software you own.



General pointers to buying ST hardware

Control accessibility
Whatever the product, check you will be able to switch it on and off, or adjust it, without having to crawl under your desk!

Mains cables
Ensure that there is enough mains cable to reach the plug socket from the position you are to position your new purchase.

Connecting cables
Make sure all the necessary cables are included, and make sure they are for the ST, or at least make sure you can buy the cables elsewhere, or make them up yourself, before forking out.

Size
Depending on where it is going to be positioned, remember to look at the size of plugs and the positions of sockets before working out whether the item will fit on your desk.

Guarantee
Unless you know exactly what you want, avoid boot fairs, auctions, etc. It may look a bargain on paper, but if it doesn't work with your ST it may as well be a pile of bar's gold!

Completeness
Make sure you know exactly what is included in the package you are

buying. Besides cables, do you need any particular software, or ribbons, cartridges, batteries?

Price
This may seem obvious, but check the price! Does the price quoted include VAT, delivery and so on? If you are buying from an exhibition, or browsing round several shops, take a recent copy of ST *Update*, and check the prices quoted against the advert. You can often use that as a bargaining tool to haggle a price lower.

Upgradability
If there is any possibility at all of you upgrading something, check out the cost before buying - it may be more economical in the long run to wait until you can afford exactly what you want, rather than buying what you can afford and waiting until you can afford the upgrade.

This year's model
"Beware the old model, for its resale value shall plummet like an arrow off Ayer's Rock."

If a manufacturer is releasing an updated model, the previous model will be cheap, and get cheaper.

Keep your eyes open, as there are a few things which increase the blood pressure like realising that what you bought last week is not not only out of date, but also half the price!

TANSTAAFL

There Ain't No Such Thing As A Free Lunch. If someone is offering three software packages and hotel accommodation in a third world country free with every widget, you are paying for it!

Before you go for the deal, make sure you want the packages, and the holiday, and make sure you know exactly what is being provided. The phrase "top wordprocessor" may simply mean a PD WP package which is available for a couple of quid.

Hogtie

In these days of economic brouhaha, the consumer is king. The British may be traditionally reserved, but take your wallet in both hands, defend on the price you want to pay, and go for it!

Mains warnings

Almost every piece of hardware you add to your ST requires some power, either drawn directly from the ST, or from the mains supply.

It is important that you check your mains connections properly, and fuse the plugs used before use.

With a complete ST setup, you could have six or more plugs all going off to one socket! This is not recommended.



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HCS STE and MEGA STE UPGRADES

HCS STE memory upgrade kits come complete with full instructions designed for the amateur. The complete job should take no longer than 15 minutes. 2 and 4 megabyte kits come with free utilities disk and multitasking software.

Upgrade from 520 to 1040	£13.99
To 2 Megabytes	£44.99
To 4 Megabytes	£84.99

ST(F)M and Mega ST upgrade kits

Xtraram Deluxe plug to upgrading system fits inside the computer. It can upgrade your computer in stages to 1Mb, 2.5Mb and 4Mb. The kit comes with comprehensive instructions designed for novices. The kit uses SIMMS, so is easily upgradeable.

Marpet Xtraram Deluxe

Quality SIMM Upgrading System

Upgrade from 520 to 1040	£44.99
To 2.5 Megabytes	£79.99
To 4 Megabytes	£119.99

Solder In Kit

Solder in kit upgrades 520ST to 1Mb 4 or 16 chips SMD or DIL types available. 16 chip c/w sockets. All c/w CAPS+ resistors + instructions.

Solder in kit (all versions)	£25.00
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REPLACEMENTS

The HCS power supply and disk drive upgrades come complete with fitting instructions and plug straight into the ST without soldering. The Power supply produces less heat than the original so is more reliable.

Replacement power supply	£39.95
Double sided disk drive kit	£47.00

ACCELERATORS

ICD AD Speed uses 68000 switchable between 16MHz with cache and 8MHz 100% compatibility. The 68030 SST runs at 50MHz with space for 8Mb memory incl TOS 2.

AD Speed ST	£145.00
AD Speed STE	£165.00
68030 SST-50	£550.00

INTERFACES

The "AdSCSI ST" ICD host adapter gives SCSI output from the STs DMA port, complete with software and full documentation, DMA cable and hard drive formatting software. Keyboard interface allows the use of PC compatible keyboards on the ST. Multirez allows the ST to display all 3 ST resolutions on the multisync monitor. The forget me clock sets your STs time and date with cartridge-through port.

AD SCSI	£69.99
AD SCSI with clock	£79.99
Keyboard Interface	£53.00
Multirez	£44.99
Forget Me Clock	£16.99

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- ★ Most repairs have same day turnaround on a booking system
- ★ Repairs charge includes labour and smaller items of repair ★ Atari registered
- ★ Ask for a TOS 1.4 upgrade at the same time as your repair for only £25.00
- ★ All repairs carry 90 day warranty ★ Courier collection/delivery £5.00 each way

MODEMS

The best data Smart One full featured modems have full industry standard compatibility including class II Fax protocol. All c/w PC software (fax software if applicable). 2400X gives V22bis, V22, V21, 9624 FX as 2400X + 9600 BPS fax + extra. Smart One 14400 comes with MNP level 1-5 and Fax capability. Using V42 bis gives a maximum effective throughput of 58000bps! All types come c/w cables. Straight fax supports most common graphic formats with fax drivers for Poststream and Calamus for immediate composition and send.

Straight Fax software	£45.00
Smart One™ 2400X	£59.99
Smart One™ 9624 Fax PC software only	£119.99
Smart One™ 9624 Fax with fax software	£139.99
Smart One™ 14400 Fax MNP V32, V32bis, V42, V42bis etc	£249.99

MONITORS

14" Super high resolution 0.28mm dot pitch monitor is compatible with TT, PC, Falcon and Multirez. The new HCS MM140 Monochrome monitor has tilt/swivel base and 14" tube. Fully compatible with all monochrome ST software.

Multisync colour monitor	£280.00
MM140 Monochrome monitor	£115.00

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Progate II 40	£288.88
Progate II 40DC	£349.99
Progate II 50DC	£349.00
Progate II 100 DC	£449.00

SPECTRE GCR MAC EMULATOR

Spectre GCR cartridge gives 20% more speed and 30% bigger screen area on the standard ST. Compatible with the TT.

SPECTRE GCR (Inc. 128K Roms)	£300.00
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Atari TT2	£1050.00
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HOW TO ORDER

Enquiries and credit card orders please Fax/Call on (081) 777 0751. Please phone for enquiries between 10.30 to 6.00 Mon to Fri. 10.30 to 2.00 Saturday. For mail order please send description of goods and cheque/PO to (sorry no postal enquiries):

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Dept 9, 35 Hartland Way, Shirley, Croydon CR0 8RJ
Prices include VAT and P&P. Goods normally dispatched within 2 working days.



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Repairs and service telephone number NOT MAIL
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Ladbroke Computing International are the longest established Atari dealer in the UK. We have developed an extensive customer service policy which involves testing all hardware prior to despatch to ensure that goods arrive in working order, offering free advice and support over the phone and keeping customers informed. Although our prices are not always the cheapest we do endeavour to offer consistently good service and value. All prices are correct at copy date 18/09/92 (while stocks last) and are subject to change without prior notice. All prices include VAT but exclude delivery. Add £5 for next working day courier delivery; add £10 for Saturday courier delivery (maintains UK only). Add £3 for postal delivery only on items under £30 (check with staff before ordering). All prices available on Mail Order Shop: prices may differ Shop/Mail order premises: 33 Cromwell Road, Preston, Lancs. PR1 2JF. Open Mon-Sat 9.30am-5.00pm. Phones answered from 9.00am. Ladbroke Computing International is a trading name of Ladbroke Computing Ltd. BPPC addresses overseas: direct BS24 VAT and add normal UK carriage.



Data/Pulse Plus

The Data-Pulse range has recently been re-designed. The Data-Pulse Plus range now offers a more compact case that cuts down on noise even more, all ports are marked, an extensive range of software utilities are now included and our range of special offer utilities has been expanded confirming our commitment to future support. We are continually improving the quality and price/performance ratio of our drives. We have recently incorporated the MAXTOR hard drive mechanisms which offer low power, cached 1ms access time, 127Mb formatted capacity, 150,000 Power on hours mean time between failures and all for a lower price than our old 105Mb drives.

- ✓ All drives are formatted/partitioned and tested ready to "plug in and go".
- ✓ Extremely low noise.
- ✓ Fully Autoboosting and Autoparking.
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- ✓ DMA Out port for delay chaining extra drives/laser printer.
- ✓ Full metal case measuring 300mm x 265mm x 51mm (w/h/d), providing good shielding and monitor stand.
- ✓ High quality ICD boards including on board clock and controller software.
- ✓ All drives include Vast archive, Backup programs, Virus killer, MCP shell program, Midstate Visual demo.

Data-Pulse Plus 42Mb ICD	£ 289.99
Date-Pulse Plus 65Mb ICD	£ 379.99
Date-Pulse Plus 127Mb ICD	£ 429.99
Date-Pulse Plus 213Mb ICD	£ 539.99
HD Turbocall II	£ 4.99
Diamond Back II	£ 29.99

Data/Pulse vs. 20 Mb Floptical

The new Data-Pulse Plus Floptical drive is a 35" SCSI mechanism, ICD host adaptor, high quality Data-Pulse Plus case and pos. The drive is capable of storing over 80Mb of data on a single 35" Floptical disk and can read 720K and 144K 35" floppy disks. The average access time is just 60ms and the transfer rate is 20K per second. It times faster than floppy disks. The Floptical is available either as a stand alone unit or as an upgrade to new and existing Data-Pulse Plus users where it would be ideal for fast data backup from hard drive.

20Mb Floptical £439.99

20Mb Floptical disk £24.99

Floptical upgrade to Data-Pulse Plus (IPlus) HD £319.99

Unlimited Storage capacity

Data-Net Network

Data-Net is a high speed network solution developed in house at Ladbroke Computing for the ST/STE. Ladbroke's Data-Net hardware consists of an unobtrusive cartridge which plugs into the cartridge port of your ST/STE and connects to other nodes via Coaxial cable and BNC connectors. The Data-Net hardware is fully Lantech compatible and can be used with the Universal Network Software.

The Universal Network software is a Multi tasking network package which does not tie up a server whilst drive or printer accesses take place. It allows the sharing of Hard drives and Centronics printers anywhere on the Network. Nodes can also Auto boot accessories from a host's hard drive.

Data-Net & Network Software

New Price

Datanet network node: consisting of 1 Data-net cartridge with Universal Network software. Per node just

£99.99

Mid-Net hardware Starter £80

Mid-Net hardware Node £30

Lan-Net hardware Starter £80

Lan-Net hardware Node £40

Atari Lynx 2

Lynx 2 (Console only)

£79.99

Lynx 2 console+Batman returns

£89.99

Lynx soft cases

£9.99

Cornyx/cab case

£6.99

New Battery pack

£9.99

Lynx 2 survivor

£5.99

Phone for Batman Returns, Ultimate chess, RoboMan, Shanghai, Chips challenge, Xyloids, Rock Raiders, Wing chik, Chequered flag, Ninja gaden, Paperboy, Turbo sub, Xenophobia, OX, Robo squash, Tournament cyberball, Mc Pac Man, Bill and Ted's excellent adventure, APEL, Warbirds, Scrapyard dog, Stun runner, Hard drive, Snake world, Electrocop, Crystal mms II, Toki.

ST Secure

ST Secure is a hardware protection system for the Atari ST which stops unauthorised use of your computer and any hardware connected to it. ST Secure measures just 1 inch square and can be installed without soldering in about 30 minutes. Once installed ST Secure will allow approximately 45 seconds of computer use before resetting the computer if during this time the password is entered correctly then ST Secure is disabled until the next power up.

Now Only **£11.99**

885 ST Format 37

Silhouette

Silhouette is a bit image and vector graphics drawing program with Auto-Tracing. The package offers Auto-Tracing, Bezier, B-splines, High resolution gray scales. Supports FSM-GDOS, requires 1Mb ST or TT. High resolution graphics, ICD, DEGAS, TMS, MacPaint, GEM, SFG, Exports: IKG, GEM, I3, SFG, DXF, EPS, Postscript.

Only **£60**

Phone for details of Scanlite accessory which allows direct scanning. The accessory supports Golden Image, Migraph, GenScan and DATAscan Hand scanners.

ST Repairs

Our Service department can repair ST's in minimum time at competitive rates. We can arrange for fully insured, courier pickup and return delivery of your machine to ensure it's safely. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day. We can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc.

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

Quotation	£ 15
Min repair charge	£ 35.25
Courier Pickup	£ 11
Courier return	£ 6
Same day service	£ 15
STFM(E) PSU	£ 39.99
1Mb internal drive	£ 39.99
A/B Boot switch	£ 4.99
TOS 2.06 STFM	£ 65
Phone for price and availability of ST spares	

Aries Upgrades

Aries Upgrades (any ST/FXIM)

512K Aries board	£ 39.99
2Mb Aries board	£ 79.99*
4Mb Aries board	£ 129.99*
Courier pickup	£ 11
Courier return	£ 6
Fitting charge	£ 15
Same day charge	£ 15

Please check the configuration of your machine before ordering. The Aries 2Mb and 4Mb RAM upgrade boards are also compatible with the Mega ST series.
* = Special offer for limited period only

Aries SIMM's STE/Mega STE

512K SIMM's upgrade

Upgrades 520STE to 1Mb (1024K)

Consists of 2 Single plug in memory upgrade boards, complete with upgrade instructions, memory test disk, comes packaged in 10 capacity 3.5" clear disk box.

Only **£11.99**

2Mb SIMM's

£42.99

as opposite but with 2 1Mb plug in SIMM boards.

4Mb SIMM's

£92.99

as opposite but with 4 1Mb plug in SIMM boards

The NEW

Brush

Mouse

- 150 Dpi resolution
- Opto/Mechanical Mechanism
- 500mm/SEC Tracking speed
- Switchable between ST/Amiga
- Direct mouse replacement
- The natural way to draw. Can be supplied with one of the very best art packages available for the ST today, Deluxe Paint (includes full package with manual)

Golden Image Brush Mouse complete with Deluxe Paint Art package:

£24.99

Golden Image Brush Mouse (No software):

£19.99

ST Format 88% issue 37

Golden Image Hand Scanner

£119.99

- 100, 200, 300, 400 Dpi scanning resolution
- 105mm scanning head
- 1 letter mode, 3 photo modes
- Includes Touch Up: The excellent scanning and editing package for preparing scans for DTP
- Includes Deluxe Paint: The excellent art package which includes animation facilities.

The Golden Image Hand Scanner for the Atari ST features a 105mm scanning head, variable contrast control, user selectable scanning resolutions of 100, 200, 300 and 400 Dpi, one letter mode for high contrast B/W images and 3 photo modes for various shades of gray. The high quality hardware is backed up by two of the most respected graphics packages around, Megapix's Touch Up for scanning and editing hi-res and grey scale images and Deluxe Paint art package for lower resolution colour.

Silhouette E80 is a bit image and vector graphics program which features Auto Tracing (the ability to convert resolution dependent bit images to resolution independent vector images) and full file compatibility with the Golden Image Hand Scanner.

Scanlite E20 is an accessory which allows a range of hand scanners including the Golden Image Hand Scanner to scan directly into packages such as Megapix II and Costesce.

Costesce E60 is a software package and tray to allow full A4 scanning using the Golden Image and other Hand scanners.

Jin Mouse

Don't be deceived by the low price of this mouse. Mass production of the Jin mouse has resulted in a high quality Opto/Mechanical replacement mouse for the ST featuring 290 Dpi resolution, 500mm/sec tracking speed, Anti-static silicone rubber coated ball.

Only **£9.99**

Switchable version ST/
Amiga **£10.99**

Golden Image Products

From Ladbroke Computing

Opto/Mech Mouse

- 290 Dpi resolution
- Microswitched buttons
- Anti static silicone rubber coated ball
- Mouse mat included

The Golden Image Opto/Mechanical Mouse offers Microswitched buttons for greater reliability and crisper, more positive response.

Only £14.99

Golden Image Optical Mouse

- 250 Dpi resolution
- 500mm/sec tracking speed
- Fully Optical Mechanism
- Mouse mat included
- Switchable ST/Amiga
- The fully optical mechanism is very reliable as it does not have any moving parts.

The Official Golden Image Optical Mouse is a high quality 3 button, replacement mouse. The fully optical mechanism means no moving parts and offers far higher reliability than opto/mechanical mice.

Now Only
£24.99

Golden Image External 3.5" drive

- Double sided double density 3.5" Floppy disk drive.
- New Low price (Now no track counter).
- External Power supply unit.
- Daisy chain through port for compatibility with STM machines.

The Golden Image External 3.5" Floppy drive for the Atari ST(F)M and STE machines features 720K formatted capacity, double sided double density. Through port compatibility for older ST/STM machines, external power supply unit.

Only
£59.99



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FAX (0772) 561071



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Emulators

PC Speed(XT)	£ 79
Please state version you require, STFM or STE.	
AT Speed STFM	£ 129
AT Speed STE	£ 139
Includes DR DOS	
AT Speed C16 STFM	£189
AT Speed C16 STE	£ 199
AT Speed C16 Mega STE	£219
Includes DR DOS 5, Socket for 80C287 Co-Processor Norton folder of 82	

Our service department can fit the above emulators for £30 including courier pickup and return.

STE Packs

The 520STE Start Pack includes: Battlezone, Crystal Caves, Missile Command, Super Breakout, Necromancer and 4 word.			
520 STE Start Pk	£ 229	520 STE Discovery II	£ 219
1Mb STE Start Pk	£ 239	1Mb STE Discovery II	£ 229
2Mb STE Start Pk	£ 274	2Mb STE Discovery II	£ 264
4Mb STE Start Pk	£ 320	4Mb STE Discovery II	£ 310
The 1040STE Curriculum Pack includes 3 packs of Educational software catering for Sps to GCSE. A creatively pack consisting of Hyperpaint and Music maker software, 2 games, Slides and Starbreaker.			
1040 STE Curriculum Pack II	£ 275		
The Mega STE includes detachable keyboard, switchable 16/8 MHz; 6800 CPU, Maths co-processor socket, LAN port, TV, Styling, VME Bus. We can fit extra RAM and hard drive mechanisms controlled by the KCD host adaptor to the Mega STE 1 to give superior specification than Atari's Mega 2 or 4.			
2Mb Mega STE	£ 459	520 Mega STE with 42Mb Hard drive	£ 675
2Mb Mega STE with 85Mb Hard drive	£ 659	2Mb Mega STE with 85Mb Hard drive	£ 750
4Mb Mega STE with 85Mb Hard drive	£ 790	4Mb Mega STE with 127Mb Hard drive	£ 860

Pision 3

Pision 3 128K	£ 189
Pision 3 256K	£ 234
The Pision 3 pocket computer is a 85 bit computer with graphical windowing Multi tasking operating system. It has 2 slots for additional plug in solid state memory up to a total of 4Mb. Built in applications include fully featured Word Processor with style sheets, Database, Calculator, To Do Manager, Time and Alarms, Word information (mailing codes etc), Agenda and OPL programming language.	
Parallel interface	£ 28
Serial RS232 i/face	£ 64
Pision 3 PSU	£ 14
128K RAM SSD	£ 74
512K RAM SSD	£ 184
1Mb RAM SSD	£ 274
128K Flash SSD	£ 37
65K Flash SSD	£ 24
512K Flash SSD	£ 109
1Mb Flash SSD	£ 184
2Mb Flash SSD	£ 274

Disks

10 bulk disks	£ 4.94
50 Bulk disks	£ 20
100 Bulk disks	£ 38
10 TDK Brand	£ 5.99
10 High Density	£ 9.99

3.5" Disk Boxes

10 Capacity	£ 1
20 Capacity	£ 1.99
40 Capacity	£ 4.99
100 Capacity	£ 7.99
120 Capacity	£ 9.99
Disk head cleaner	£ 4

The NEW FALCON 030

The new Atari Falcon computer is based on a 32 bit Motorola 68030 processor running at 33MHz. The model has 1Mb of RAM (upgradable to 4Mb), High Density 1.44Mb Disk Drive, 8 channel 16 bit CO quality DMA sound chip, 56001 Digital Signal Processor running at 32MHz for sound and graphic applications, 65536 colours on screen in low res, 256 colours in VGA mode, SCSI II bus, Multi TOS multitasking operating system, Microphone input for sound digitising, Stereo headphone socket, Local Area Network port.

Falcon 030 1Mb RAM, No HD	£479.99
Falcon 030 4Mb RAM, 65Mb IDE HD	£879.99
Phone for IDE HD's, SCSI HD's, VGA Monitors etc.	

Accessories

Wire printer stand	£ 8.99
LC10 mono ribbon	£ 3.99
LC10 Colour ribbon	£ 7.99
LC24/10 ribbon	£ 7.99
LC200 Col ribbon	£ 14.99
LC24200 Col ribbon	£ 14.99
Starjet SJ48 ink cartridge	£ 16.99
SLMB04 Toner	£ 39.99
200 sheet printer pack with Citizen drivers	£ 9.99
LC200 Dustcover	£ 7.99
LC24200 Dustcover	£ 7.99
ST Dustcover	£ 3.99
8833MKII Dustcover	£7.99
Forget Me Clock II	£ 17.99
Vidi ST	£ 99.99
14" Monitor Stand	£ 9.99

Atari Monitors

Atari SC1435 Stereo Colour Monitor	£ 209.99
Stereo, Colour monitor includes green screen feature, cable, and 10/20/40/60 Hz.	
Philips 8833MKII Stereo Colour Monitor	£ 189.99
Stereo Colour monitor includes Lotus Turbo challenge II and 12 months on site warranty.	
Philips 15" Scart, Fastext, Cube TV	£ 259.99
Includes FST remote control. Scart input giving near monitor quality display, 60 tuner presets, sleep timer and Restext.	
Philips 15" Scart TV	£ 219.99
6" FST Remote control Scart input TV	
ST or STE Scart cable, please specify (when bought with Tv/Mon only)	£ 9.99
8833 MKII to ST or STE, please specify (when bought with Tv/Mon only)	£ 9.99

Printers

StarJet LC-100 Colour	Star LC24-100	Starjet SJ-48
£85	£79	£210
9 Pin printer	24 Pin printer	48 nozzle Bubblejet printer
100 cps high speed dwt/45cps NLQ	102 cps/84 cps	Fully portable
4 Resident NLQ fonts	10 Resident LG fonts	Epson & IBM compatible
Electronic Dip switches	18KB Buffer	100cps/2 Resident LG fonts
Quiet Mode	Electronic DIP switches	Near laser quality output
Auto emulation change	Compressed data mode	Sheet feeder available £59.99

Star LC24-20 £ 189 Star LC24-200 Colour £ 259
 Star LC-24 £ 124 Star LC-200 Colour £ 179
 HP Deskjet 500 £ 369 HP Deskjet 500 Colour £ 549
 Please add £3 for cable and £5 for next working day courier delivery.
 All Star dot matrix printers include FREE 12 months on site warranty.

Ricoh LP1200 400Dpi Laser Printer £759.99

- ☑ Fully HP LaserJet II compatible
- ☑ Smooth Edge output
- ☑ 400Dpi Resolution
- ☑ 2Mb RAM on board
- ☑ Serial and Parallel ports
- ☑ 1 Year on site warranty

Portfolio

Atari Portfolio	£ 129
The Portfolio Pocket PC has 128K RAM expandable externally to 640K, MS-DOS 2.11 compatible operating system, 5 built in applications including Lotus 123 compatible Spreadsheet, Calculator, Text editor, Address book and dialer and a Time manager.	
Pocket Modem	£ 219
200 baud Hayes compatible modem. Auto answer & wake up modes, telephone lead supplied.	
Serial RS-232 i/face	£ 55
Parallel interface	£ 39
Portfolio PSU	£ 11
64K memory card	£ 84
128K memory card	£ 129

Cables

Centronics printer	£ 4.99
STE Scart cable	£ 14.99
STFM Scart cable	£ 14.99
STE 8833MKII	£ 14.99
STFM 8833MKII	£ 14.99
Null Modem lead	£ 9.99
Mouse/J/S ext	£ 5.99
Monitor switch box	£ 24.99
Scart cables listed only compatible with Philips TVs/monitors.	

Tel: (0772)

203166

Fax:

(0772)

561071

Special Offers

PRO 5000 Joystick
 £7
 SM124
 Dustcover £2.99

Slow sales for Mega STE

Mega STE - it's here at long last and what's it like? Well it's fast, versatile, powerful, available now. And what isn't it? Selling.

The reasons are quite simple - it costs too much and everybody is waiting for the Falcon.

Atari can fix the first problem. Just reduce the price. Yes I know it cuts into their profit margins but compared with the average PC clone, the Mega STE is overpriced and under-powered.

The second problem is much harder to solve. Atari can't deliver the Falcon on time. They know that. We know that, yet we all keep our money in our pockets, waiting for this machine that's been promised to us for so long.

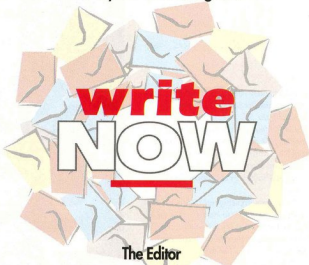
Based on previous performance, the Falcon is not going to appear in this country in any quantity until this time next year. Just look at the effort it took Atari to release the Mega STE and TT.

How many botched releases, how many hardware problems, how many supply problems, how much messing around until you could actually buy one? Does anybody think the launch of the Falcon is going to be any easier?

Why does this matter? Well it matters because it is killing sales of current machines.

Who in their right mind would buy an STE or Mega STE when all the signs indicate that this world-beating Falcon will be here early next year? How many Christmas sales will be put on hold wait-

Got anything to say to the ST community? Send your scribblings to:



The Editor
Write Now!, Atari ST User,
Europa House, Adlington Park,
Macclesfield SK10 4NP

ing for this wonder machine to arrive?

And all the time there will be a steady attrition of potential buyers migrating to PCs, Amigas and Macintoshes. Only die hard ST owners who need a new machine now and can't wait any longer are going to buy.

What is the solution? Atari must either launch the Falcon now, or dampen down speculation with a good

Mega STE price cutting and promotion campaign. This limbo we're currently in will do Atari immense harm otherwise.

I am not a doom and gloom merchant really, but sometimes the obvious has to be said. Despite owning what is likely to be the forgotten machine - the Mega STE, didn't you guess - I wouldn't be disappointed if the Falcon hit the High Street tomorrow. At least Atari

would make some money. Promising a pipe dream has the opposite effect, and if Atari go down then where are we?
Roland Givan, Brentwood

The Mega STE, it would appear, has no life in this country. When ST enthusiasts wanted it, Atari were shipping it into practically every country you could mention except Britain.

And when it did sneak in, the only way Atari promoted it was with three or four thin leaflets outlining "serious" ST/TT applications. Incidentally, I've never seen these outside Atari.

Pricing is important, but more importantly there has to be awareness of the product. If you weren't part of the ST community and have an interest in its future, would you have ever heard of the Mega STE?

How many times have you looked in business computer publications and seen advertisements for the Mega STE or TT?

You're concerns about Falcon are similar to many that we've been hearing from readers and industry figures. Atari say they can deliver Falcon during October - we will have to wait and see whether it shows

Pleasing printer service

So often I read in magazines, and not just computer magazines, of bad service from mail order companies. Well I am

Positive PC view

I am writing to congratulate you on the new style of your magazine. Its content has improved dramatically over the last few issues, becoming more professional and not just another games mag.

However, I wish to take you to task over a couple of matters. Firstly, any discussion about a choice between the ST and the PC has, unfortunately, fallen into that very outdated trap of comparing the ST against the PC on price.

Pound for pound the PC is, at the moment, far better value than the ST - yes I know that is not something we like hearing but it is true.

With the marketing deals available at the moment it is much cheaper to buy a PC because ST users have to buy their hard drives and monitors separately, and at no small cost either.

I am an ardent ST fan and recommend it whenever asked about computers, but no longer can the cost argument be used against Big Blue and its imitations.

Rather, I explain how much easier the ST is to use, how intuitive the operation of the programs running under GEM are and how old-fashioned and unfriendly MSDOS is.

In other words, explaining the virtues of the ST against the negatives of DOS. I hope we will see more articles along this line, not using the tired old one of cost in future.

Finally, it was great to read your praise of the PD software ST Writer Elite - this is typed on it - and that you use it yourselves at the offices.

The PD pages keep me informed of new items but may I make a suggestion? Why not pick out a couple of those reviewed and include them on the

CoverDisk? At the same time could you not increase the amount of space given over to the PD scene. In any event, keep up the good work - you're getting more like the old ST World every issue, and that's praise indeed!

Anon, Guildford

It makes a nice change to receive a letter putting forward an argument in favour of the ST. As you have illustrated there are advantages of both the ST, the PC and, yes, the Amiga.

But while you are right to say MSDOS is unfriendly compared to GEM, most PC users are today using 386 or 486 machines and Windows - this software makes PCs much easier to use.

Thanks for your kind words about the magazine. Like many other readers you are particularly interested in the public domain pages, and would like to see an increase in its coverage.

It is a possibility I am looking at, but unfortunately because there are fewer and fewer PD releases as each month passes the software reviewed could not be new.

We try wherever possible to put the latest software on our CoverDisk, but when a library takes the trouble to send us a disk for review I am reluctant to copy it straight on to our CoverDisk.

In the short term our readers would benefit, but in the long term libraries would receive fewer orders, meaning less revenue, and I'm sure it wouldn't be long before many closed. That would be a disaster for us all.



not writing to complain, but to praise. I sent for a new printer, the order being sent off on a Friday. I received the printer on the following Tuesday. Yes, the Post Office and Securicor did their part, but falls must go to one of your advertisers, WeServe of Portchester, Hampshire. I telephoned them to say thank you, and to tell them that the first letter printed on my new printer would be to you, singling their praises. I would recommend them to anyone.

Re Spinner, Durham

A great number of software and hardware manufacturers and suppliers give their customers a first class service, but nevertheless well done WeServe

Conversion costs take over

In the letters pages of the September issue of your magazine, Mr Mills of Andover asks why you don't consider producing quality software for the Atari ST, mainly games which software houses have stated that they are not going to convert.

He names Eye of Beholder and Monkey Island 2 as two examples. In reply you state that you publish magazines and are not a software house.

Why then is Easy Amos for the Amiga produced by Europress Software, with an address remarkably similar to Europress Enterprise in Macclesfield?

Would you care to rethink your reply to Mr Mills in view of this? On the face of it, it appears that even Europress are deserting the ST. I hope not.

Clive Booth, Derbyshire

My original answer still stands, Clive. The letter asked Atari ST User to convert the games for the ST and not Europress Software, our sister company.

You mention that our software division

ATARI ST USER online

We can be contacted on several bulletin boards and conferencing systems. If you have anything to say, why not get it off your chest online?

Speak to John Butters on the following services:

CIXstuser
Compuserve.....75300,1505
Prestel999900386



publishes Easy Amos for the Amiga, and suggest that the Europress Group are deserting the ST.

Remember, we continue to publish two monthly ST magazines - Atari ST User and ST Action - and our software house wrote and recently updated STOS, the very popular games creation software for the ST.

Publishers deciding not to convert their software are doing so because sales of ST games have fallen back to a level where they sometimes don't even break even financially - or so I'm told.

True, these software houses are deserting the ST, but at the end of the day if today's firms are to produce games for Falcon in a year or so they have to stay in profit now.

Entering the games arena

Back in 1987 I bought myself an Atari 1040ST and a black-and-white monitor for the sole purpose of running the Steinberg Pro-24 Midi software.

Indeed that is still all that I have used to my, but now the time has come to fully utilise my ST, and I thought ST User could give me some advice.

Primarily, I would like to be able to play some games on my computer. The games that I want are for two players - that is, I can play the computer or play a friend using a second joystick. Could you recommend a pair of mid-price joysticks?

The games that I want are a football game and a boxing game. Do you have any suggestions? I would also like to buy a Rambo-type game of mindless violence where I'm not too bothered about the two-player option. Any ideas?

Steve Hallett, Surrey

The pros in the office don't let their Zip Sticks out of sight. They are likened to a dog's sexual organs, so, Steve, I'll let you decide whether you want them in your pants.

As for games, Panza Kick Boxing from Kixx and Renegade's Sensible Soccer should keep you and a friend happy for some time.

For a good game of mindless violence look no further than Smash TV, a budget-priced Ocean game. Taking part in a TV game show, your aim is to blast people to pieces.

CONTENTS

ATARI ST USER

It's not what you know - it's who you know!

TECHNICAL PROBLEMS

We are happy to answer your technical problems in our Advice Service section. Send your letters to **Advice Service** at the address below

NEWSDESK

If you have a news story, send it to **John Butters** at the address below. If your story is URGENT call him on **0625 878888** during office hours

GALLERY

We are always on the look-out for good ST art. Send your work to **ST Gallery** at the address below

WRITE NOW!

Got something to tell other ST User readers? Send your general letters to **Write Now!** at the address below

COMPETITIONS

Enter competitions using the details on the form. If you have any enquiries connected with our competitions, contact **Lucy Oliver** on **0625 878888**

PUBLIC DOMAIN SUBMISSIONS

PD libraries are welcome to submit their latest releases. Submissions should include a detailed list of what each disk contains. Jiffy bags to **Darren Evans**

ASPECTS

Our Aspects authors can be contacted via ST User. Please mark any correspondence clearly and send it to the address below

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Have you ever wondered how it is possible for companies to be able to have a sale where they slash the price of products and still make money?

And, if they can do it at sale time or more typically just after you've bought a product at full RRP, can't they do it when you want to buy something?

Well the answer is yes and has to do with margins, that is how much everybody makes in the selling process. Knowing how tight margins are for dealers will help you negotiate a better deal and thus better prices.

For starters, an understanding of how products get from the manufacturer to you will help. There are hundreds of thousands of people, just like yourself, who buy ST hardware, and peripherals.

To sell these computing products to you and others a large number of dealers and mail order firms have sprung up across the UK.

Staff

Like any company, the less staff a hardware manufacturer or software developer has to employ the cheaper it can produce its products for.

Naturally, for such a company to "service" this huge base of dealers requires a large work force of sales staff, administration teams and support personnel. For this reason a second layer of suppliers have appeared.

These companies take the product direct from the manufacturer and supply the nationwide dealer base. They are known as distributors and supply only to the trade – there are fewer than 50 such organisations in the UK, and they are all fairly large (much bigger than the average dealer).

So now we have it – between you and the original developer there is a distributor and then a dealer. Both take their share of the RRP price that you pay.

Now the important part. The dealer pays a sum to the distributor for the products he buys. Then he adds an amount to this – covering his or her costs and making a small amount for profit – and sells it to you.

The amount they add usually brings the price up to a retail price set by the original developer but it is completely up to the dealer if this is the case.

Sometimes they add less, thus making themselves less money but allowing them to undercut their competitors and hopefully attracting more customers. How the dealer sells the product will also determine the price.

Mail order companies, because they don't have to pay for costly shop space and keep products on display, can charge less – which is why mail order prices are typically lower than shop prices.

I should add, however, that there are advantages to you in buying from a dealer with a shop rather than just mail order operations and these can often justify the slightly higher price.

So when buying the product, if the seller is quoting the RRP you will probably be able to haggle them down a little bit on the price – after all they would rather gain a sale and make some money than lose it completely.

In fact a great many of the larger dealers who only advertise RRP's often have a price match service for just this reason.

Those companies advertising at reduced rates have already discounted to some extent before you even talk to them. As such they are starting on a lower margin and thus are less likely to

be open to negotiation on price.

A point unconnected with your buying price but worth consideration is that those companies consistently advertising at prices well below RRP's are running on very tight margins.

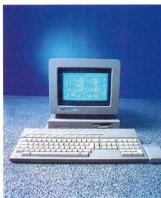
As such they won't have that much money and in some cases may skimp on the after sales support or have no intention of being around for long.

Basically, while it's OK for you to talk a dealer down, be careful of those who appear to be advertising at ridiculously low prices.

Power

Another way you can often get a good deal is to simply ask. Bigger dealers and organisations have considerable buying power and can force their suppliers to reduce their selling price (a technique you can use as shown later on) or buy "end of line" stock – all dealers occasionally have ex-demo stock or re-boxed product.

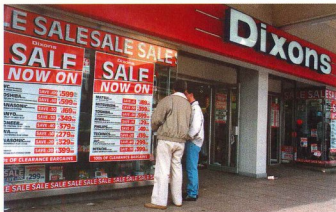
End-of-line stock is particularly good value. For instance, when the Mega ST was discontinued to make way for a new model, a large dealer would bought all of Atari's final stock for less than normal and then sold it off cheaply. In this way Atari clear their warehouse to make way



Old stock such as Mega STs can be often picked up cheaply

for the new product, the dealer sells however many it bought, making a quick killing in the process and you, the user, get a good product for a low price – everybody gains!

Promotion offers are the old favourite of the sales and marketing staff. Using the Mega ST in yet another example, imagine that it hadn't been the success it has been and had in fact flopped.



High Street sales are an obvious place to start looking for bargains

Buying hardware at the lowest possible price is easy when you know how. Keith Milburn has some pound-preserving advice



Getting the



With more and more High Street computer shops prices should become competitive

Atari would now need to sell all the mass product stocks it had. A favourite remedy is to slash the price - providing you know the product is OK for your requirements, you can once again get a good product for a low price.

In all circumstances, however, ensure that the product has a full warranty and parts will continue to be available. Reboxed or cosmetically damaged stock is particularly open to abuse and more likely to fail, although in my experience

this is very rare!

In most cases the casing may be slightly scratched while being demonstrated, or the packaging dented when someone carrying it walks into a bench corner etc.

Negotiation

It is then not possible to sell it as new and it needs to be sold off as quickly as possible (no one wants piles of damaged stock occupying valuable space). Prices on such stock can frequently be negotiated down further given the right techniques.

This brings us neatly to the next topic. There you stand in front of an eager sales assistant or maybe sitting down on the phone to a mail order firm.

You've explained what you want, and the firm's representative has given you their price. How do you go about getting their price down?

Well the first technique should start even before you've approached your dealer. Pick-up your favourite ST magazine and note down the advertised prices of the item you are interested in from other dealers.

Approach

Now approach your chosen dealer, when it comes round to pricing time point out that other dealers - hopefully in the area - are selling the same product for less and if necessary give details.

At this point, with hardware at least, you'll need to make a choice. Many dealers will offer you some form of soft-

ware pack free of charge instead of a lower price.

These packs take the form of giving you a greater saving, than if the software is bought separately, over the saving you will make on buying the hardware from a cheaper competitor.

Whether you want to save more there

and then by going for the cheaper dealer's hardware or save more in the long run on software costs is your choice. I'd recommend the long run saving personally.

If you have no straight competitive price advantage to play with, and you are fairly confident, you can try to bait the sales representative with a question. Something like: "Why should I buy from you rather than a High Street multiple?" for example will occasionally result in a volunteered price drop.

Other techniques you may like to try are joining forces with your friends and buying two or more units at once - offering to buy a lot of other products, such as a printer or monitor, with the main hardware to increase the overall order value. Some dealers will happily reduce the individual price of the items in return for a greater sale value.

If you're looking for a really good deal, then there are few better places than computer shows. The specialist computer shows, like the International Computer Show, are great places for bargains, especially on the last day when the traders are looking to rid their stock and thus avoid taking it back.

All the above techniques can be used at shows, usually to even greater effect and there are often some truly fantastic offers to be had.

A final last resort, and one only available to a few, is buying through your company. Many ST dealers have corporate sales teams who sell, not surprisingly, to corporates and large companies.

If the company you work for uses computers you could ask the purchasing department to approach the dealer in question and try buying it at this level for you. As I've said, this route is only open to a few, but if you can do it do so, it is worthwhile.

At the end of the day there is a simple rule to follow when try to get a good deal out your dealer. Remember that they are, after all, there to make money - if they don't they won't be around, and you'll lose out.

So when negotiating, give them room to move and play fair. If you make them a reasonable offer, most dealers will be happy to work with you - let's face it, you need them and vice versa!



Even music shops are offering incentives - in this case 1Mb in Discovery Xtra

right deal

This month we'll tackle the only part of the program we haven't explored so far – the Edit facilities. These are generally the most complex part of any sequencer and Midistudio is no exception. However, they are as easy to use as we'll see.

All operations in the Edit window are performed on the Current Phrase which appears in the Current Phrase box. You can drag a new Phrase here for editing from the List or Arrange windows.

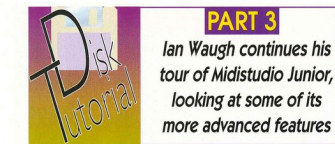
Parameters

We saw how to move through the edit display in the first part of the tutorial. Alter numeric parameters by clicking on them. Del, as you might guess, deletes the current event although you get a warning dialogue box to prevent accidents.

The two <Ins boxes are used to insert events before or after the current event. But first you specify which type of event you want to insert from the list above and below the <Ins boxes:

Aft – Aftertouch. Not all keyboards support Aftertouch. It is a message generated by pressing down on the keyboard after playing a key to add vibrato to a sound but it can also control other parameters.

Bend – Pitch Bend. This can take any value from 0 to 16,383 but it is represented by two data bytes. Settings of 0 and 64 are the mid-values which means no bend. In the program the second entry is the coarse byte. Alter this one



Midistudio Junior

and fine tune with the other if necessary. Sixty-four is the mid-value which means no bend.

Normally, a continuous stream of data is used to bend a note up and back



Midistudio Junior's Edit window

down to pitch, or vice versa. However, you can produce bend effects with just a couple of entries.

Cancel any bend with values of 0 and 64 otherwise the Phrase will Play out of tune. The adventurous can use this to create micro tonal pieces!

The first Pitch Bend entry in the event list gives the first note a lift. The second one resets the pitch so the rest of the Phrase plays in tune!

The boxes on the extreme right of the window let you play back the Phrase either from the beginning or from the Current Event. Playback will loop from the start point to the end until stopped, allowing you to make changes on the fly.

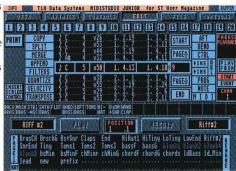
Playback

The Channel box at the bottom can be used to select the MIDI output channel for Phrase Playback.

Any changes you make in the Edit window are permanent – a copy is not stored in the Buffer automatically but you can store a copy in the buffer prior to editing.

Clicking on the Print box gives you the option of printing the Page – which consists of the events you can see in the edit window – or the entire Phrase.

● Next month – Power User hints and tips!



A glossary of edit functions

We looked at Quantise in the first part of the tutorial. Here are the other edit functions:

- Copy** Creates an identical Phrase with a different name.
- Split** Splits a phrase at a specified bar and beat position.
- Merge** Merges the Current Phrase with a destination Phrase. The Current Phrase is unaltered and a copy of the destination Phrase is saved to the buffer.
- Append** This joins the current Phrase to the end of a destination phrase. As with Merge, the current Phrase is unaltered.
- Filters** This lets you remove certain events during or after recording. Events with the filter on in the Auto column are removed during recording (actually they're removed just after recording), those set on in the Exec column are removed from the current Phrase when you click on Exec.
The exception is the Auto filtering of Aftertouch during recording for which you do not need to click the Auto box.

You can filter all Controllers or select one by number. Two events are always filtered out – Active Sensing and All Notes Off. We mentioned All Notes Off last month.

Active Sensing is a message put out by certain instruments about three times every second saying 'I'm here!'. If a device receives an Active Sensing message and then stops receiving it, it assumes there's been a break in communication and switches off its notes.

Some instruments may also reset to power up status. This can cause a lot of confusion so Midistudio filters out Active Sensing messages completely.

Quantise We covered quantisation in the first tutorial.

Velocity The Incr/Decr All By area lets you add or subtract a value to all the notes in a Phrase. It keeps the highs and lows the same but alters the overall velocity level. Alter the value by clicking or dragging the slider.

The Abs Level All At will set the velocities of all the notes in a Phrase to the same value. This has Auto and Exec boxes which work in the same way as in other functions, for recording or immediate use.

The Rand box on the right will randomly

allocate velocity values between lower and upper limits to a Phrase. This can help humanise a music line, especially drums.

The Scale function produces a gradual change between two velocity values. The change runs from the start to the end of the Phrase. Use it to produce a fade in or fade out.

Transpose This transposes the pitch of all the notes in a Phrase and works in a similar way to the Incr/Decr Velocity function.

Insert Scaled Control This works in a similar way to the Scale Velocity function.

You must specify the Controller number, how often it is to be inserted in clicks and the values it is to be scaled between. For example, the following would produce a fade in:

```
INSERT CONTROLLER 7 EVERY 4 CLICKS
SCALED BETWEEN
FROM: 0 TO: 127
```

As this is volume as opposed to velocity data, the fade in would be shown by the faders on the Desk. Some instruments use Controller 10 and 11 to produce pan and brilliance effects.

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Last month we got our program to the point where we could display bats on the screen by pressing keys, and the ball could move horizontally or vertically, as long as we told it by amending the initial values of the X and Y velocity before assembling the program.

This month we will finally get to interact with the game, by allowing the ball to bounce off the bat and so change direction.

For convenience, I will call the two different types of bat we are using Left Bat and Right Bat. The Left Bat is displayed by pressing the Z key, and slopes down from left to right (\searrow). The right Bat is displayed by pressing the X key, and slopes down from right to left (\swarrow).

Velocity

The ball could hit either bat from any of four directions. The table shows the effect on the balls X and Y velocity for every case.

If we were going to be really clever about it, we could write a very short routine which handled every case.

Essentially, we would just need to swap the X and Y velocity, and multiply by -1 if we were travelling left or up.

Programming, like life, is never so simple. There are other things to be taken into consideration. For instance, if the ball is travelling along an edge when it hits a bat, and the bat forces the ball into the edge, the ball effectively needs to bounce three times – once from the bat, then from the wall, and finally from the bat again.

So I've taken the easy option (as ever). The check for what to do when the ball hits a bat is done within the routine which checks for wall collision. Each

Marc Young finally gets his balls under control and the Game with No Name shapes up

check is performed individually, for each direction, and for each bat.

Although this may seem like the coder's way out, it certainly makes the program easy to follow, and also means that should you wish to add any further features – such as different shaped bats etc – adding the code should be relatively simple.

Longer

The only real disadvantage is that the assembler source is somewhat longer.

Now we can control the ball as it moves around the screen, simply by positioning the bat correctly.

The next enhancement to our Game with No Name is to give ourselves something to aim at. Two major changes

LEARNING Assembler Part 6

Programming the 68000

need to be made to the program at this stage – we need to show a target on the screen, and we need to be able to detect if we have hit the target. In true Marc Young fashion, I'll cover these in reverse order!

The routine `target` is executed when a target is hit. This routine handles the display of a new target at a random position, as well as the erasing of the target we have just hit.

The first action taken by the routine is to clear the byte in the squares table. This table, if you remember, holds a different value in each byte depending on what is shown on each square on screen.

Zero means nothing is on the square, one means a left bat, two a right bat

and three a target. Next, the routine erases the target from the screen. This is done by executing the subroutine `undraw_tgt`.

This routine is almost identical to `draw_tgt` which is described below. The only difference is that the `undraw` routine draws a sprite of a background square, whereas the `draw` routine draws a sprite of the target.

Now we need a random number, to determine the new X and Y co-ordinates of our target. Luckily the ST's operating system again comes to the rescue with `XBIO$17`. This splendid system routine will return a 24-bit random number in `D0`.

Co-ordinates

Of course, a 24-bit number allows a value of between zero and 16,777,215. For our X co-ordinate, we need from zero to 19 and for the Y co-ordinate, from zero to 11.

We could just take the low byte of `D0`, then call the `Random` routine again, and use the low byte again.

Unfortunately, the `XBIO$17` routine is not exactly lightning fast, and there is a better way of handling the situation.

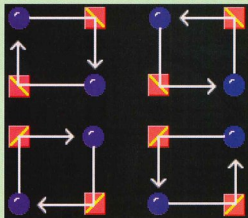
The low byte of `D0` is moved to `D2`, which will be used to hold the grid X co-ordinate. The two word halves of `D0` are then swapped, using the `SWAP` command, so that the high word becomes the low word and vice-versa. The new low byte of `D0` is then moved to `D3`, which will be used to hold the grid Y co-ordinate.

At this point, `D2` or `D3` could contain any value, as we have only affected the low byte of either register. To limit the values to those within our grid, I have used the `AND` instruction. `ANDING D2` with binary 11111 has the effect of lim-

Bats and balls

The effect of the ball hitting each of the two Bats from each of four directions.

Bat	Initial X	Initial Y	Final X	Final Y
Left	1	0	0	1
Left	-1	0	0	-1
Left	0	1	1	0
Left	0	-1	-1	0
Right	1	0	0	-1
Right	-1	0	0	1
Right	0	1	-1	0
Right	0	-1	1	0



The eight possible situations which occur when ball meets bat. This diagram illustrates each case detailed in the accompanying table

▶ its value to between zero and 31.

ANDING D3 with binary 1111 limits its value to between zero and 15. We still need to adjust these values if they are outside the width and height of our grid, and this is performed over the next few lines of program using the CMP instruction.

It is worth noting here that this use of ANDing values to limit their range, while being efficient, does mean that, should we change the dimensions of our grid, the values used may need to be changed.

Amendment

For this reason I have included the two binary values as EQUs at the top of the program, to make such amendment more obvious.

Having finally got our new co-ordinates, the subroutine `draw_tgt` is executed to draw the target sprite on-screen. Finally, the value 3 is moved into the correct position in the `squares` grid, so that the appropriate routines can check whether the ball has hit a target.

If you've loaded the source code of PROG0016 from the CoverDisk, you may have searched for the subroutine `targ_target`.

If you did, you will have discovered that there is one BSR to the subroutine at the very start of the program, then the routine itself, and only one other reference to the routine. Rather than the

other reference being a JSR, or BSR, or even a JMP, BRA, BNE or similar, it is in fact used to define a value in a table called `targ_addr`.

If you take a look at the table `targ_addr`, you will see that it consists of four values of Long Words, the first three being `targ_end` and the last being `targ_target`.

If you now take a look at the subroutine `target`, you will see how this table is used.

The subroutine `target` is executed whenever the ball completes a journey from one square to the next, in whatever direction.

Following the routine through, it firstly gets the value of the byte within the table `squares` corresponding to the position of the ball, into data register D1. It is worth noting that the whole register is cleared first, as only a byte is moved from the table.

Register

Next, the address of the table `targ_addr` is loaded into address register A1. The value in D1 is then multiplied by four, by shifting the bits left by two—remember each shift left multiplies by two again, so shifting twice multiplies by two twice, which is the same as multiplying by four—trust me, I'm a doctor (so you're not—Ed).

(No, now we have the address of the start of the table in A1, and the value of

LEARNING Assembler 6

the byte of the square we have just arrived at (multiplied by four) in D1. So what next? If you think about it logically, each value we could have in the table (0 - blank, 1 - Left Bat, 2 - Right Bat or 3 - Target) has been translated into 0, 4, 8 and 12.

If we were to add this value onto the address in A1, this would point us to the value at the appropriate position in the table of addresses.

We could then jump to this address, and perform the appropriate routines depending on the contents of the square. This is essentially what the next couple of lines of code achieve. The instruction:

```
MOVE.L (A1,D1),A2
```

adds the contents of A1 and D1 and moves them into A2, without affecting the value of either A1 or D1.

The next line:

```
JMP (A2)
```

jumps the program to the address held

in A2. An important note here - don't try:

```
JMP (A1,D1)
```

as, although this will compile, it will certainly not have the same effect! In fact it will almost certainly crash your ST!

Obviously, with the limited options we have in our Game with no Name, the use of this Jump Table is a little over the top. The only other options beside the target are the two bats or an empty square, and in all of these cases, we want to take no action, so the code jumps to the end of the routine (`targ_end`).

However, if you want to add new routines, for example different types of target, or maybe different bats, it is a simple matter of writing the code required, and adding the address to the table.

Next month

Next month we'll finish off the Game with No Name, and I'll cover a few miscellaneous bits and pieces.

If there is any aspect of assembler programming you would like me to cover in the future, why not drop me a line at the 'User office'.

Drawing a target

When it comes to drawing a target, most of the work is a duplication of the routines we have already used for drawing the ball or the bats. If you look at the routine `draw_tgt` you may recognise quite a lot of the code. The differences, however, are important and worth working through.

The first line of the routine is:

```
MOVE.L D2/D3,-(SP)
```

This moves the contents of both D2 and D3 onto the top of the stack. If you look at the last line of the program, you will see:

```
MOVE.L (SP)+,D2/D3
```

which moves the top two Long Word values from the stack into D2 and D3. The net effect, of course, is to preserve the values of D2 and D3.

This is required, as the BLIT routine, which is used by this routine, would change the values of D2 and D3, and both are required after the `draw_tgt` routine ends.

The next two lines of the program select the sprite to be drawn. If you haven't looked at the `SPRITES.P11`

file recently, it may be worth loading it into your favourite art package and taking a look.

Two things have changed. Firstly I have added a sprite for the target and a sprite for a blank square. Also I have changed the palette slightly, and used the new colours for the target.

It is not particularly important to keep the effect of a semi-transparent ball as it travels over a target, as the target will disappear when hit. Therefore, I have simply picked some colours I liked, and allocated them.

The lines following simply set up the registers ready for calling the BLIT routine to display our sprite on the screen 2.

Just before executing the BLIT routine, you will notice the line:

```
MOVE.L D0-D7/A0,-(SP)
```

As you may gather, this instruction moves the contents of all the data registers and address register A0 onto the stack. Take a look after the BLIT has been executed:

```
MOVE.L (SP),A0-D7/A0
```

This instruction restores the values of the registers, but does not adjust the stack pointer.

The reason for this strange behaviour is all down to the use of multiple screens. To avoid flickering, we need to display our target on the visible screen, the work screen and the master background screen.

To save any delays, having set up the registers once, they are saved to the stack and the A1 register adjusted—A1 holds the address of the screen to be displayed to—as the BLIT routine is executed a total of three times.

After executing the BLIT for the second time, the `MOVEM` instruction is used to extract the registers from the stack, but this time the stack pointer is adjusted, as we will not require all the registers after the third BLIT.

However, we will require the values of D2 and D3, which were pushed onto the stack at the start of the routine, and these are taken from the stack before the routine exits.

As I mentioned above, the `undraw_target` subroutine performs much the same functions, but instead of drawing a target, it draws an empty square.



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Squidgy and Mrs Munchie

Programmed by: **Toby Liddicoat and Robert W Dytmire (respectively)**
Goodman International +
 Disk No. GD1667

Two games comprise this disk from Goodman International. Squidgy is a puzzle game in which the objective is to clear the screen of stray blocks.

Unusually, this game makes use of both mouse and joystick. When started, you are presented with a screen containing various patterned blocks scattered willy nilly.

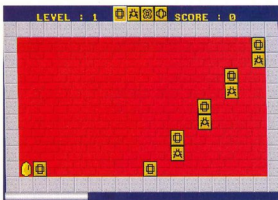
You can then use the mouse to choose a specific patterned block which the game character, named Squidgy, will push at the stray blocks and if they match, the stray block will be cleared from the screen.

Clearing the screen of stray blocks completes the level, with later levels becoming more difficult.

This is a simple game and I have to say I got quite bored with it after a very short while despite the fairly good graphics and digitised speech effects.

The second game on the disk - Mrs Munchie - is a lot more enjoyable. It is a Pac-Man type game with lots of extra features, and it requires 1Mb to run.

Some of these extra features include



Lots of puzzling fun with the squishy little bighiter in Squidgy

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Public Sector

Zaps which are like smart bombs and kill all creatures on-screen. There aren't that many though, so you have to use them sparingly.

There are also various Trap Dots which appear that have various and random effects. The effects range from adding more creatures to the maze to the Super NOVA, which kills everything on-screen and eats all the dots.

This game may be based on an old classic, but I enjoyed it.

SIAM Railway Demo

Programmed by: **SIAM Ltd**
Goodman International +
 Disk No. GD1662

These programs apparently allow you to experience the challenge of railway operation from the comfort of your own home. Well I travel to ST User on a train



every day and I have to say the whole process is about as enjoyable as breaking wind in a spaceship.

Maybe it's because the particular route I travel is serviced by antiquated, uncomfortable carriages but I wouldn't wish the experience on anyone, apart from that annoying bloke in the month-wash advert who keeps saying, "Still working."

Anyhow, enough banter and on with the review. This disk contains a collection of railway-based games that attempt to simulate the problems and challenges of running a railway.

Authentic track plans, motive power and schedules for the location and period are implemented, in some cases with additional workings to add extra interest.

I can't honestly say I found these games enthralling, probably because I

"S'cuse me guv, fancy some cheap software? You do? Then let me show you some real bargains that won't bust your bank balance or burn a hole in your sky rocket."

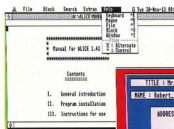
have never had any interest in the field of locomotive vehicles whatsoever. However, train spotters and rail enthusiasts may find it interesting.

ALICE - Another little C editor

Ralf Kaufman
 Rivdene PDL +
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There are many PD text editors out there in use by C programmers. Some are absolute pap, others are very good. ALICE is one of the good ones.

ALICE provides a simple, GEM-oriented package for entering source code



It may be referred to as a C editor, but it is just as useful for normal text editing

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and although its name suggests that its main use would be for C source code entry, it's equally usable for creating any Ascii file.

Although ALICE may be simple, it does have some good features such as, simultaneous editing of up to ten text files, each in their own window, additional buffers may be held in cut/paste text, comprehensive block functions, search and replace and operates on all ST/STE/TT computers.

Anyone looking for a good, simple text editor will find it in this program.

Address Banks

Programmed by: David Potter
LAPD + Disk No. L.17

Address Banks is a very easy to use database for names and addresses which also has the facility for printing address labels.

Written in GFA Basic, it is fully mouse controlled allowing easy access and retrieval of address cards.

There is a password system to restrict access to any particular address file and also a search facility for locating any particular word or combination of letters as parameters.

Premier Packers Collection

LAPD + Disk No. U.48

There are many packers available to help save space on disks and this collection from LAPD seems to have all the best packers available in the public domain.

The nice thing about this collection though is the menu system which provides many useful functions.

Besides giving you a menu of the 13 packers on the disk, there are also some basic disk operations built in.

You can create folders, rename files and delete files. You can also set the internal clock or find out how much memory you have left in your computer.

The menu system also allows you to run the Revenge document displayer

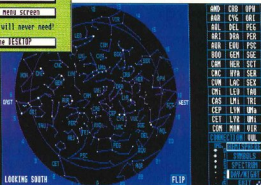


An excellent and addictive game. Great sound effects, good gameplay and it's PD too!



A easy to use GEM-driven interface makes the packing process easy and quick

A view of the entire hemisphere, showing constellations in official symbolic form



and a multi-depacking program for decompressing any packed programs.

The Northern and Equatorial Star Atlas

Programmed by: Peter Hague
Goodman International + Disk No. GD1666

This is one for the budding Patrick Moore's among you. This program contains masses of information on star constellations.

When you run the program, you can choose a constellation. Once chosen, the program draws the constellation and provides a brief description of its history.

You may then click on any of the objects within the constellation and the program gives you the name or number of the object, for example beta Orionis or NGC 6853.

If available, there will be more information and data displayed on the selected object. Some of the data provided includes ly - the distance of the object from Earth measured in light years, App Mag, the apparent magnitude, or the brightness of the object as seen from Earth and Spec. which is the

spectral class of the object.

This program is a must for the budding astronomer and is a great learning aid in recognising the constellations as well as gaining an insight into their history and composition.

Grav 2

Programmed by: Martin Brownlow
Music by Dave Gymer
LAPD + Disk No. G221

According to the blurb, many years ago, a being known only as the Enemy appeared in our universe from parts unknown. It tainted the hearts of men and from these men, a new empire arose to challenge our society.

An attack was launched on the Earth and was only stopped from destroying the mother planet by a single fighter craft codenamed Grav.

The Grav pilot destroyed the Enemy's followers' two base planets, but the Enemy escaped back to its own dimension.

Now, from the ashes of the old empire, a new force has arisen. The forces of the Earth had grown lax and ignored the build up of weapons and

MTS price cuts

MT Software have reduced their prices and have introduced a new and custom written catalogue program of their stock.

The catalogue is free of charge and can be obtained by phoning, writing or faxing them at the address given at the end of these pages.

Get in print!

If you are a PD library and you wish to feature in ST User, just send any of your titles which you feel worthy of review to:

Public Sector, Atari ST User,
Europress Enterprise, Europa
House, Adlington Park,
Macclesfield SK10 4NP

If you do send any of your titles, please try to adhere to the following steps to ensure that I can quickly assess each contribution.

1. Include a list of the contents of each disk along with a brief description of the program.
2. If you update your disk catalogue, send it in to me to ensure I have an up to date list of your stock.

bases on the outskirts of our galaxy until it was too late, the empire had returned.

Pretty nail biting stuff eh? This is the sequel to the "thrust and fire"-type game called Grav which had you controlling a lander type ship which required you to rotate the ship and activate thrusters in order to manoeuvre. It was a tricky control method at first, but you soon got used to it.

Grav 2 has even more features than the firsts with such additions as secondary weapons such as Bombs, which can take out several installations in one shot, Defence Lasers, which destroys all nearby projectiles and Computer aided retros which aid in controlling the ships descent.

These are just a few of the weapons and defence systems available and can be bought from the Shop section of the game (for a fee of course).

The aim of Grav 2 is to disable the enemy base. This is achieved by destroying 80 per cent of the elements, but some levels have specific objectives, such as destroying cargo canisters.

If you find an enemy computer on a level and land next to it, the computers database, containing information and position of other bases, is downloaded and your position is recorded so if you lose a life, you will start from the last recorded position.

The graphics are quite good and the sound effects are monstrous, digitised explosions. I spent hours playing this game, it's brilliant. Lots of features, excellent gameplay and hideously addictive.

Upgrading your RAM

Why upgrade your RAM? There are two reasons. No doubt those of you with 512k are noticing the increasing amount of games that are demanding 1Mb of memory, such as Steel Empire and Elvira 2.

Even if a game will run in 512k, there are those which have extended features – digitised soundtrack, better graphics and so on – for those with the extra RAM, and as games become ever more complicated and sophisticated, they are inevitably going to require more from your computer.

Entertainment

As well as the increasing memory requirements in the entertainment side of software, the more serious software applications for the STE are inherently memory intensive.

Desktop publishing is one area notorious for its appetite for your RAM. If you are to take a serious step into the DTP arena, it is doubtful that you will find any product that can operate with less than 1Mb.

Most packages state that the ideal memory configuration is at least 2Mb with 4Mb being the optimum for professional use. The two major DTP products, Calamus SL and PageStream 2, are leaders in colour DTP. Calamus SL is so sophisticated that it requires at least 2Mb.

Budding

So, if you are a keen games player or budding publisher with 512k, you can't afford not to walk down the upgrade path. The Aries upgrade board on offer from ST User is progressively upgradable from 512k to 2Mb and then to 4Mb. The board is very small and because it requires soldering as opposed to being a plug-in type, is very reliable.

Full instructions and diagnostic software are supplied with the boards and a phone helpline is available for technical assistance.

The Aries memory upgrades for the STE range of computers consist of SIMM boards which are simply plugged into the expansion slots within the STE.

The upgrades come complete with instructions and diagnostic software.

Moving on up

At some time or other there's a good chance that you've wished that you could use PC-compatible software on your ST – there are many reasons why you should want to.

Maybe you just wanted to use one of the many complex packages available for the machine, or perhaps when office work's been piling high you've wanted to catch up at home – right?

A pretty cost-effective and easy answer to both of these problems is an emulator. Basically they convert the ST into the industry-standard machine, enabling it to run many PC programs. The great beauty, however, is that your favourite ST programs can still be used.

PCs come in various shapes and sizes and so do emulators. During the years as technology has evolved there have been several types of PC.

From the days of XTs, PCs are now powered by 80X86 chips and known as PC-ATs. They started with 80286s, then came 386s and today 486s. Even now 586 PCs are just around the corner.

For the user, the most noticeable change throughout these developments has been speed, with faster computers allowing more powerful software to be used.

But it isn't as simple as saying that, for example, a 386 PC will be faster than a 286 model. The clock speed of the chip

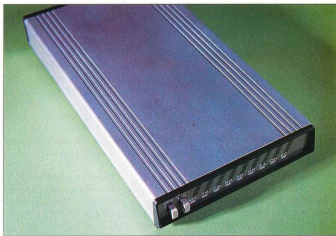
must also be considered. This makes the whole situation confusing and so it has become common practice to measure the PC's speed with a Norton factor rating – the higher the rating the faster the computer. You can choose from several boards, but the ones we are offering at knock-down prices all come from German firm Sack Electronics and are supplied with a copy of the DOS operating system.

With them fitted you'll be able to use great software like spreadsheets

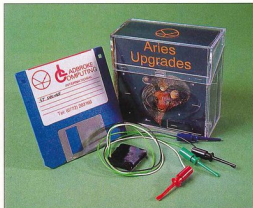
Lotus 1-2-3 and Excel, AutoCAD, dBase and desktop publishing king Pagemaker. It's possible for each to be fitted at home, but if you don't have experience with a soldering iron you could run into difficulty. We recommend novices use our fitting service.

PC Speed

The oldest of the bunch, but still a big seller. PC Speed emulates the first PC-XTs and has graphics displays, including CGA mono and colour, Hercules and



Drive your storage problems away with a new floppy



Banish the out of memory blues with the Aries upgrades



Talk to the world with a straight fax/modem

All features great and small

There are countless other ways of making your ST faster, friendlier and more reliable. Here are a few suggestions

● Generally the STE is very reliable, but there is one component that is more susceptible to damage than most and that's the power supply. If your ST's power supply has given up the ghost, don't despair. ST User can provide you with a replacement unit which is even more reliable than that supplied by Atari.

● For the security conscious – or downright paranoid – among you, ST Secure is a hardware/software combination which will prevent unauthorised access to your machine.

Installation takes only 30 minutes and once installed, it provides a Password protection function.

● When you turn on your STE, the operating system uses the internal disk drive to boot from. With the A/B Switcher and little modification, it is possible for those of you with an external disk drive to tell the ST to boot from the external drive instead.

● There's no doubting the importance fax machines have played in both large and small businesses. The ability to send and receive both graphic and textual information over long distances is extremely beneficial.

The Straight FAX/Modem allows access to this world of telecommunications through use of a fully-featured 2,400 baud modem incorporating MNP 5 error correction.

The Straight Fax software allows the sending and receiving of faxes, it will also send Ascii text, GEM IMG images, Degas PDS or PC3 files to a Group 3 fax machine.

Printer drivers for Calamus and PageStream are included, which allow direct file output from either to be sent by Straight fax. It also features multi-page documents up to 255 pages, fine and normal resolution fax modes and 100 normal fax phone list.

It can schedule fax transmission at a delayed time, and receive faxes while waiting for scheduled outgoing fax documents.

Olivetti. With a Norton factor of 4, it is sufficient for basic work such as wordprocessing.

ATSpeed

Running from an 80286 processor at 8MHz, ATSpeed has the advantage of being able to run more PC software than its XT brother. ATSpeed can be

run from GEM as a desk accessory and in addition to the graphics displays available in PC Speed is capable of mono EGA and VGA.

ATSpeed C16

With a Norton rating of 6.7, it solves on to the ST's existing Motorola CPU and is a solder-free fit on

ATARI ST USER

It seems like our special upgrade service was just what you'd all been waiting for. The response was overwhelming, with ST users rushing their machines to us for improvements.

But if you haven't had yours improved yet, don't worry. Atari ST User has guaranteed the amazing special low prices until the November issue.

There are plenty of upgrades to choose from – double-sided disk drives, extra memory, accelerators, in fact almost anything you could think of.

So why not better your ST – you won't find a cheaper or more convenient service anywhere.

Quality upgrade service

Mega STs. The latest board is an upgrade of ATSpeed, and takes PC emulation as far as it can go before it becomes too expensive to remain a realistic alternative to the real thing. Improvements to be found are increase in chip speed to 16MHz and the option to plug an 80287 maths co-processor on to the board, making mathematical-heavy applications such as computer-aided design programs faster.

ATSpeed C16 is the most suitable of the three for anyone wanting to use the PC equivalent of GEM, Microsoft's Windows. Without Windows, beginners can find PCs a nightmare to use, with long commands needing to

be typed at prompts.

It has a Norton rating of 8.2.

A better drive

Nowadays, STEs are sold with internal 3.5in double sided disk drives with a 720k capacity as standard. However, earlier STs had drives fitted with single sided drives with half the space.

Nearly all cover-mounted disks require a 720k drive to give access to all the programs on them. This is also true of many games software houses who are now putting games on double sided disks.

The reason behind this policy is that magazines and software companies have

Turbo TOS

It's a well known fact among ST users that the operating system, particularly the Desktop, has a few problems and niggly omissions.

Many third-party programs attempted to provide a replacement for the Desktop such as NeoDesk and DC Desktop, but these took up a lot of memory.



With TOS 2.06, you can place files and folders directly onto the Desktop similar to the NeoDesk feature

TOS 2.06 is the hardware solution and gives lots of extra features found in the third-party versions that make using your ST more enjoyable.

TOS 2.06 was at one time only available on TTs and Mega STEs, but now it is available for all machines in the ST range. Some of the main features of TOS 2.06 include:

● Menu options have a keyboard equivalent for quick selection and can be altered

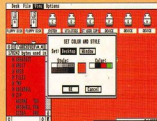


Assign programs to the function keys to allow quick execution at the press of a key

to your own preferences

- Twenty programs can be assigned to the function keys for execution at the press of a key
- Files and folders can be dragged onto the Desktop, similar to the NeoDesk feature
- The Desktop and windows can be spruced up by assigning colours and patterns to them
- The maximum number of windows open has been increased to seven
- There is a Search facility for quickly finding the location of a particular file
- Hard drive owners do not need to individually create a partition icon any more. Simply select Install Devices and icons for each partition appear instantly
- Atari's Xcontrol accessory is completely compatible with 2.06. No need to shut down when changing resolutions any more

There are, inevitably, some programs



Change the pattern and colours of both the Desktop and the windows

that will not be compatible with this new TOS version. This is most notable in the games sector.

The majority of well written, professional software which adhere to Atari's programming guidelines will have no problems.

Some PD will also fail to work with TOS 2.06 if a program has been written with TOS 1.62 in mind. It should be fine running with TOS 2.06.

to cater for the majority and, unfortunately, single sided drive owners are in the minority.

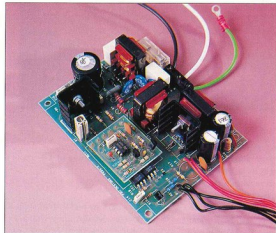
ST User's CoverDisk is also geared towards those with 720k drives and although we offer a single sided disk service to those with single sided drives, it is obviously a drag to have to post off your CoverDisk and have to wait until it returns.

So, why not take advantage of ST User's affordable solution, a double sided drive upgrade for you're ST?

Better with a blitter

Mega STs and all STEs have a blitter chip installed as standard, speeding up all operating system graphics routines such as screen redraws, window manipulation, dialogue box drawing and all other GEM graphic processes.

You will notice a "snappier" feel when using the Desktop and other graphical applications, such as scanning packages, will also benefit from this extra hardware.



Has your power supply given up the ghost? Replace it with this more reliable unit

Order now

Now you've read about them, Atari ST User are giving you the chance to snap up these little GEMs - pun blatantly intended - at the lowest prices through our ST User offer extravaganza.

Just tick the items you wish to buy on the order form, including any extras (see services), then do your sums and add up the total cost. Fill in the details of how you wish to pay and don't forget your name and address.

All prices include VAT. All kits include full instructions and a help line is available.

We also offer the following services when ordering:

I Courier pick-up - £11 We can arrange for Red Star to pick up your machine, usually the day after you contact us (see contact number on the order form). A courier is fast and fully insured!

I Fitting/test - £20 We will fit the above and fully test all computers using Atari diagnostic hardware.

I Same day service - £15 Fitting

of any requested items will take place the day we receive the machine and be despatched that same day. Subject to stock availability.

I Courier return delivery - £6 Next day courier delivery, fast and fully insured.

I Repair quotations - £15 We will check out a machine and report the exact cost of repair. You can then decide whether to go ahead with the repair or pay the £15 and have the machine returned.

Should you decide to go ahead with the repairs, the £15 is absorbed into the minimum charge which is £35.25.

NOTE: A few STEs may require SIPP memory as opposed to the more usual SIMMs. If this your case with your model, you may require a converter. This costs £5 per set of two, and we will inform you should you require this addition.

Order form

Please tick the products or services you require, making sure you have filled in and checked the total. Don't forget to tell us how you wish to pay, and ensure that your full name and address is included!

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One, two, music

Taking your first steps in Midi need not be an expensive move. Phil Morse looks at a package which promises features as well as value for money



The computer musician is spoilt for choice when it comes to software, and nowhere is he or she more spoilt than in the ST market.

With its built-in Midi interface and some (belated) marketing in the right direction from Atari, there are a glut of music packages for the ST, ranging from some pretty basic PD stuff to the big boys like Cubase and Notator, which can be found – along with the ST – in professional recording studios worldwide.

However, the musician on a smaller budget is left with slightly less of a choice. Lower prices have always meant compromises, and there's nothing worse than having equipment which is capable of so much, but being let down by basic, unreliable or inappropriate software.

Which is where Concerto comes in. Priced at a highly reasonable £39.95, Concerto aims to provide a full package for any Midi musician, losing nothing except the high price tag. It certainly seems to boast a lot when it comes to the features available, but more of that later.

The package comes in a game-size box, complete with two disks, an advert for other Microdeal products and a 96-page manual, which is plastic ring-bound and clearly written and presented. A 1Mb ST is recommended, and the program will run in medium or high resolution.

The program boasts five separate editors, which translates into five different ways of manipulating Midi information – quite a lot by any account.

The score editor uses traditional musical notation, which is not, I feel, particularly useful to the average modern musician, for whom musical notation tends to be something left to the classical and jazz crews.

Nevertheless, this is a pretty well-endowed editor, which allows you to define time signatures, place notes from demisemiquavers to semi-breves straight onto the stave, alter the phrasing of the piece by using slurs and the like, and incorporate Midi-specific information such as program changes, which usually tell your keyboard or sound module to alter the instrument currently playing.

The step-time editor which is useful for when



Concerto's Midi implementation controls

you wish to enter music a note or chord at a time, and can help when entering difficult passages or, as the manual suggests, if you do not actually own a keyboard.

Most Midi users will, of course, have a keyboard, but if you buy a dedicated sound module – such as the new Roland Sound Canvas – there is just the chance that you will be wanting to control it solely from software. Not recommended, but it takes all sorts...

The basic idea is that you scroll to the position on the stave where you wish to

enter the note or chords, define such things as velocity and note length, and then play the note(s) on your keyboard.

There is an on-screen "keyboard" which you can click on with your mouse, should you be one of the strange folk who feel a keyboard is not necessary, and you can, of course, delete notes(s) should you make a mistake.

The drum and grid editors are very similar – the difference lies in what they do, not how they do it. These are the editors most useful for those who don't read music.

Most Midi instruments which contain drum sounds now follow the Roland standard of defaulting to Midi channel 10 for drums. This means that, however complex or simple your drum patterns are, they will all be played by channel 10.

Midi can cope with this, but sequencers frequently fail to provide any special facilities for editing the mass of information cluttered onto this one channel. Even the excellent Sequencer One from Gadgets fails in this department.

However, Concerto's drum machine window is a definite step in the right direction. Down the side of the screen are the various percussion instruments (which you enter in the synth window –

more on that later)

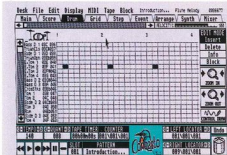
and from left to right the screen is a grid showing you the various positions in the songs (again it is scrollable) and which drums are programmed to play in these positions.

There is a very useful zoom function, which allows you to alter the size of the grid.

Say you have a very complex hi-hat and bongos section in your song. You'll want to see these small, frequent notes with the highest magnification possible, to make it easier to alter them. The downside is that you'll only be able to fit a very small part of the song onto the screen at any one time, so will have to scroll a lot.

Should you have a simple drum pattern, you can reduce the magnification, so allowing you to display more of the

A painless way to program drum patterns



The main screen, showing pattern and track information



Product: Concerto
Supplier: Microdeal, PO Box 68,
 St Austell PL25 4YB
Telephone: 0726 68020
Price: £39.95
Configuration: All STs and TT



Live mixing is possible in Concerto

song at the same time, sacrificing a level of clarity which is not necessary anyway. As mentioned earlier, the grid editor window is practically the same as the drum editor, except it concerns itself with the other instruments.

The drum list is replaced by a vertical "keyboard" down the left-hand side of the screen, which shows which notes are being played. Where they are played is, again, shown by their horizontal positioning.

There is a position cursor, five-octave range, crosshair positioning of notes (as with the drum editor) and various other edit modes.

There is another editor too, called the event editor. This displays all the MIDI information in words. Quite why this is included, bar completeness, is not mentioned - I can see little reason for the

Sample city

Only applicable to STE (or TT) owners, the separate sample program allows you to incorporate digitised samples from elsewhere within your MIDI creations, playing them just as if they were another instrument.

The program, Sample Studio, allows you to load samples, sort out and edit a sample list and save out the results for use within Concerto.

Here is no place to go into the dos and don'ts of sampling, but a variable sample frequency would have been useful - as it stands, you are tied to a respectable 25KHz.

This is fine if you are doing your own samples, but indicates what may already be obvious - that this is a very basic piece of software, and one which is intended for use alongside a dedicated sampling package.



inclusion of such a feature - but should there be some earth-shattering important reason which has alluded me, I'll describe it anyway.

You can't add information from this mode, but you can use the mouse to edit existing information or delete it.

You can instruct the sequencer to list just certain types of information too - should you wish to see just the tempo changes or the pitch bends, for instance, it can be achieved easily.

Cast your mind to the word "sequencer". Although this is used to describe the piece of software which controls your MIDI equipment via your computer, quite literally it means putting things into sequence! The Arrange Window in Concerto is where you do just that.

You can order various recorded musical patterns, which you will have assigned numbers to and named in the Main Window, as well as adding effects such as delay and transposition (pitch changing).

Other features include a mixer window, quantise ("the only reason I bought a sequencer" as one musician friend told me!), full handling of a variety of MIDI/Concerto file types, and a MIDI Strip function, which is useful for removing, say, over-zealous pitch bends in a piece.

This is, without a doubt, a comprehensively-featured package. As the software house claim, it does indeed provide a variety of features usually found only on far more expensive programs.

At less than £40, this is very likely to be an entry-level package for many folk, especially those with just one synth or module. Hence facilities like the ability to handle up to eight synthesiser seem

Editing and processing features

Programmable tempo change

In order to add expression to a piece, you can speed up or slow down a phrase or part of a phrase using this feature.

Programmable volume change

Again, the volume of phrases can be changed in order to add a realistic feel to MIDI information - essential should you wish to get away from the often mechanical feel of sequenced music.

Search and replace

Allows you to select a pitch of note and change just the notes which correspond to your chosen pitch. This may sound a little unnecessary, but it is particularly useful for MIDI drum tracks, as you can alter "notes" which, as each drum is effectively a different note. Will allow you to, say, swap a snare sound or change a cow bell to a bongo throughout a piece.

Fill

Allows the filling of a section of a pattern with a specified note - again, useful when programming drum patterns.

Force

"Forces" information regarding a note to a specified value. Say you wish a piece to have uniform volume, or be at a uniform pitch, or you wish all the notes in an imperfectly-played phrase to be the same length, you can utilise this facility to add mechanical feel to a piece.

Although one may question why you would wish to do this, house and techno music relies heavily upon just such mechanised sounds and phrases for its distinctive, danceable uniformity.

Transpose

If you wish to make a played piece higher or lower, this function will allow you to do this. A neat trick involves playing a piece in the key of C (ie no need to press those difficult black notes on your keyboard) and put it into a more suitable key (ie E if you wish to jam along on a guitar, or the correct key for a brass instrument) after playing it.

to be a little out of place. It's this kind of blurred idea of exactly who will be using Concerto which is my only qualm about it.

In this case, a package going all-out for extreme ease of use while ditching some of the more complex features might have been more appropriate. After all, most home studios are used for playing about, or for putting out a passable demo of a track, which will then be produced in a studio using professional software costing much more, such as Cubase.

With Concerto's degree of sophistication, I believe the beginner will struggle to get anywhere for a while, and will not use some of the features frequently, or ever.

But these are small piffles, and all based

on the assumption that it is only beginners who are desperately poor! With so many features, most of them well-implemented and many extremely useful, and some innovation thrown in too, it would be foolish to complain too much. For a mere £40, Concerto must be the best value Atari sequencer ever.

Bottom line

FEATURES: Plenty of features, well implemented and extremely useful.

EASE OF USE: The beginner will struggle to get anywhere for a while. Decent manual supplied.

Features	Ease of use
Excellent	Excellent
Good	Good
Average	Average
Bad	Bad
Appalling	Appalling

You know the score!

The comprehensive synth handling screen

The synth window

This is an extremely useful feature. The Synth Window allows you to tell the computer about eight different synths, effectively meaning that a £40 program can control eight synthesisers or equivalent at once!

By copying the information in your tone bank table, which comes

with every synthesiser, into the machine, the sequencer can remember which instruments are assigned to which instrument numbers.

Thus, instead of "81", whenever that instrument is referred to within the program, you will see the word "square wave", or whatever instrument 81 happens to be.

Hi fidelity ST

I'm fed up with the meagre sound quality from my TV when playing games with great soundtracks. I wish to connect my STE to my hi-fi but I don't know what cables I need.

Is it just a case of a straight cable connection or is there some form of electronics needed between them?

B Sykes, Southampton

Connecting your STE to your hi-fi couldn't be simpler. All you require are two phono-to-phono leads.

Connect these to the stereo outputs on the back of the STE and the inputs on your hi-fi and you'll have superior sound.

You'll recover

There is much to enjoy in *ST User*, even though I am one of those subscribers who is not interested in the games content.

Consequently, I have acquired a number of extra disks by copying the CoverDisk programs I want and then reusing the disk.

Arising from this, I now have two problems.

1. With the November 1990 issue, there was a drive protection program. The problem is, how do I remove the protector from the disks?

There are no instructions with the program text on how to do this and no apparent way from within the program either.

2. Copying Hatlekin from May 1992, I inadvertently deleted X_ACCS.TOS.

Using the disk editors that I have, I thought I had recovered it but my Michtron Utilities will not allow the file to be renamed correctly (reports "Name clash") and a PD editor runs the program for a few seconds, then throws up the message "This machine is not an STE", scrambles the screen, prints two bombs on the screen and locks up the ST.

I have an STFm with TOS 1.0, two 1Mb external disk drives, a CM8533 monitor and a Star NL-10 printer.

I hope one day to be able to acquire more up to date equipment but not for the foreseeable future, so I need to be able to use programs that will work on my setup.

So how if possible, do I recover accidentally deleted programs such as X_ACCS.TOS, especially when they are still archived?

J F Cubberley, Kent

1. If you are going to re-use your extra CoverDisks, I suggest that you completely re-format them.

That way, you can be ensured of a



clean disk and any programs that you save to it will not be fragmented and will load slightly faster.

The other alternative is to use a virus detector that will recognise that the boot sector is executable and allow you to kill the program.

2. First some advice. When copying files from our CoverDisk, ensure that the CoverDisk is write protected so accidental deletions are impossible.

There are many PD programs that will un-delete accidentally erased files but I strongly recommend that you invest in HiSoft's KnifeST disk utility.

This excellent piece of software has all the facilities needed to enable you to recover files. I can only assume that your attempts to recover X_ACCS.TOS were only partially successful and that not all the data was recovered.

May I suggest the following course of action when recovering accidentally deleted files. As soon as you realise that you have deleted a file inadvertently, do not attempt to store any more data on the disk.

When a file is deleted, the space it occupied will be overwritten by further data stored on the disk, thereby making recovery impossible.

Always make a backup of the disk

and use the backup when trying to recover the file. If anything goes wrong during the recovery process, you still have the master disk to fall back on.

When you find yourself in a position to upgrade your equipment, I suggest that you give priority to upgrading your ROMs? The latest TOS version is 2.06.

Video titles

I have an STFm and I wish to use it to create titles for my collection of home videos.

I know there are video lockers around that will enable me to do this but all I require is to be able to record my ST's output to the video. My video recorder does not have any Scart inputs, which I am told would make things easier, so I presume I would have to make up some form of cable.

I am quite capable of making such a cable and would appreciate any information on the necessary video connections from the monitor sockets output to the videos inputs.

L Staton, Shrewsbury

The monitor output of the ST gives a

composite video output through pin 2, with the ground signal on pin 13.

Although your video does not have Scart sockets, every video has a video-in input.

Your video-in input will be one of two types - BNC or phono. If you look at the TV output socket on the back of your STFm, this is an example of a Phono-type connection.

BNC-type sockets have two metal "lugs" protruding from the metal casing. You will need to connect pin 2 from the monitor socket to the inner connection of the BNC or phono plug and then connect pin 13 to the outer connection (shield).

Once done, switch your video to Aux or Line and you should be able to record the ST's output directly to your video.

You will also find lots of good quality PD software dedicated to providing different graphic and text effects especially for video titling.

Alien drives

At a recent computer auction, I managed to obtain two disk drives for the Apple Mac.

Is there any way I can modify the drives so that they will operate on my STFm or is it wishful thinking on my part?

E Smith, Salford

A recently piece of hardware called The Link from ICD Incorporated will allow you to use the drives on your ST.

The Link is an external SCSI host adaptor which has a 50-pin Centronics-type SCSI plug which connects to the SCSI out on the back of the drive and is then connected to the ST's DMA port with a simple DMA cable.

The Link also allows drives designed for Amiga, IBM PC and NeXT machines to be used. It comes with the excellent ICD software utilities and is available from Gasteiner on 081-365 1151 for approximately £59.

Multi-gaming

My friends and I are all ST owners and we all practically live next door to each other.

Recently, we were at our local computer club and there was a kind of seminar on multi-computer games. The game being shown was Falcon which was being played on two STs linked by a null modem cable.

We would like to know in where we can buy a null modem cable from so

Got a problem?

Is your printer playing up? Floppies behaving strangely? Having problems loading ZX81 games on your Spectrum emulator? Maybe *ST User* can help. Join down your gripe, along with as much information about your set-up as possible, and send it to:

Darren Evans, *Advice Service*,
Atari ST User, Europa House,
Addington Park,
Macclesfield SK10 4NP

>

that we can all get together and hook our computers up to play this type of game.

J Simpson, Shropshire

The most basic of games can be totally transformed into a brilliantly addictive one with the inclusion of a multi-computer facility.

A classic example is Midi Maze, a game which would bore the socks of you if you were to play against the computer.

However, when you find yourself playing against 16 other human players, everything changes.

There are two methods for hooking up computers to each other. One method is to use a null modem cable, as used by Falcon which you referred to.

The other method uses Midi leads and seems to be the more preferable. The null modem cable method doesn't allow more than two machines to be hooked up whereas the Midi method allows for many more.

Both types of lead can be obtained from Silica Systems on 081-309 1111.

3D models required

I am very interested in 3D modelling programs and animation utilities. Please could you recommend any packages that will enable me to produce 3D models and then animate them.

I have a limited budget so something under £100 is all that I can afford.

J Kane, West Sussex

The best package for 3D is CAD3D v2

Better keyboard

I recently saw a Mega STE at a computer show and I noticed the keyboard is different from my Mega ST's keyboard.

Upon close inspection, I noticed that the lead to the Mega STE is the same as the lead on my keyboard.

Is it possible to use a Mega STE keyboard on my computer or are they electrically incompatible?

P Hill, Strathclyde

Yes, you can use the Mega STE's keyboard on your computer without any modifications at all, just plug in and go.

I can understand your reasons for wanting to change. The Mega STE's keyboard has a better action on the keys and the mouse and joystick ports are easily accessible too.



package which allows you to construct complex sequences and Cyber Paint which is an excellent paint package and will allow you to touch up and add detail to your 3D animations. Contact Silica Systems (081-309 1111) for availability and price.

But it's not an STE!

A friend of mine recently gave me a disk full of utilities from a PD library.

However, every time I boot up the disk, I keep getting the annoying message "This is not an STE".

I am well aware of this fact and I find it strange that someone wrote a utility to tell me this. Please tell me how to get rid of it as it is driving me up the wall.

A Evans, Gloucester

If you check your disks contents, you will see a folder called AUTO. It seems there is a program written for the STE which is in there.

The program is probably one of the many patches which fix the problem of the STE being unable to boot up in median resolution.

Look for any program marked STE or falling that. Just de-activate one program at a time until the message disappears.

More 3D questions

Having seen the absolutely brilliant 3D game Cybercon from US Gold, I was determined to learn more about 3D programming.

I am fairly competent at assembly programming but I can't seem to find any recent publications that deal with the maths and programming techniques involved in producing such graphics.

The only book I found was from Data Becker and that was absolute trash. It was extremely badly written and the programming techniques used

in the book used the built-in routines of the operating system for producing polygons.

Considering the fact that the ultimate aim of a 3D games programmer is to make the graphics as fast as possible, I found Data Becker's approach totally unrealistic for producing any decent 3D game.

Please could you recommend a good source of information?

C Grant, London

There is only one decent book for anyone wishing to learn the techniques of 3D programming on the ST and that is Andrew Tyler's Realtime 3D Graphics Programming for The Atari ST from Sigma Press (ISBN 1-85058-217-3).

All examples are written in assembler with an optional disk containing all the source code from the book.

Also, Andrew is of the same opinion as you seem to be, that the ST's built-in graphics routines are just not capable of producing the speed required for a half-decent attempt at a game.

Andrew therefore explains the techniques of directly manipulating the screen and also the techniques of fast filling a polygon.

Falcon games

I have been reading your reports on the new Falcon030 and it certainly looks very exciting.

When the machine is finally released, just how compatible will it be with the current software available for the ST?

I have a large collection of games for my and it would be a shame if they were all to become obsolete if I bought a Falcon.

J Houghton, Canterbury

The Falcon isn't just an upgrade to the ST giving the same features with extra capabilities, it's a completely new piece of technology.

The extremely powerful hardware inside the machine will provide capabilities far in excess of what the ST can offer.

There will be some compatibility with programs currently on the ST—especially with text-based programs—but to achieve a higher degree of compatibility would mean sacrificing some of the Falcon's powerful features and would also increase the price substantially. This change in technology is analogous to the jump from the old Atari 8-bit computers to the ST. The power you got from the 16-bit technology over the 8-bit technology was well worth the lack of compatibility between the two.

Crazy correspondence corner

● We sometimes get the strangest of letters in the Advice Service postbag. Just take a look at this example:

Virulent viruses

I have not had a computer for very long (about four months) and I think my computer system has a virus.

I have heard that an infected machine can damage your software and I am very concerned about this.

I realise there are many known types of viruses so I will list the symptoms in the hope that you can recommend some of action.

The symptoms are: My once greyish ST is now a blotchy rash-red colour, my printer keeps complaining of pains in it's ribbons, the internal disk drive keeps having coughing fits every time it activates and my mouse has a cold nose.

Is there any hope for my ST or is it doomed?

P Little, Edinburgh

My my, this sounds serious. I suggest a course of psychiatric treatment, and I am not referring to the computer.

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A colour halftone scanned at 600dpi and magnified several times. This is actually the eyeball of the eagle below

There's no doubt that colour can make all the difference to a document, whether it's a simple newsletter or a full-blown advert. Getting it there is another matter.

Many ST users think that just because they can colour items on the screen using DTP packages such as PageStream or paint colour pictures using art programs such as Quantum Paint, full colour publishing is only a hop and a skip away.

Unfortunately nothing could be further from the truth. Colour is a very complex subject – but with an understanding of the way colour works and some knowledge of the tools needed to get the job done, you can get good colour output from your ST.

If you happen to have a colour printer such as a Deskjet 500C or a colour dot matrix printer, you will be able to get reasonable colour proofing output using the correct driver. If you want to print large numbers of the document, however, different techniques are called for.

Single colour

However, cost might prove the final factor. Adding but a single colour to a commercially printed publication jacks the price up considerably. A typical quote for £70 for printing 500 copies of a black-on-white newsletter might go up to £120 with a single spot colour and £170 for just two colours.

Understanding the colour process is the first step. Each different coloured ink used in printing adds to the cost.

Black and white documents can be printed with black ink, making them very economic for the home user and part-time desktop publisher.

Colour photographs and illustrations, on the other hand, can involve upwards of 16 million different shades. To reproduce them using an ink for every shade would be impossible.

In fact, they can be reproduced using just four ink colours – cyan, magenta, yellow and black (see "The Nature of Colour" opposite). This is known as four-colour process printing and it requires that the image is separated into

four component parts, in order to make one printing plate for each ink colour.

There is another element to process colour – screening. Colour cannot simply be washed on like water colour painting. Each colour is printed in lines of different sized dots and each colour normally printed at a different angle, fooling the human eye into believing

Andrew Wright looks at ways of getting to grips with colour publishing on the ST

that there are thousands of different shades of colour.

The size of the dots, the shape – elliptical, circular or square – and the angle of the lines all play a part in ensuring optimum results.

These colour halftones, similar in appearance to those used to represent continuous tone black and white images, can be seen by looking at colour pictures, such as those in *ST User*, very closely with a magnifying glass.

Simple

Spot colour, on the other hand, is relatively simple to specify and use. Ink of a chosen, pre-mixed colour is used to print certain areas of a page. For example, a logo, masthead or just a frame can be given a spot colour to make it stand out from the rest of the document.

Spot colours can be specified – for the benefit of the printer who will be printing the document – using a number of methods, the most common of which is the Pantone matching system.

Each of several hundred precise shades is referred to by an identification number or occasionally a name such as Warm Red or Rhodamine Red. Charts

are available so that exactly the right colour can be chosen beforehand with a fair degree of certainty that the printed result will match up.

An alternative method of specifying spot colour is to provide percentages on the CMYK scale (see the accompanying panel). Pantone Warm Red, for example, is 100 per cent magenta and 100 per cent yellow.

Up to four different spot colours are usually economic but any more than that and process colour tends to be cheaper. Remember though – every spot colour adds extra cost to the bill.

An increasing number of DTP programs now support colour output, including PageStream, Calamus and Didot Professional.

Image processing programs such as Retouche Professional allow full colour images to be edited and manipulated to get the desired effects, although the hardware requirements – a second colour monitor and graphics card – push it beyond the reach of most of us. The

simplest way to use spot colour in documents is to take your finished artwork to your local printer and point out which areas on the page need which colour.

A more professional approach is to overlay the artwork with tracing paper, trace the bits needing colour and mark them up clearly and legibly. The printer will be able to make separate plates for each ink colour based on this information.

Separations

Using PageStream or Didot, you can define and mark the various spot colours as you design the page, producing what are known as mechanical separations (similar to the process separations discussed above but only one will be produced for each spot colour).

This does part of the printer's job for him but it's unlikely to save very much on the cost of the job.

With process colour, the software can make the separations, if it is capable, or

TECHNO

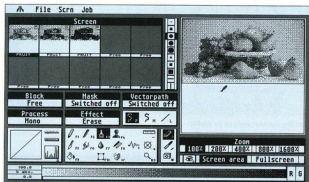


the time-honoured method can be used. In the days before DTP and colour pre-press, all colour photographs and multi-colour illustrations would have been taken to a repro house for scanning on a high quality, very expensive drum scanner.

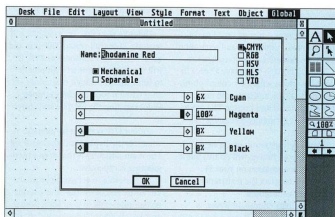
The result would have been four fully separated films which would then have

been added to the line art and text to make a full page.

Desktop separation methods have come a long way but they still can't match the traditional methods for quality. Probably well over half of all colour images are still processed this way, despite many large publishing houses



Retouche Professional - it'll cost the best part of a grand but it's the most powerful bit of ST software yet



Defining spot colours in PageStream

COLOUR!



The photograph above has been separated into its four process colour components - cyan, yellow, magenta and black

The nature of colour

There are two types of colour relevant to the desktop publisher - process colour and spot colour. To understand process colour requires a look at how colour is defined.

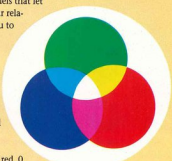
So-called "white" light is a combination of all the colours of the spectrum and it can be broken down into just three primary colours - red, green and blue. They are known as additive primary colours because they are added together to make white, but other combinations are possible.

Red and blue make magenta (a shade of purple), green and blue make cyan (a pale blue) and red and green make yellow. These colours - magenta, cyan and yellow - are known as the subtractive primary colours.

Colour models are conceptual models that let mere mortals visualise complex colour relationships and values. They enable you to specify a colour quite accurately in terms of percentages of the various components.

The additive primaries give us the RGB model (Red, Green, Blue) while the subtractive primaries give us CMYK (Cyan, Magenta, Yellow and black). In practice, black is added to provide better contrast and dark shadows.

Red can be defined as 100 per cent red, 0 per cent green and 0 per cent blue using the RGB model. Another widely used model is HLS (Hue, Saturation and Lightness) where the colours are represented on a circle, 0 degrees being red, 120 being green and 240 being blue.



The primary additive colours

Directly correlated

The hue and saturation reflect the depth of the colour. For the most part the various models can be directly correlated so you can choose which model you prefer to use.

For example, a medium pink of 100 per cent red, 65 per cent green and 65 per cent blue in terms of RGB would be 0 per cent cyan, 35 per cent magenta and 35 per cent yellow on the CMYK model and 0/82/100 on the HLS model.



The primary subtractive colours

Most commercial printing is carried out with inks made up of the subtractive colours, CMYK, so it makes sense to stick to this model. In practice some black ink is used as true black is difficult to obtain using the first three.



such as Europress having opted for in-house colour origination and separation based on powerful desktop computers.

All you need to do is leave a space in your document where the colour photograph should be and leave the rest to the repro house and printer. The main difficulty is accurately realigning the four plates.

Printing registration marks helps here. All repro houses will do this but if you do the separation on your ST, remember to select the registration mark option on your output.

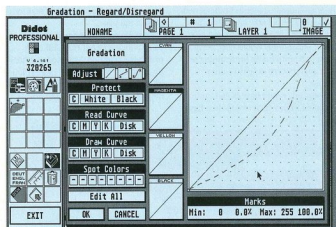
Using a repro house, however, is unlikely to be cheap. If you need to produce documents with full colour photographs, it might well be worthwhile

investing in software that can ease the cost.

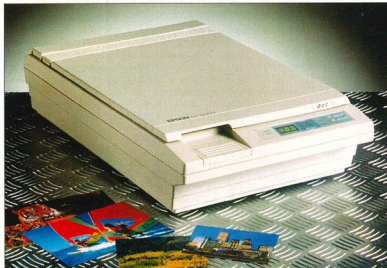
Didot Professional, for example, will separate 24-bit full colour TIFF files and screen them into halftones as well. It will also support limited manipulation to bring out or dampen one colour – if an original is too blue, for example, Didot can alter the balance and correct it.

Colour DTP is still in its infancy, whatever the hype that comes your way. The main difficulty is that even experimenting is expensive.

It is possible to get excellent results but at the end of the day, there is one golden rule – talk to your local printer and ask his advice before you start. It'll save an awful lot of your time and hard-earned money.



Manipulating colour values in Didot



Epson GT 6000 colour scanner

Scanning in black and white has been around for a while and it represents the quickest method of transferring designs from paper to screen. Simple mono hand scanners have always been relatively affordable but colour scanners are only just starting to come within the average ST owner's reach.

The latest arrival on the ST scene is the Epson GT family, a series of full colour flatbed scanners capable of very nearly photographic quality output.

Excellent new driver

The GT 6000 and GT 8000 models aren't new products but with the release of an excellent new driver, they are about to make their mark on the ST/TFT DTP world for the first time. Both models are capable of scanning a full A4 page, either in full 24-bit colour (16.7 million different colours), in 256 greyscales or in standard mono.

The GT 6000, which we reviewed, can scan at any resolution between 50 and 600 dots per inch with an integrated zoom function between 50 and 200 per cent for maximum flexibility.

The scanner itself has plenty of built-in features such as gamma and colour correction, three halftone modes and optional SCSI (for TEs) or parallel port connection (for STs).

It takes up as much desk space as a laser printer with a small control panel on the

front and an opening lid, somewhat like a photocopier, which lifts to reveal a glass plate for the scanned document.

Operation is quick and intuitive using the driver software, called Look. Look runs on any ST/STE or TT although less than 4Mb of RAM can't be recommended for colour work. Any screen resolution is supported, including ST medium and high resolution and all the TT modes, though it isn't necessary to have a colour monitor to scan in colour.

Pre-scan mode

The software has a pre-scan mode which lets you look at the image first then decide which parts to scan in detail and what settings to use. Images can be saved as mono IMG files, Retouche-compatible TIFF blocks or standard TIFF files.

In tests we scanned a 2Mb full colour graphics file in about a minute and a half.

However, it slows down when scanning files larger than available memory as they are saved directly to disk.

The same file took seven minutes when scanned directly to disk. Greyscale and mono images are considerably faster.

Product: Epson GT 6000/Look software

Supplier: CGS, 19 Ledbury Place, Croydon CRO 1ET

Telephone: 081-686 8121

Price: £865

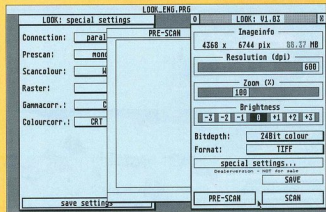
Configuration: All STs and TT

Bottom line

FEATURES: Superb quality A4 scans with fast, flexible software.

EASE OF USE: Very easy to use and set up despite port trouble.

Features	EXCELLENT
Excellent load	LOAD
Average load	Average
Bad	Bad
Appalling	Appalling



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

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

ARC 50 HACMAN, superb pacman clone. MR PACKY, another super pacman. SOCCER brilliant 3D football game 2 players. MUTANT WIPEOUT ariel shoot em up. INVADERS needs no description.

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

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

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

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

DART05 ANI ST. Great animation package formerly sold at £80.00 now PD, VAN GOGH Paint package with animated sprites. 4 LANDSCAPE Generators including GENASIS and a CAD Package.

MUS31 The ACCOMPANIST SEQUENCER from H. COSH.

WFR01 ST WRITER V4.2 and FIRSTWORD. The best word processors for the ST(E) plus a spell checker, print spooler and a selection of ready to use letters.

0DD07 THE WORLD OF STARTREK. Over 300K of text interviews and biographies from the original STARTREK and NEXT GENERATION plus loads of pictures from both series. A must for all TREKKIES!!!

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

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

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

WPR09 LEXICOM. A pure word list containing 46,209 words without slang, americanisms or other rubbish. Needs 1Mb to run with SPELLONE (spellchecker) also provided on this disk.

ART01 ARTUTOR. For budding artist. Includes its own package.

BRD05 AMERICAN FOOTBALL. DALEKS. START REK. DELTA 3. CELESTIAL CEASERS (versions 1 and 2). SPACE WARS. RED ALERT. MATCH.

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

ARC13 VIOLENCE. Super scrolling shoot em DROID - Excellent platform game.

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

ADV06 BLACKDWN. Good text adventure with excellent graphics. DUNGEON MASTER NEW LEVELS. Needs original DM disk to play.

UTL73 GEMCALC. Best German spreadsheet now translated to English. Both 0.5 and 1Mb versions.

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

UTL139 DESK PACK PLUS. This superb integrated accessory tool has now been released as Shareware. GET IT!! DOSS ACC v2.8 + THE ACC - Super multi function accessories. M DISK v4.3. Multi function ramdisk, disk copy, hard disk, cache and more. NEWBELL and SIREN.

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

DEM123 FISH 'N' CHIPS. Superb multi screen demo.

EST. 1989

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With computers and software expanding in power and sophistication at a hefty pace, their hunger for higher capacity media is becoming insatiable.

This growth is not restricted to the business computing arena either. Computer and software sophistication in the consumer market grows at an equal rate.

The humble 1Mb floppy drive, which provides 720k of actual storage space, is straining at the seams with data and 1.44Mb drives are replacing them in newer machines such as the Mega STE, TT and now the Falcon030.

The storage capacities of these devices all pale into insignificance however, compared with the capacity offered by the new Floptical drive.

Using special 3.5in "Floptical" disks, the Floptical drive gives a formatted capacity of 21Mb, with 40Mb and 80Mb and higher floptical disks due in the future.

Precise tracking

Such high capacities are achieved by its patented optical tracking and magnetic recording techniques.

The Floptical disk has 900 concentric microscopic optical "servo" tracks stamped onto the magnetic surface, and using techniques similar to CD players the Floptical drive shines an infra red LED onto the embossed surface.

A receiving lens arrangement then relays the beam to a photodetector which is used to indicate that the drive head is in position.

Once in position, a second, "fine-tune" positioning stage is used to accurately locate the data.

This use of precise optical tracking allows track densities of 1,245 tracks per inch (tpi) as opposed to the 135tpi of standard floppies.

Standard floppies

With dimensions of 101.6 x 25.4 x 156.5mm and a weight of 450g, the actual drive could be mistaken for a normal external floppy drive – and it isn't only in looks that the Floptical resembles a standard floppy drive. It can actually read and write to standard 720k and 1.44Mb floppies, allowing you to continue using your existing collection of disks.

In fact, the Floptical is essentially a floppy disk and hard disk in one, providing hard disk capacity with the removable, low cost convenience of a floppy.

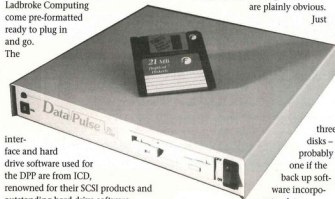
The model sent to *ST User* for review was a Data Pulse Plus (DPP) drive incorporating a Maxtor 127Mb hard drive with the Floptical built in.

However, standalone Flopticals and upgrade offers to existing Data Pulse Plus owners will soon be available.

The DPP drive is very compact and

quiet in operation and has a power switch and external ID switch mounted conveniently on the front of the unit.

All DPP models from Ladbroke Computing come pre-formatted ready to plug in and go. The



interface and hard drive software used for the DPP are from ICD, renowned for their SCSI products and outstanding hard drive software.

The DPP came at a convenient time for review, as the *ST User* Mega STE was about to have the hard drive backed up.

Backing up 52Mb of data on to immemorable floppy disks is an extremely time intensive and boring process.

Unless you are fortunate enough to have a second hard disk to copy your

data on to, you are in for a lot of disk swapping and lots of coffee.

With a built-in Floptical however, the advantages of 21Mb per 3.5in disk are plainly obvious. Just

three disks – probably one if the back up software incorporates data compression features

– are needed to back up 52Mb.

One notable problem, though, was the fact that the most popular backup software on the ST – Diamond Back II from HiSoft – failed to recognise the Floptical.

Ladbroke are to contact the program-

mers of Diamond Back and hope to resolve this.

However, using simple Desktop copying procedures, backing up a partition to a Floptical disk took a lot less time than would have been required to back up to standard disks.

Not cheap

With a price tag of £770, some may say it's not exactly cheap, but when you consider that you get ICD software, 127Mb hard disk storage and unlimited capacity storage on the Floptical due to the removable nature of its media, plus the ability to read and write to 720k and 1.44Mb standard floppies, the price is worth it.

Bottom line

FEATURES: Extremely quiet and compact. Very convenient front mounted ID and power switch. High capacity and cheap removable Floptical media.

EASE OF USE: Ready formatted for the beginner, with lots of useful utilities provided on disk.



Product: Data Plus 127Mb with Floptical

Supplier: Ladbroke Computing, 33 Ormskirk Road, Preston Lancashire, PR1 2QP.

Telephone: 0779 203166

Price: £770

Configuration: All STs and STEs

Seeing is believing

Ladbroke Computing are bringing new data storage technology to the ST in the shape of Insite Peripheral's Floptical drive. Darren Evans investigates

Specifications for Floptical drive and Floptical disk

Formatted capacity	21Mb with downward compatibility with 720k and 1.44Mb disks.
Interface	SCSI – 1.5Mb/sec max transfer rate.
Average seek time	65ms
Power requirements	5v only
Track density	1,245tpi
Bit density	24,000bpi
Media	Barium ferrite

Accelerators

PRODUCT	PRICE	SUPPLIER	COMMENT
AD Speed ST	£145	HCS	68000 chip running at 16MHz with cache or standard 8MHz. Fits in place of standard 68000
AD Speed STE	£165	HCS	The STE version of the above
68030 SST-50	£550	HCS	For the Mega ST giving phenomenal speed increase. 68030 runs at 50MHz and has space for 8Mb on board RAM. TOS 2 include

Atari hardware

PRODUCT	PRICE	SUPPLIER	COMMENT
Mega STE1	£586.32	Atari	1Mb of memory featuring the latest operating system (TOS 2.06). Switchable speeds between 8 and 16MHz. Features stereo sound and 4096 colour palette and is fitted with a 1.44Mb internal floppy drive.
Mega STE2	£700.83	Atari	As above but with 2Mb of memory.
Mega STE4	£1047.83	Atari	As above but with 4Mb of memory.
TT0302	£1164.15	Atari	A 2 Mb, 32-bit machine featuring the 68030 processor which runs at 32MHz as opposed to the normal ST's 8MHz. Has normal ST low, medium and high res with additional TT modes of 320X480 (256 colours), 640X480 (16 colours) and 1280X960 (2 colours).
TT0304	£1456.65	Atari	As above but with 4Mb of memory
TT0308	£1866.15	Atari	As above but with 8Mb of memory.
SM144	£149	Atari	A high resolution (640X400) monochrome monitor providing an excellent and crystal clear display. Ideal for wordprocessing.
SC1435	£259	Atari	A stereo 14" colour monitor providing an excellent display.
SLM605 Laser Printer	£599	Atari	Atari's laser printer offering 300dpi resolution with a performance rate of 8 pages per minute.

Emulators

PRODUCT	PRICE	SUPPLIER	COMMENT
Vortex ATonce 386SX-16	£330	Silica Systems/HCS	This emulator is for the STE/Mega STE runs at 16MHz. The board includes space for a maths co-processor and 512k of fast RAM.
Spectre GCR v3.0	£340	HCS	A Mac emulator giving a faster performance and easy fitting. Includes the 128k Mac ROMs
PC Speed(XT)	£90	Ladbroke Computing	An XT PC emulator for the STE and ST
AT Speed	£149	Ladbroke Computing	A PC emulator complete with Dr DOS software.
AT Speed C15	£229.99	Ladbroke Computing	Includes Dr DOS 5, and has a socket for the 80C287 math co-processor

Hard drives

PRODUCT	PRICE	SUPPLIER	CAP.	ADAPT.	COMMENT
Data Pulse Plus	£399.99	Ladbroke Computing	52Mb	GE-Soft	The Data Pulse range are come with either ICD or GE-Soft host boards and are very quiet in operation. Also have integral 64k look ahead disk cache
Data Pulse Plus	£359.99	Ladbroke Computing	52Mb	ICD	
Data Pulse Plus	£439.99	Ladbroke Computing	105Mb	GE-Soft	
Data Pulse Plus	£459.99	Ladbroke Computing	105Mb	ICD	
Data Pulse Plus	£529.99	Ladbroke Computing	120Mb	ICD	
Data Pulse Plus	£799.99	Ladbroke Computing	240Mb	ICD	
Series 900	£329	Power Computing	52Mb	ICD	
Series 900	£479	Power Computing	105Mb	ICD	The Series 900 drives feature a very slimline construction, uses Quantum mechanisms and has a write-protect switch. Battery backed-up clock is optional for extra £10
Mega Drive	£249	Gasteiner	32Mb	ICD	A good budget hard drive with a robust case. Very quiet.
Mega Drive	£309	Gasteiner	52Mb	ICD	
Mega Drive	£399	Gasteiner	105Mb	ICD	
Mega Drive	£599	Gasteiner	210Mb	ICD	
Reference	£299	Evesham Micros	40Mb	ICD	Colour matched to the ST and uses the NEC mechanism.
Reference	£449	Evesham Micros	100Mb	ICD	
ProGate 2	£232	Protar	20Mb		An excellent drive featuring a built-in SCSI host adaptor and includes space and wiring for an extra "bare" SCSI mechanism to be plugged straight in. Ready to use with excellent manual and software.
ProGate 2	£292	Protar	40Mb		The range of Protar hard drives use Quantum drives
ProGate 2	£376	Protar	50Mb		
ProGate 2	£503	Protar	105Mb		
ProGate 2	£607	Protar	120Mb		
ProGate 2	£938	Protar	240Mb		
ProGate 2	£1415	Protar	440Mb		

Hardware buyers' guide

A detailed and up-to-date listing of peripherals for your Atari ST

Welcome to *ST User's* Hardware Buyers' Guide. Herein you will find information on a variety of hardware products available for your computer.

Although every effort has been

made to ensure the information is correct, products and prices are constantly being revised and updated. The information was accurate at the time of going to press.

Hard drives

PRODUCT	PRICE	SUPPLIER	CAP.	ADAPT.	COMMENT
ProGate 2	£1602	Protar	500Mb		
Hunter Carnegie	£449	Hunter Business Systems	100Mb	ICD	Good quality all-rounder. Comes with ICD's AdSCSI host adaptor

DIY hard drive parts

PRODUCT	PRICE	SUPPLIER		COMMENT
Host Adaptor	£59	Gasteiner		
Metal Case	£35	Gasteiner		
50 Watt PSU	£35	Gasteiner		
DMA cable	£5	Gasteiner		
SCSI cable	£5	Gasteiner		
Seagate 32Mb bare drive	£150	Gasteiner	Bare drive for hard drive kit	
Seagate 50Mb bare drive	£199	Gasteiner		
Quantum 52Mb bare drive	£199	Gasteiner	Quantum are regarded as the best hard drive mechanisms available. Extremely quiet and very fast.	
Quantum 105Mb bare drive	£279	Gasteiner		

Floppy disk drives

PRODUCT	PRICE	SUPPLIER		COMMENT
PC720B	£65	Power Computing	Excellent features such as built in Blitz Turbo, virus blocker and allows you to boot from drive B.	
PC7200I	£45	Power Computing	An official Atari internal drive. The ST range have differing sizes of eject buttons and case modification may be required.	
Golden Image External	£59.99	Ladbroke Computing	Features an LED track counter and thru' port for the older ST/STM models	

Mice, and trackballs

PRODUCT	PRICE	SUPPLIER		COMMENT
Power Mouse	£15	Power Computing	Good quality and reliable mouse at an attractive price	
Optical Mouse	£29.95	Power Computing	Reliable 300dpi optical mouse with 600mm/sec tracking. Includes mouse mat and holder. Good buy.	
Star Cursor Joystick	£17.95	Europress Direct	Based on the MCA Arcade joystick, regarded as the best in the world. Features selectable four or eight-way microswitch operation. Two fire buttons.	
Golden Image Mouse	£14.99	Ladbroke Computing	A low price, opto/mechanical mouse with 290dpi resolution and Amiga/ST switch	
GI Brush Mouse	£24.99	Ladbroke Computing	A somewhat different mouse which is held as a paintbrush would be. 150dpi, 500mm/sec tracking speed and comes complete with the Deluxe Paint art package. £19.99 if purchased without Deluxe Paint Kidz	
Mouse	£32	Logitech	Has a novelty look to it, poor 200dpi resolution but does feel very smooth	
Alfa Data Infrared	£44.95	Gasteiner	An infra red mouse which rids your desktop of the intrusive mouse cable. Quite expensive and unpredictable during quick movements	
125+	£9.99	Cheetah	Auto-fire joystick with four fire buttons. Good ergonomic feel	
Turbo Fighter	£49.99	Cheetah	Aeroplane control-type design with clamp to secure it to desk. Quite expensive.	
The Bug	£14.99	Cheetah	A very distinctive, if somewhat stubby, design. Very comfortable in the hand. Has auto-fire function. Good value	

External power supply unit

PRODUCT	PRICE	SUPPLIER		COMMENT
3.5in External	£52.99	Evesham Micros	Very slimline design and very quiet. Uses Sony/Citizen mechanism	

Scanners

PRODUCT	PRICE	SUPPLIER	COMMENT
Power Scanner	£99.95	Power Computing	Good quality, low price scanner with scanning resolutions up to 400dpi. Features include auto scan rate detect, real time greyscale scanning and good, feature-packed, GEM-driven software.
Golden Image scanner	£119.99	Ladbroke Computing	Up to 400dpi scanning resolution. Includes Touch Up, a comprehensive editing and scanning package and Deluxe Paint.
Naksha scanner	£116.33	Naksha	Supplied with Migraph's Touch-up and has resolutions between 200 and 400dpi.

Networking and interfacing

PRODUCT	PRICE	SUPPLIER	COMMENT
Data-Net	£179.99	Ladbroke Computing	This is the Data-Net starter pack which includes two nodes. Hardware plugs into cartridge port and connects to other nodes via coaxial cable and BNC connectors. Hardware is fully Lantech compatible
Data-Net Nodes	£89.99	Ladbroke Computing	The additional Data-Net nodes.

Samplers/Sequencers

PRODUCT	PRICE	SUPPLIER	COMMENT
Stereo Master	£39.95	Microdeal	A great sampler with lots of features. Stereo capability and has a real-time special effects feature. The cartridge is very compact and the editor software is easy to use.
Sequencer One Plus	£129.95	Gajji's Music Software	An excellent sequencer offering 32 tracks and a very easy to use interface with tape transport type controls.
Concerto	£39.95	Microdeal	A very good Midi sequencer offering 24 tracks and five different editors including Score, Step and Event.
Replay 16	£129.95	Microdeal	The first low-cost 16-bit sampler for the ST giving high quality sound sampling and excellent editing software.

SCSI host adaptors

PRODUCT	PRICE	SUPPLIER	COMMENT
Ad SCSI Micro Host Adaptor	£55	ICD	An internal SCSI controller for Mega STs with excellent software utilities and manual
The Link	£TBA	Silica Systems	A very compact external SCSI host interface allowing SCSI drives and for the Mac, PC, Amiga and NeXT machines to be used with the ST. CD-ROMS are also supported

Graphics boards

PRODUCT	PRICE	SUPPLIER	COMMENT
Crazy Dots	£389	System Solutions	For the Mega ST/STE, gives 256 colour displays from a palette of 16.7 million. Uses the TsengLabs ET4000 controller and has an expandable architecture. Good performance. 1Mb video memory on board
Reflex	£199	Titan Designs	A graphics card that increases the screen resolution of the SM 124, 125 or 144 to a massive 1024X960. Features include a X4 zoom facility, mouse accelerator, smooth scrolling over virtual screens of 1024X1024 and full or partial screenshots.
Matrix C1102V1	£749	Silica Systems	High quality, excellent performance board featuring the Intel 82786 controller. Features include hardware scrolling and zoom function. Comes with 1Mb VRAM on board
Matrix C1102V2	£899	Silica Systems	Same as the C1102V1 except it includes 2Mb of VRAM for increased performance

Modems – fax/modems

PRODUCT	PRICE	SUPPLIER	COMMENT
EurLink	£157.45	Europress	Supplied with ST comms software. Speech up to 2,400 baud
Smart One	£119	HCS	v.22bis (2,400bps) fax/modem... Modem does not have MNP error correction and is prone to line noise
Modem 9600	£139.99	HCS	A fax/modem offering MNP 5 error correction and data compression, thereby giving 9,600bps throughput
Pace Linnet	£149	Silica Systems	A v21/v23 Hayes-compatible modem, featuring auto dial/answer, auto baud rate sensor and battery back up
Pro 4 Auto	£138.83	Silica Systems	A v21/v23, v22, v22bis, Hayes-compatible with error correction and compression
Ultralink 32	£873.83		Intelligent v21/v23/v22bis, v32 LCD display, Hayes-compatible with MNP error correction
Ultralink Quad	£468.83	Silica systems	Intelligent v21/v23/v22bis, LCD display, Hayes-compatible with error correction

Monitors

PRODUCT	PRICE	SUPPLIER	COMMENT
Atari SM144	£115	HCS	Atari's latest revamp of the mono monitor. Excellent picture quality for Word processing and other applications other than games
Atari SC1435	£249.95	Silica Systems	Atari's stereo monitor offers excellent picture and sound quality. Has a 13in screen and sleek design. Bad decision to put the power switch at the back though

Hardware buyers' guide

Monitors

PRODUCT	PRICE	SUPPLIER	COMMENT
Philips CM853 MKII	£229.95	Philips	Good stereo sound and picture quality. Picture adjustment controls at the front but power switch is at the rear
Philips Book	£249.95	Philips	An extremely distinctive TV/monitor resembling an open book. Picture quality not as good as a dedicated monitor.
Philips FST Cube TV	£259.99	Ladbroke Computing	15in screen, remote control and Fastext

Printers

PRODUCT	PRICE	SUPPLIER	COMMENT
Epson EPL-4300	£999	Epson (UK)	A easy to use printer with LaserJet III compatibility. Excellent print quality and lots of internal fonts including Courier, Time, Sans serif and Dingbats. Will also accept Epson font cards.
HP LaserJet IIIp	£1,179	Hewlett Packard	Sleek looking laser printer but rather expensive when compared to the Ricoh and it's features. Good quality print.
Panasonic KX-P4410	£845	Panasonic Bus. Sys	A little expensive when compared to what other laser printers offer. Very good quality print. A good basic printer if a little pricey.
Seikosha SP-1900 Plus (9-pin)	£128.00	Silica Systems	80 column, 192 characters persec draft, 48cps NLQ. Has 1k printer buffer and two fonts with Epson and IBM emulation.
Seikosha SP-2400 (9-pin)	£170.35	Silica Systems	80 column, 300cps SD, 2400cps Draft, 60cps NLQ. Features 21k printer buffer and 5 fonts & Epson and IBM emulation.
Seikosha SL-92 Plus (24-pin)	£229.13	Silica Systems	80 column, 240cps draft, 80cps letter quality. Includes a 44k printer buffer and 9 fonts Epson and IBM emulation.
Star LC24-20 (24-pin)	£189	Ladbroke Computing	210cps draft, 64cps LQ. Includes 10 resident fonts with the ability to accept font cartridges. 16k printer buffer expandable to 48k and has paper parking facility
Star LC24-200 Colour (24-pin)	£259	Ladbroke Computing	22cps with 5 resident fonts. Accepts font cartridges and has bottom feeder, push or pull tractor feed and paper parking
Starjet SJ-48	£219	Ladbroke Computing	A good quality 48 nozzle bubblejet printer. 166cps with 2 resident fonts. Offers near-laser quality output and Epson and IBM com patible
Star LP4 III tridges.	£1,049	Star Micronics (UK)	A high quality, quiet LaserJet III compatible laser printer. Has a font slot that will accept both Star and LaserJet III font car- High quality print output.
Ricoh LP1200	£779.99	Ladbroke Computing	A value for money, 400dpi laser printer offering HP LaserJet compatibility, smooth edge output and onboard 2Mb RAM

Miscellaneous

PRODUCT	PRICE	SUPPLIER	COMMENT
Forget Me Clock II	£17.99	Marpel Developments	A clock that fits into the ROM port on the ST providing a battery backed up clock for automatically setting the time on the ST. Has a thru-port to enable other cartridges to be used when fitted.
ST Secure	£19.99	Ladbroke Computing	A security device to prevent unauthorised use of your computer. Once installed, ST Secure allows 45 seconds for the password to be entered or it resets the computer
Centronics printer	£4.99	Ladbroke Computing	
STE Scart	£14.99	Ladbroke Computing	Used to connect the ST to the Scart socket found on the Philips TV/Monitors
STE 883MKII	£14.99	Ladbroke Computing	Allows connection to the very popular Philips colour monitor. STE only
STFM 883MKII	£14.99	Ladbroke Computing	As above except for your STFM owners
Null modem lead	£9.99	Ladbroke Computing	This lead allows you to connect two machines together to play the many games that feature multi-player modes.
Mouse/Joystick extension	£5.99	Ladbroke Computing	Prevents wear and tear of the badly placed and fragile mouse/joystick sockets and makes connecting and unplugging of the mouse and joystick much easier

Video Digitisers

PRODUCT	PRICE	SUPPLIER	COMMENT
Complete Colour Solution	£179	Rombo	A complete package for capturing colour images. Images can be grabbed from colour video cameras, home VCR's or any still video source. Package includes a electronic RGB splitter, problems with focusing and movement are removed. The digitising software included (VidIChrome) is excellent.

Distributors phone list

Atari	0753 533344
Ladbroke Computing	0772 203166
Power Computing	0234 843388
Protar	0628 789788

Gasteiner	081 365 1151
Evesham Micros	0386 765500
Hunter Business Systems	0382 28245
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HCS	081 777 0751
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Calamus News

Calamus S Release - Incredible promotional deals

CALAMUS

At long last Calamus S is with us and at a lower price than previously advertised. £335.00 inc. VAT

If you are at present a Calamus 1.09N user or running any other DTP program available on the Atari platform, Halco are willing to upgrade that program to Calamus S (on receipt of your master disk) for the staggering low price of £145.00 inc. VAT

Calamus

*Faithful Calamus 1.09N still at th low price of £139.99 inc. VAT
Outline Art also at the reduced price of £95.00 inc. VAT
Font Catalogue £7.00 inc. postage & packaging*

CALAMUS

Calamus SL is proving to be a master of colour work and the latest May issue is even better. £587.50 inc. VAT

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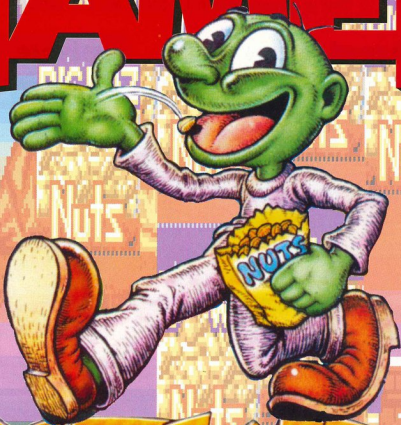
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WEIRD CITY!

ISSUE FOURTEEN • NOVEMBER 1992

GAMER



WIZKID



Ocean's answer to Ebenezer Goode

Plus...

**REVIEWS... PLAN 9 • CARL LEWIS • FIRE FORCE
MEGA SPORTS • CAPTAIN DYNAMO • AND MORE**

ALSO... LURE OF THE TEMPTRESS SOLUTION • REACH FOR THE SKIES PREVIEW

...THE UNSTOPPABLE GAMES MACHINE... ..

ONword

This is rumour control... these are the facts

Strange shaped things to wrap your finger around



Cheetah has brought out some rather silly joysticks. Character joysticks which believe it or not are joysticks with characters from various cartoons and films instead of the usual sticks. It's supposedly the biggest tie-in ever involving film licensing and the computer hardware. All I can say is that they should be locked up. Bloody perverts.



Violence, violence

Press release of the month goes to Virgin for their preview of Apocalypse. In these times of the socially aware, references to mindless violence are somewhat frowned upon, but do we care? Virgin don't.

It seems that they have Charles Manson and The Yorkshire Ripper writing their press releases, and I quote:

"The emphasis here is on mindless mass destruction. It's a fire fest." Basically it's a total violence frenzy. Coming soon from Virgin.



grab-a-groupie sessions, trash that hotel room, and slapping an oriental man around the face with a fish. You also have to knock Stonehenge over onto the hippies before they float away. Updates as we have them...



The Ace of Spades

I remember reading an NME review about Motorhead. It said that nothing, but nothing, can prepare you for their testicle-shaking volume. If your aim in life is to be loud and socially unacceptable then read on.

The "eccentric" exploits of one of the world's favourite heavy metal bands can be experienced by everyone, even your gran.

You play Lemmy, the warty bass player, whose talents stretch to being Jimi Hendrix's roadie and being thrown out of Hawkwind for taking to many drugs. The idea is to release your friends from the clutches of somebody.

The actual game can be described as a beat-'em-up along the lines of Golden Axe, but it's infinitely more silly. The player has to run around Karaoke Land, Nashville Land, Hippy Land, Gothic Land, Hip Hop Land and Rave Land, where foolish floating E-Heads are out to do over Lemmy. You really would have to be on some sort of drugs to take him on. As a bonus there are



TALKING SHOP

This month

Last month

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It's an issue packed full of goodness, plus now with 25% less fat

I'm quite average really

After nine years of waiting the masters of procrastination Braben and Co have finally got round to doing a sequel to the space trading shoot-em-up Elite, originally titled Elite II.

The graphics on the new game have been hailed by another mag as being the "Some of the most stunning screen shots you'll ever see".

The sequel will give a whole new depth to the game, offering you different starting points and the opportunity to fly with a bunch of pirates. It also boasts that it will "let you do everything the book said you could do".

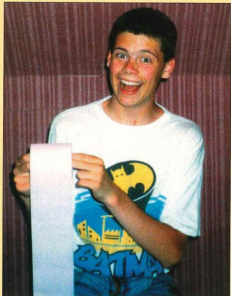
It is still the office favourite as we found out last week when somebody brought their copy into the office, so you're lucky to be reading this mag at all this month.

All together now

It didn't take long - lock up your daughters and shackle your sheep, the Biff is back. Ha ha, his love for Gamer made him leave his job on another magazine and come fleeing back to this stalwart organ. He's not doing much this month but next month all hell breaks loose at Biff the Kiff does Silly Putty.

To inject a small amount of jollification into the On Word pages we are running a small competition.

The question is thus - who is this ex-editor of Gamer and how silly does he look? Answers on a Melon to the Get Dan Back Competition, and we'll think up some worthwhile prize to send you.



CARL LEWIS CHALLENGE4
Sporty goings on in Psygnosis' newest, plus absolutely no sign of Jim Rosenthal

MEGA SPORTS5
US Gold go all sporty aswell in this sports extravaganza compilation type thingy. My goodness

PLAN 9 FROM OUTER SPACE10
Quite possibly the crappiest film ever, but is the game a load of yak's droppings?

CAPTAIN DYNAMO12
Yeah, Code Masters are back with a budget platform romp. It's that good we've given it a whole page

WIZKID14
WizKid is a game that messes with your mind, plus it's possibly going to be the game of the year

LIVERPOOL16
The boys in red get out on the park and try to stick the ball into the old onion bag or something like that

FIREFORCE17
Grabs your big weapon and shoot loads of no good foreigners that are, err, up to no good

ONWORD2
All the latest news and views, plus a brilliant embarrassing picture

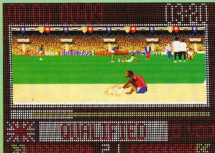
TALKING SHOP2
Oscillating Hazelnut was far too bizarre, so we've changed it back to Talking Shop

THE SOURCE5
Nigel Mansell's car gets an expert look over by ace mechanic Ben. Plus there is a sneaky peek at Hero Quest 2. Wow

THE RETURN OF THE SOURCE6
All you RPG fanatics hold onto your hats, because Daemonsgate is coming and it's going to be massive

THE SOURCE - THE FINAL SOURCE...8
Reach For The Skies gets a good seeing to by Paul as he dons his flying scarf and goggles

CHEAT MODE18
Having trouble with Virgin's Lure Of The Temptress, well fear no longer here's a handy four page Cheat Mode special



Hooray, time to build a sandcastle. Where's my bucket and spade?'

This could be a really interesting and witty caption about the high jump, but it isn't



More like The £*%&!* S*&% Challenge

CARL LEWIS CHALLENGE

I am desperately looking for a word or words to describe how bad this game is. The only words I can think off at the moment are obscene and you'll only find them in Viz.

Things are definitely looking bad for Carl Lewis and his Challenge. I don't normally start a review with what I think of the game - I normally leave my comments to the end, where they belong - but because this game is so stinky I just have to tell you now.

After a few plays it loses any appeal it might have had in the first place. Take a look on the box and you'll see several screenshots. To be honest it looks quite nice and more than likely I might have bought it from my local computer game store, but thank God I'm a reviewer and I get to see everything before you do, and for free.

In terms of smelliness: Carl Lewis' Challenge is, err, well imagine the smelliest smell you can possibly think of. Carl Lewis' Challenge is 20 times smellier than that.

Well I'll take a little break from slagging right now and instead I'll tell you a little about what you do in the game. There are five events to compete in.

You might think that Carl Lewis Challenge is a joystick waggler. You'd be half right because - and here's a slight bit of original-

ity - there are three different ways of controlling the game.

The joystick waggler, which is for intents and purposes called the speed control method, is the best out of the three, but it doesn't half knacker you out.

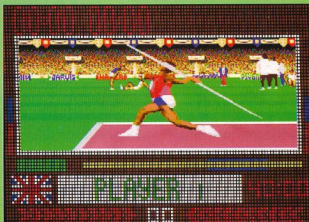
The way it works is pretty damn obvious, but just in case there's one reader out there who doesn't know, I will tell all. The quicker you are able to alternate between the left and right controls, the quicker your athlete will run.

The rhythm control method depends upon your timing of the Fire button presses in relation to an on-screen gauge. The last method is called the gearing control method. Using the marks below the scanner, you time the Fire button press to each of the marks.

Failure to hit the marks results in your athlete losing speed or not jumping or throwing at the correct time.

All righty, time to explain those delightful events. First of all the 100m sprint. This is a very complicated event - you have to guide your athlete in a straight line, going as fast as you can towards the finish line, and blow me down if you don't race over the

PSYGNOSIS ■ £25.99 ■ 1/2 meg ■ Joystick ■ Out now



Excuse me, but aren't you Fatima Whitbread?

distance of 100m, or bimey missus if that ain't a turn up for the books.

The 110m hurdles is essentially the same as the 100m sprint, except you jump over hurdles and you have to race over 110 metres. Easy, isn't it?

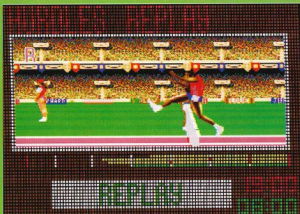
The javelin is one of the better events in the game, which is not saying much. High jump and long jump are very easy indeed, in fact far too easy.

So there you have it, all the events, all five of them. Now time to finish this review - yes kids, time to get nasty.

The digitised graphics are nice and work quite well - at least that's one plus point. The playability is non-existent - I've seen better games than this out there in the PD market. Well, the only award this game is going to win is Crappiest Game of 1992. If anyone makes a game as bad as this, then I'm going to cry.

To sum up, Carl Lewis Challenge isn't a challenge, in fact the only challenge is whether I'm going to chuck the game into the nearest lake or wait until November the 5th and burn the disks. Utter trash.

Jonathan



Now that could be very painful indeed. Ouch

VISION

Nice digitised graphics, but the game is bobbins.

AUDIO

Nice intro tune, but the ST chip kicks in and ruins it all.

PLAYABILITY

It gets one because I feel so sorry for Carl Lewis.

ADDICTION

About as addictive as Pot Noodles. Yeuck!

25%

the source



We love you, Nigel

One thing that the English seem to be vaguely good at is motor racing. This year old Mansell won the World Championships – about time too is all I can say.

To commemorate this momentous occasion, Gremlin are about to release the game of Nigel Mansell, and would you believe it, it's a driving game. Now there's a surprise, eh?

It's an actual racetrack game, which is something we haven't seen in a while. It's all racing through deserts and the like nowadays, but I still remember Pole Position – no-one else does.

Since the release of the motorbike driving game Team Suzuki, which was deemed the most ridiculously impossible game in the world, people have started putting trainers in their programs.

This is the first fully functional one that I've come across. It has a sort of advice service that takes you around the various tracks – handy, huh?

It's got all the usual stuff you see on racing games such as gearbox options for the grrrlies who want an automatic. You will also be able to tune the car more to your needs.

Well, the sources say that this is going to be the closest thing to driving a Formula One car, bar actually driving one, I suppose.

We reckoned that the handiest bit of the game was the fine tuning of the car which allows you to add aerofoils or spoilers and other little bits and pieces. And you'll have to wait a mere few weeks, until the end of November, to get your clammy paws on a copy.



A beastie's back door

Hero Quest II is another vastly humorous adventure game from those lovely Gremlin people. The follow up to, wait for it, Hero Quest, this is bigger than a very big thing. Comprising ten different scenarios, it should keep the adventure game people happy for a long while.

The nicest part were the interactive characters, who have the ultimate aim of either distracting you or helping you in your quest.

Unlike some of the recent adventure games, you are not just confined to a dungeon (who said Lure of the Temptress?) as there are forest, and things like that to get thoroughly lost and frustrated in.

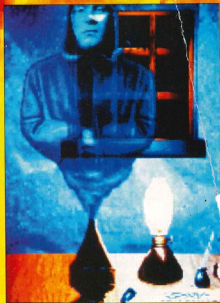
There's all the normal cobblers you get in adventure games. like character, class and the like, and it's out in November, so you'll have to wait a little bit longer.



the source

2

Daemonsgate 1 - Dorovan's Key



Daemonsgate is the delightful title given to Gremlin's brand new role-playing game and apparently it's going to be the largest and most in depth game of its genre yet. We shall see, but first let me tell you a little story.

Six months ago all contact was lost with the ancient kingdom of Elospea, not something that the rulers of other kingdoms were too worried about because the Elospeans were a strange race.

Strange probably isn't the word, but any race that watches the evening and Sunday editions of Eldorado is definitely a bit bonkers. For nearly a thousand years, they have lived a reclusive existence, rarely coming into contact with their neighbours.

Suddenly, strange reports began to filter in from the small hamlets (now listen up kids, a hamlet is a small village, especially one without a church. Oh and it's also a make of well-known cigars sold in most newsagents. - Educational Ed) to the south of Tormis.

It appeared that a rather large Daemonic army (gasp!) of unknown origin (yowzers!) was moving through the Border Peaks from Elospea destroying everything in its path (gasp!).

Besieged

The armed forces of Tormis tried to stop the advance, but to no avail and the city was soon besieged. Alone and without any help from their neighbours, the inhabitants of Tormis had to sit and wait it out and the Daemonic hordes were happy to let them sit there and sweat.

Well, it's about this time when some sort of hero or heroes appear and kick the butts of the Daemonic hordes. You play the part of Captain Gustavus of the Imperial guard and by the request of the city council, you have to get a band of willing mercenaries and find a way out of the besieged city.

From there you have to find a certain elderly Elospean who knows how to defeat the Daemonic hordes, give them a bashing and be home in time for tea. Easy, innit?

Remember the hordes could attack at any time and the city's defences cannot withstand a prolonged assault. The survival of the kingdoms and the world is in your hands and if that isn't dramatic, I don't know what it is. The game is set

upon a world called Hestor, for which a (take a deep breath here if reading out loud) detailed rationalised background has been produced including a fully detailed "hythos" (?), a complex social structure, realistic ecology and logically laid out geography.

What a mouthful - big words never impressed anyone especially when you don't know what the hell they're going on about.

Well it was all compiled over six months and Gremlin assure me that it's going to be one of the most rational fantasy environments ever created for a computer game.

As with almost every role-playing

game, the player in Daemonsgate controls a number of characters - in this case eight - utilising the various skills and abilities of each team member to overcome the tasks and problems that lie in their way.

The game is made up of five major elements, which consist of land travel, town travel, combat, conversation and magic. In total there are over 100,000 screens of towns and over 5,000 town inhabitants and this apparently is the

largest map size and non-player characters yet seen in an RPG.

As you can see from the screenshots, the graphics are top notch and thus it could be Gremlin's finest release yet, we shall see. Daemonsgate 1 - Dorovan's Key will be out in time for Christmas and will cost you a penny short of £35, but by the looks of things it'll be worth every penny.

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Eat lead Gerry swine!

the source

3

Courtesy of Diplomatic Headlines Inc

Aw, please don't shout at me for being an ignorant racist limey pig. It's Wednesday afternoon - deadline day - I'm hosed, and I need to let off steam.

Now before we start receiving a... er, trickle of letters questioning the wisdom of employing a xenophobic editor, let me just point out that the *Gerries* of the title are not our contemporary pfenig-mad, sunbed-pinch-ing, queue-jumping European brothers, but are in fact the chippy-

released by Virgin round about... well, some time in the near future. Approximately.

Designed and written by flight sim supremo Rod Hyde, *Reach For The Skies* promises to be a massive hit with all fans of the genre, and may even convert a few thickos like me.

The whole simulation revolves around the Battle Of Britain. You're given the choice of being a good old boy from Blyth, or a nasty Gerry, faced with the awesome task of alter-

ing the entire outcome of the war.

At the time of writing, the sound and explosions are still a trifle weedy, and the control's just a bit wobbly, but Rod assures us that these will be tweaked and beefed up on the finished version.

As a simulation it's just about as accurate as you can get. There's a real feeling of speed - you can almost believe there really is a bandit on your tail, and the smoothness and external scrolling is not to be scoffed at. For the real

sky hogs among you, even greater speed can be achieved by sacrificing a little detail, such as roads and landscapes.

There seems to be plenty of options and various nice touches even at this relatively early stage - a

particularly good detail is the facility to shoot away portions of the enemy plane, rather than score a direct hit every time.

Unlike many flight sims, *Reach* allows you to get into the action straight away rather than go through various tedious procedures before you even leave the ground. From what us boys in the office have seen so far, this is a contender for the flight sims hall of fame.

Make sure you buy next month's copy. We probably won't have a full review, but buy it anyway.



It's smooth and fast, so there's no excuse for a mist

bombing Luftwaffe of the forties.

Really, where are my manners? Third paragraph already and you're still not entirely sure what I'm on about. I'll elaborate. We're talking about a flight sim here chums (as you may very well have gathered from the screenshots) - you know, dials, aeroplanes, dials, whizzing landscapes, dials... all that sort of thing.

Reach For The Skies (for that is its nomenclature) is in the latter stages of production at the moment and will be

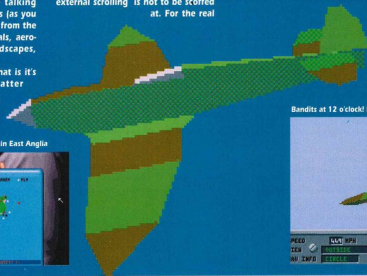
Not very interesting unless you live in East Anglia



The planes appear gradually, giving a realistic simulation



The seat's empty! Who's flying this bird?!



Bandits at 12 o'clock! Bandits at 12 o'clock!



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TEN 10000 CALLSIGN SWIFTY 1:
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RANGE 9 MILES

HEADING 139 DEG
CALLSIGN SWIFTY 1:
RANGE 9 MILES

ALTITUDE 6573 FT
BEARING 81 DEG

Where does Lynford Christie keep his shopping?

MEGA SPORTS

US Gold ■ £29.99 ■ 1/2 meg ■ Joystick ■ Out now

All right, hands up all those people who don't own a sports game. Yes, that's what I thought... not one of you.

OK, let's try this one then. Say "Aye" all those who believe there simply aren't enough sports games on the market. Hmm... was that a pin I heard drop?

Well, in the face of this obvious desire for yet more joystick-waggleing run/ski/vault/hurdle-em-ups, US Gold leap to the rescue, more than meeting our collective sporting requirements with Mega Sports - "A thrilling compendium in the best of world sports", or so we are led to believe.

For those of you who haven't yet caught my gist, so to speak, it's a compilation. Yes, all the old favourites are back from the computer game equivalent of the donkey sanctuary, clinging doggedly to the belief that there are still one or two people so overcome with the fading Olympic fever that they'll don a pair of tracky bottoms, take steroids by the bucketload and triple jump all the way to the local compo shop in the vain hope of rekindling the feeling inspired by Sharron Davies's bikini-clad rump.

And who knows - perhaps they will. Let's see...

I must apologise. I've been very flippant thus far and realise that there will be some who don't own a sports game, and who would rather not endure my sarcasm while they are trying to decide whether a game is worth buying. This review is for you.

First up is **THE GAMES, SUMMER EDITION**: eight summer-like events for your enjoyment such as archery, hurdles, pole

vault... well, you get the picture I'm sure.

Apart from the norm, there are one or two original[ish] events included, such as velodrome cycling [like that bloke with the funny looking bike in Barcelona] and the uneven parallel bars. Control is by the dodgy waggle/press method, with added knobby/press methods for the more complex events.

This leads us rather nicely to - you guessed it... **THE GAMES, WINTER EDITION**. This is my favourite of the five, consisting of such brass monkey-freezing events as the Luge, ski jump and figure skating.

Graphics-wise, it's not much better than it's sunnier counterpart, and there is actually one event less to compete in - but better crashes and falls are possible, making it a much better laugh.

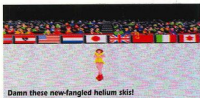
Sadly, but inevitably, the control method is every bit as dodgy as the other events, and it's unlikely that the sound will win any awards. Not bad though... not bad.

Let's have a look - what's next. Aha, **WINTER GAMES** - just a minute, haven't we just done this? No, note the slightly different title... very crafty. Slightly different events too - a bit more light-hearted this time.

Impress the chicks with your Hot Doggin' skills (which is basically somersaulting off a small hillock with skis on), or test your stamina in the beathon (trekking round the countryside in skis, shooting at what can only be described as the easiest targets in living memory). Graphics slightly better, sound still naft... amusing for a while.

More sunshine, this time in the good old US of A in **CALIFORNIA GAMES**. None of that running or jumping lark here; there's some serious competing to do in world famous events such as skateboarding, BMX-ing and, wait for it... flying disc!

Yes indeed; chill out, get rad, be bad, and...and... do other such American-esque things in this [relatively] fun beach-bum sun-



Damn these new-fangled helium skis!

shine romp. Enthusiastic eh?

That's it for the compilation bit. The other two in this six-of-the-best bonanza (more enthusiasm) have been commissioned specially for this package and proudly go by the names of **SUMMER GAMES** and, sorry, but **SUMMER GAMES 2**.

Sket shooting and equestrianism are two of the better events; the rest have all been seen in some shape or form a hundred times before. It's a little disappointing that since these games are newer than the rest, their quality in sound and vision has hardly evolved from the many predecessors.

Apology time once more. I may have been a little harsh, and you probably now believe that I hate Mega Sports and all it stands for.

Well I don't. I'm certainly a long way from falling to the ground and slobbering a lot, because the graphics and sound just don't utilise the capabilities of a 16-bit machine, but there's plenty to do, and some of the events are even a decent laugh. Worth paying thirty quid for? Hmm...

Paul

VISION

Nothing stunning. Nothing even very good. But OK.

AUDIO

The odd tunette here and there, but nothing special.

PLAYABILITY

To be fair, as playable as the next sports game.

ADDITION

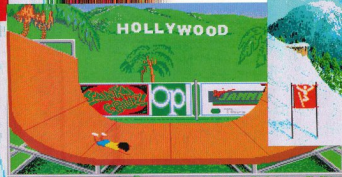
Still a long way behind nicotine in the addiction stakes.

61%

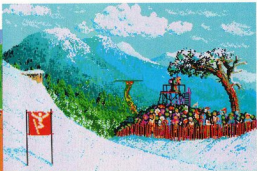


Well Harvey, what went wrong?

It's a '64E' lad, and no mistake!



Can't kick turn backwards. 1:13



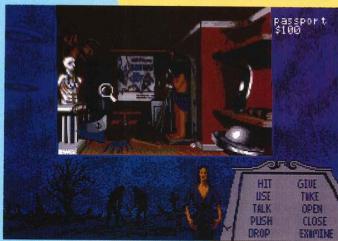
Anything Sonic can do I can do better

Well why didn't you tell me earlier?

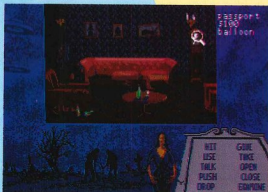
Hubcaps and dead people

PLAN 9 FROM OUTER SPACE

GREMLIN ■ £25.99 ■ 1/2 meg ■ Mouse ■ Out now



Such literary dexterity. "Weird thing" says it all to me



Seedy secret room, looks all right to me

Any film buff worth their salt should have heard of Plan 9. If you haven't then I will fill you in.

It was christened the worst film ever made. The lead actor, Bela Lugosi, died half-way through the filming. So to fill his place Bela's wife's chiroprapist or accountant took over the role.

The main problem with this substitution was that the guy was over a foot taller than Bela and looked nothing like him. This unsimilarity to Bela was solved by his holding a cape in front of his face - very convincing I'm sure.

The special effects were almost as comical. Hub caps from old classic American cars were used as the flying saucers, the problem with this being that they wobbled unnervingly as they scooped across the screen, almost as though they were attached to pieces of string. I wonder why?

Anyway, there you have the background to the film. The question is, is the game just as

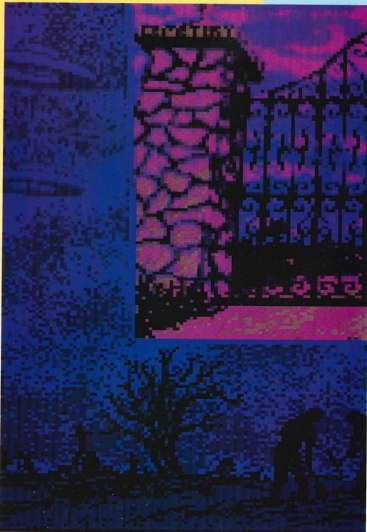
bad. You begin your quest in the office of the director of Plan 9. He's hired you to find some reels of the film which have gone missing - fair enough. So you step out of the office and start your exploring in the corridor.

Good point number one - the majority of the things you see on the screen can be interacted with, not just the usual two of which one is absolutely useless.

The first part of the adventure is very linear, a case of do this which will let you do this, but after a while there is a lot more scope to it. What I like most about this game is the sense of humour which seems to run right through.

Some of the characters you meet are intentionally wooden, as they are in the film. If they're not totally wooden they are intensely violent - the barman starts threatening you with a baseball bat, for instance.

You control your character by a word-driven action interface thingy - you know the score, examine, look, use, and so on.



The only thing I found a little confusing was moving around the locations. Instead of having the usual north and south directions you have a different location to which you move directly.

To move there you move your cursor to different points on the screen until it turns into a signpost. It's a little confusing at first but you get used to it.

You will have noticed by this time that the graphics are done in a very individual style. The playing screen is actually quite a small square with the rest of the screen being an inanimate border.

Other magazines have looked at Plan 9 and thought that the style of graphics is a bit of a cop-out. But if the style improves the overall presentation of the game then that's alright by me.

As far as the main screen graphics go the scenes seem to be quite effective if a little sparse.

It doesn't exactly work to the capacity of the machine as you see from the screen shots but it's good

to see programmers working on the game play and the overall effect of the game rather than making it look nice and it being awful to play.

The locations themselves are very well drawn with a lot of things you can interact with like the weird thing in the corner. My only gripe about the graphics is the other characters in the game.

Basically they all look the same. The man who you are supposed to be getting these reels of tape for is also the cab driver, the bricklayer and the barman. Now I wasn't sure whether that was intentional or not.

The one thing that really made Plan 9 for me was the soundtrack – it's absolutely corking. In the background is the typical hammer horror music. Then it fades out and in comes the actual game soundtrack. It's very atmospheric, but a bit hard to explain really, so you'll just have to listen to it yourselves.

There are loads of individual touches which sets Plan 9 apart

from the rest. On the box it states that the game contains actual footage from the film and it really does. When you go into the cinema, part of the film is playing – bizarre.

I was pleasantly surprised by the disk swapping on this game. It's usually a foregone conclusion that it's going to be disk swap city if a large adventure game is not installed on a hard drive, but it's kept to a bearable minimum.

You can't help but like Plan 9. It's good harmless fun with a large dash of the ridiculous and enough intrigue to keep your average gamer going.

Ben



Foxy bar babe, schwing

VISION

 Highly effective and quite original.

AUDIO

 Corking soundtrack, occasional noise thrown in.

PLAYABILITY

 Takes a bit of getting into but the movement is quite fast.

ADDITION

 Will keep players coming back time and time again.

80%



I know a good Lenny Kravitz plug when I see one



Spooky graveyard – had to be really



This is my house, this is all right to me

Time for a new kind of superhero. An incontinent one...

CAPTAIN DYNAMO

CODE MASTERS ■ £7.99 ■ 512k ■ Joystick ■ Out now

Now, when you hear the word "superhero", the first things that spring into your overactive minds are probably words like Batman, Superman and Spiderman. Captain Dynamo comes a good stone's throw down the list from these luminaries.

However, if you don't know about Captain Dynamo you soon will, because it's story time, kids. Evil Austen Von Flyswatter, a 72-year-old mad scientist, has decided to fund his retirement by stealing the world's largest set of diamonds.

Having stolen his booty, he's scattered the diamonds around his booby trap-infested rocket ship and escaped to the moon. Of course the whole world is up in arms and decides to call a superhero into action, but unfortunately Superman is out to lunch and Batman is getting his hair done, so the world's leaders have to have the next best thing.

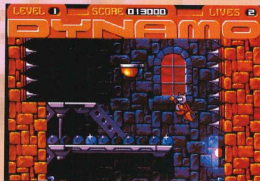
Great cries or whispers of "This is a job for Captain Dynamo!" fill the air. Now this might sound like a good idea, but Captain Dynamo is currently in retirement and at the sprightly age of 75 is at this moment sitting in the Happyvale Home for the Elderly growing lettuce and doing an unbelievable amount of dribbling.

The world has not seen or heard from Captain Dynamo for the last 25 years, but seeing as Captain Dynamo is the only available superhero he'll just have to do.

So, stirring from his bedpan, grabbing his Zimmer frame and donning his super cap and cape, he's on his way to save the world - but first he has to collect his pension. So there you have it, the story of the world's first incontinent superhero, Captain Dynamo.

The game is a straightforward platform romp. Simply collect the diamonds which are strewn all over the place and get to the top of the screen into a teleporter and so on and so on until you complete it.

Sounds simple, doesn't it? Well



Here he is to save the day, it's Captain Dynamo



Wowee, platforms a plenty. Value for money, that's what I say

believe you me it isn't. There are plenty of hazards out there waiting to bring Captain Dynamo down to his very old knees.

These include space worms, evil bats, deadly spikes, crushers, blasters, conveyor belts and eventually Mad Austen himself. Cor, all sounds a bit scary doesn't it?

You might be thinking that Captain Dynamo has an awesome weapon to do away his baddies with. Well, you'd be dead wrong. All Captain Dynamo can do is jump, and that's very handy.

For example, if faced with a gun-wielding crazed psychopath, Captain Pacemaker can jump out of the way. But hey, never mind, who said games had to be true to life anyway?

Right, I'll own up. I'm not a big fan of Code Masters' Dizzy exploits, but *Steg the Slug* was suitably impressive and now here we have Captain Dynamo, which is in fact very good indeed. Let's put it this way - even Ben played it for more than ten min-



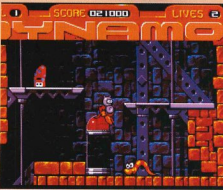
Ere, ain't you one of those teenage mutant turtle thingies?

utes and that means it is good.

It's got great graphics, probably the best in any Code Masters game yet. It's bloody easy to play - all you have to do is pick up your friendly old joystick and you're away.

The box actually says it's instantly addictive and you're not going to believe this, it is instantly addictive and it's one of those games which you play again and again just to strive to get that little bit further.

Overall Captain Dynamo is a bit of a stonker by Code Masters' standards. It may be like every other platform game, but for a wild and wacky fun platform number, it's worth eight quid of anyone's money.



A wiggly worm and an, er, umm, well OK so I don't know what the hell it is. What do you want? Blood?

Jonathan

VISION



Lovely cartoon graphics that are very good indeed.

AUDIO



Nice enough tune, but could get irritating after a while.

PLAYABILITY



As playable as that Catherine Zeta Jones woman.

ADDITION



You'll always come back for just one more go.

80%

SOFTWARE

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Amo The Commander 51	NA 229.99	Elvis Madcap Dark 52	£200.99 £200.99	Killer Queen 49	£116.99 £116.99
Amo The Commander 52	NA 229.99	Elvis Madcap Dark 53	£200.99 £200.99	Killer Queen 50	£116.99 £116.99
Amo The Commander 53	NA 229.99	Elvis Madcap Dark 54	£200.99 £200.99	Killer Queen 51	£116.99 £116.99
Amo The Commander 54	NA 229.99	Elvis Madcap Dark 55	£200.99 £200.99	Killer Queen 52	£116.99 £116.99
Amo The Commander 55	NA 229.99	Elvis Madcap Dark 56	£200.99 £200.99	Killer Queen 53	£116.99 £116.99
Amo The Commander 56	NA 229.99	Elvis Madcap Dark 57	£200.99 £200.99	Killer Queen 54	£116.99 £116.99
Amo The Commander 57	NA 229.99	Elvis Madcap Dark 58	£200.99 £200.99	Killer Queen 55	£116.99 £116.99
Amo The Commander 58	NA 229.99	Elvis Madcap Dark 59	£200.99 £200.99	Killer Queen 56	£116.99 £116.99
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Amo The Commander 60	NA 229.99	Elvis Madcap Dark 61	£200.99 £200.99	Killer Queen 58	£116.99 £116.99
Amo The Commander 61	NA 229.99	Elvis Madcap Dark 62	£200.99 £200.99	Killer Queen 59	£116.99 £116.99
Amo The Commander 62	NA 229.99	Elvis Madcap Dark 63	£200.99 £200.99	Killer Queen 60	£116.99 £116.99
Amo The Commander 63	NA 229.99	Elvis Madcap Dark 64	£200.99 £200.99	Killer Queen 61	£116.99 £116.99
Amo The Commander 64	NA 229.99	Elvis Madcap Dark 65	£200.99 £200.99	Killer Queen 62	£116.99 £116.99
Amo The Commander 65	NA 229.99	Elvis Madcap Dark 66	£200.99 £200.99	Killer Queen 63	£116.99 £116.99
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Amo The Commander 69	NA 229.99	Elvis Madcap Dark 70	£200.99 £200.99	Killer Queen 67	£116.99 £116.99
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Amo The Commander 71	NA 229.99	Elvis Madcap Dark 72	£200.99 £200.99	Killer Queen 69	£116.99 £116.99
Amo The Commander 72	NA 229.99	Elvis Madcap Dark 73	£200.99 £200.99	Killer Queen 70	£116.99 £116.99
Amo The Commander 73	NA 229.99	Elvis Madcap Dark 74	£200.99 £200.99	Killer Queen 71	£116.99 £116.99
Amo The Commander 74	NA 229.99	Elvis Madcap Dark 75	£200.99 £200.99	Killer Queen 72	£116.99 £116.99
Amo The Commander 75	NA 229.99	Elvis Madcap Dark 76	£200.99 £200.99	Killer Queen 73	£116.99 £116.99
Amo The Commander 76	NA 229.99	Elvis Madcap Dark 77	£200.99 £200.99	Killer Queen 74	£116.99 £116.99
Amo The Commander 77	NA 229.99	Elvis Madcap Dark 78	£200.99 £200.99	Killer Queen 75	£116.99 £116.99
Amo The Commander 78	NA 229.99	Elvis Madcap Dark 79	£200.99 £200.99	Killer Queen 76	£116.99 £116.99
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Amo The Commander 82	NA 229.99	Elvis Madcap Dark 83	£200.99 £200.99	Killer Queen 80	£116.99 £116.99
Amo The Commander 83	NA 229.99	Elvis Madcap Dark 84	£200.99 £200.99	Killer Queen 81	£116.99 £116.99
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Amo The Commander 86	NA 229.99	Elvis Madcap Dark 87	£200.99 £200.99	Killer Queen 84	£116.99 £116.99
Amo The Commander 87	NA 229.99	Elvis Madcap Dark 88	£200.99 £200.99	Killer Queen 85	£116.99 £116.99
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Amo The Commander 91	NA 229.99	Elvis Madcap Dark 92	£200.99 £200.99	Killer Queen 89	£116.99 £116.99
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Amo The Commander 99	NA 229.99	Elvis Madcap Dark 100	£200.99 £200.99	Killer Queen 97	£116.99 £116.99
Amo The Commander 100	NA 229.99	Elvis Madcap Dark 101	£200.99 £200.99	Killer Queen 98	£116.99 £116.99
Amo The Commander 101	NA 229.99	Elvis Madcap Dark 102	£200.99 £200.99	Killer Queen 99	£116.99 £116.99
Amo The Commander 102	NA 229.99	Elvis Madcap Dark 103	£200.99 £200.99	Killer Queen 100	£116.99 £116.99
Amo The Commander 103	NA 229.99	Elvis Madcap Dark 104	£200.99 £200.99	Killer Queen 101	£116.99 £116.99
Amo The Commander 104	NA 229.99	Elvis Madcap Dark 105	£200.99 £200.99	Killer Queen 102	£116.99 £116.99
Amo The Commander 105	NA 229.99	Elvis Madcap Dark 106	£200.99 £200.99	Killer Queen 103	£116.99 £116.99
Amo The Commander 106	NA 229.99	Elvis Madcap Dark 107	£200.99 £200.99	Killer Queen 104	£116.99 £116.99
Amo The Commander 107	NA 229.99	Elvis Madcap Dark 108	£200		

WizKid, it's the bizniz...

WIZKID

OCEAN ■ £25.99 ■ 512k ■ Joystick ■ Out now

Now cast your minds back, back into a time where computer games were about to hit the big time on the 16-bit computers.

The time was 1987 and those great lads at Sensible Software were twisting their minds around a simple, but effective and original idea for a game.

That game was Wizball and what a stonking game it was, although Ben totally disagrees with me on that point. The idea was to paint a desolate grey planet using loads of bright, happy colours and make it all, err happy and colourful again.

You played the part of a wizard and using your magic you turned yourself into a green ball, thus creating the title of the game, Wizball.

Once inside the little green ball, you had to roam over the planet shooting all the little baddies and collecting the paint which the baddies left behind when they had died.

A most enjoyable romp indeed, in fact one of my favourite games of all time. Slowly five long years passed and with a big boom and even a slight bit of thunder and lightning came WizKid the sequel to Wizball (hurrah).

Technically it's not actually a sequel, it's a completely new game altogether. The game stars WizKid, the son of

Wizball who apparently settled down and got married and jumped into bed and got involved in an entirely different kind of enjoyable romp.

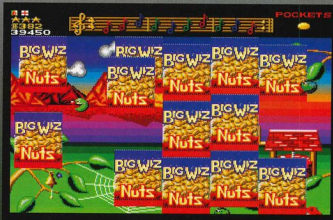
There is a question to be asked though and dammit I'm going to ask it. In Wizball the star of the game was actually a wizard, so shouldn't WizKid be a human instead of a green blob, and how on earth did the wizard get hitched up with a woman?

I can see it all now - the wizard walks into a singles bar and when asked by a beautiful woman what he does for a living replies: "Err, well actually I paint planets and turn into a green blob, but it pays well."

As I was saying WizKid is here and it's going to be one of the games of the year. It's not a platform game and it's not a shoot-'em-up, but then again it could be a mixture of the two, but then again it's not really a mixture of the two... see what I mean? I'm seriously having problems.

It is in many respects like the classic game Breakout with a huge wedge of toilet humour in it. Well I say Breakout, but perhaps the only similarity is that you have to bash some blocks, but then again it's not always blocks you have to bash (Eh? - Mr Confused Reader).

Look listen up, it's not my fault, it's those lads at Sensible Soft-



What a load of nuts!

ware, sometimes they're just too damn surreal for their own good. The only possible way you'll know exactly what it's like is to buy the game. End of story, OK?

Right, your objective is to rescue the wizard/Wizball from the evil clutches of Zark, the baddest and nastiest mouse on the planet. Easy huh? You have got to be joking.

Now if you sat down to play Wiz-

Kid for the first time and just thought it was bashing blocks, then couldn't be more wrong. You have to think surreal. Surreal is probably the best word that describes WizKid along with weird, wonderful and wacky.

Everything is not what it seems,



Now that's what I call toilet humour





That handy training bit in full

that wishing well [Look at the grab] might look innocent, but it isn't.

WizKid is lucky. As well as being a head, he can also gain a body and other items to help him on his quest. Once he's a body, anything can happen.

You might think that WizKid is one of those games where you play through from level one to level whatever, well you'd be wrong yet again.

By generally messing about you can suddenly find yourself heading towards level six from level one, but don't think you'll complete the game because every level has to be played to complete it.

Plus a cat - also a star of Wizball - has to be collected from each area to complete the game. If you don't collect enough cats then when you get to the end of the game you'll be told it's "Game Over, man".

As well as running/flying around the screen bashing blocks and doing several surreal things, there's a shooty bit. If you're a fan of the first game then you'll be well chuffed with this part of the game because all the graphics and sound from Wizball are

those were the days".

Oh yeah I nearly forgot. When you kill the baddies a coloured bubble will appear. When collected the bubble will turn into a note. When you've collected all the notes, the game will play a tune and you'll receive loads of dosh and with this dosh you'll be able to buy loads of stuff.

Plus sometimes a special bubble will appear - collect this and you'll be given a special power. For instance collect the red one and you'll be able to bounce the blocks on your head or collect the teeth and you'll be able to bite and carry blocks. Both make it much easier to do away with the fearsome baddies, well if you can call bees, penguins and butterflies fearsome!

Get hit too many times by these fearsome baddies and you'll lose a hit point. Lose all your hit points and you'll lose a life. Lose all your lives and it's game over.

WizKid is weird with a capital W, but it's absolutely brilliant. It's original, it's funny, the graphics are beautiful, the sound is good, it's very addictive indeed and very easy to get

included and it'll make you look all wishful and you'll start saying things like "Ee



WizKid good for your karma

to grips with.

If you don't buy WizKid you may well regret it, if not today, then tomorrow and for the rest of your life. It's a real work of art if you sit back and take a good long look at it. For starters it combines so many playing styles.

It's wild, wacky, bizarre, surreal and funny. It's everything a game should be. Ocean should go and see Sensible Software and thank them very much and pay them loads of money because after the disappointing Epic this is like a big breath of fresh air which should improve Ocean's current reputation. WizKid is wonderful and I think I'm in love.

Jonathan

VISION

Excellent cartoony graphics that make you smile

AUDIO

Great tunes that you'll be humming for days and days.

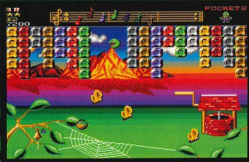
PLAYABILITY

If anyone says it isn't then I'll become quite violent indeed.

ADDICTION

Well, I'm addicted. What more can I say?

92%



Izzy wizzy let's get busy

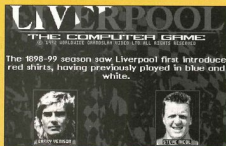


The house that WizKid built and then destroyed

Successful football club in bad game scandal

LIVERPOOL FC: The Computer Game

GRANDSLAM ■ £25.99 ■ 1/2 meg ■ Joystick ■ Out now



The 1998-99 season saw Liverpool first introduce red shirts, having previously played in blue and white.

Fascinating facts about the origins of Liverpool FC. You learn something new every day

Arguably one of the most successful teams of all time have made it to your ST courtesy of Grandslam, Liverpool FC: The Computer Game stars all the Anfield blokes in a soccer game that Grandslam think will rival the success of Kick Off 2.

Actually, when you think about it, Grandslam is an interesting name, when you consider that for the rest of this review I'll be slamming their rather poor effort.

The game loads to the accompaniment of a remixed version of "You'll Never Walk Alone", the song that's become synonymous with Liverpool FC. Unfortunately, Grandslam have slaughtered the tune to a point where it's not particularly recognisable. While this is

playing in the background, you're treated - or should that be subjected - to a brief history of the club, with little digitised pictures of all the current players underneath.

Liverpool fans should like this bit the first time they see it, but for the rest of the world at large, and for people who've already seen it, it's a shame you can't skip it.

After extensive intro pictures of FA Cups and suchlike, you eventually get to the main menu screen. From here you can choose whether to compete in an FA Cup competition or a full League Season, and you can choose a two-player FA Cup final.

You can also change your squad about, although of course you can only choose from Liverpool players.

When you've twiddled around with the options you can start a practice session or play a proper match. Practice is definitely recommended, since the control system takes a bit of getting used to.

The pitch is viewed from an angle not unlike Rage's Striker, with one player

heading up and "into" the screen, and the other coming down and "out of" it. The player currently selected is marked by a four pulsing arrows around his feet, and you move him around with your joystick.

The fire button kicks the ball, although not as in KO2. There's no way to control how hard you'll hit the ball, the player just belts it as far as he can.

This means you'll find yourself running up the pitch with the ball at your feet (it's a sticky-feet control method) and shooting, because stringing together several passes is completely impossible. It's a very awkward passing system - so impractical that you'll give up trying.

The computer teams are quite good, and you'll find that before long they've scored against you. When the ball crosses the line, the view instantly flicks back to the centre circle before you know what's happened, and it's a bit confusing to say the least.

The graphics look OK when the game is paused, but as soon as you see it in action you'll reconsider. There are precious few frames of animation for the players and the game really looks a bit tacky.

The ball responds to completely unrealistic

VISION
G G G G G
Moves quite fast, but rather rubbish animation.

AUDIO
G G G G G
OK music but feeble crowd sounds.

PLAYABILITY
G G G G G
If you persevere you may just keep on playing.

ADDITION
G G G G G
The league mode has some lasting appeal.

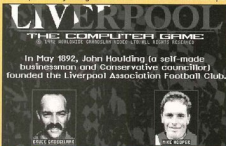
70%

tically that you'll laugh... it shoots along at 200mph and then stops almost instantly. It's as if the pitch is covered in honey or something.

So what is there that's good about Liverpool FC: The Computer Game? Erm, it's endorsed by Liverpool FC, which will mean it's bound to sell a fair few no matter how bad it is. And the presentation screens look all right.

But that's about it, I'm afraid. From the moment you start playing and think "This is all right" to the moment a few minutes later when you think "Blimey, this game's been bunged together in a few weeks to cash in on a good licence, when in fact it's complete tripe," it's all gradually downhill.

The simple fact is, that no matter who you support, you have to admit that Liverpool are quite a good team. And the other simple fact is that even if you support Liverpool, you'd have to have a bit of a mental disorder to fork out for this.



So it's the Conservative party we've got to thank for Liverpool FC: The Computer Game



RESERVE

STRENGTH: 70%
DFA: 70%
FITNESS: 100%
IQ: 70%
REGISTRATION: £25.99
WEIGHT: 70kg
AGE: 25

DRIVER SUBURBS
NO. SELECTED: 11

IN TEAM
RESERVE
VIEW INFO
EXIT

Choosing your team from the stunning array of players available

Slide tackling the opposition

SELECTION SCREEN

AFTERTOUCH YES
DISK OPTIONS
TEAM SELECTION
PRACTICE
PLAY FULL SEASON
FA CUP ONLY

2 PLAYER F.A. CUP FINAL
VIEW LEAGUE TABLES
MATCH DURATION 10 MINS
RESET SEASON

The main menu. From here you, er, click on things



Don't try to repeat this at home kids, it's dangerous to play with fireworks

Fishface leapt from the helicopter and landed face down in the mud. But that was no ordinary mud. It was the mud of a middle eastern country where Fishface knew he had a mission to complete. He had to go in, kill a guy, and get out alive again. That was his job. For Fishface was a Seal.

His mother had never quite understood, asking him why he wasn't in a circus balancing balls on his nose, but Fishface knew deep down inside that the Seals were the last hope for the civilised world. Or something.

Yes, you too can enter a war zone from the comfort of your own living room, thanks to those terribly obliging peopple at ICE. In fact, some of you out there may remember that Fireforce was originally developed by Electronic Zoo.

But since their collapse, ICE stepped in and revamped the game before releasing it. If you did remember that, and on cheating now, give yourself two Browne points.

Boot up your ST with Fireforce disk one in the drive, and hey presto you're off. You can select an existing Seal or name one of your own, a new recruit.

Then you are given several missions to choose from, including assassinating a Middle Eastern officer and destroying a bridge in a tropical war zone.

Equip yourself with a few guns, then toodle off to join the fray. You are deposited by helicopter and left to fend for yourself in a hostile foreign environment, armed only with a machine gun, a handful of grenades and your packed lunch.

You have a set amount of time to complete the mission and arrive at the predetermined rendezvous point - the far right of the level - if you want to get out alive... otherwise, you'll be listed as Missing in Action.

Each level scrolls horizontally, and you walk right shooting anyone and anything you see. It's all a bit reminiscent of the 8-bit

Feel those old 'Nam wounds coming back

FIREFORCE

ICE • £25.99 • 1/2 meg • Joystick
Out now

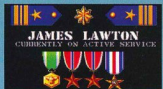


Ooh, you heartless chappy you, shooting a helpless bloke

hit Green Beret, but that's no bad thing. It's actually surprisingly good fun, and the graphics and sound complement the action well.

If you complete the mission, you can go on to bigger and better things. If not, then it's a sad screen, a Purple Heart award, and a new character for you, matey.

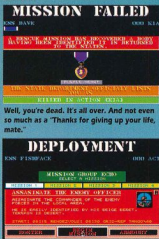
Fireforce is a refreshing new addition to the world of wander-and-shoot games, and it's quite a competent program. So if you're the type of individual who likes nothing better than bobbing out and gunning down a few Arabs before breakfast, Fireforce could just be your thing.



James Lawton sets out armed only with a gun and a small - but perfectly formed - Matchbox model of a 1953 Morris Minor



OK, you're off on your mission. And you have visited the water closet before setting out? You don't want to be taken short



The deployment screen where you are briefed on your mission

VISION

Nicely drawn graphics, although the hero's run is a wee bit weird.

AUDIO

Good gunshots and bangs, but that's it.

PLAYABILITY

A fair old challenge with the multiple missions.

ADDICTION

You'll stick with it a fair while.

82%



You can enter the buildings that you pass



Getting to grips with the Temptress

Another ripping Gamer guide

You lucky people! This month we, the lovely people at Gamer, and a certain gentleman, bring you Lure of the Temptress – the Solution. This time it's personal, with wings. So if

you were as baffled as we were playing it you may sit down and complete the blasted thing with no effort at all, you spineless workshy fops.



CELL

Pull the torch. Walk forward as far as possible. When the skori passes you to look at the fire, walk out of the cell, and close and lock the door.

OUTER CELL

Look at the prisoner. Go to the guard room. Look at barrel. Look at the tap on the side of the barrel. Get the knife on the barrel. Get the bottle.

Use the bottle on the tap. Use the knife on the sack. Look at the sack. Go to the torture room. Use the knife on the leather cord on the rack. Go to outer cell.

Give the bottle to the prisoner. Look at the bricks on the eastern wall. Tell Ratpouch to push the bricks. Walk through the opening in the wall.

SEWERAGE

Find the man called Mallin (hint: he usually hangs out in the alleys, the sewerage or the werigate). Talk to Mallin. Accept his offer. Go to the village shop. Talk to the shopkeeper (Ewan).

Give Ewan the metal bar. Find the blacksmith (Luthern). Talk to Luthern twice. If you are in the Blacksmith's workshop then get the tinderbox on the floor in the foreground. If you're not there, go there now.

Go to the Magpie Inn. Talk to the barmaid (Nellie). Give her the gem. Talk to the man at the table (Morkus). Bribe him then talk to him. Then go to the blacksmith's and talk to Luthern. Give him the flask.

Go to the Magpie courtyard. Talk to the man sitting in the middle (Grub) about the black goat. Go to the Severed Arms (hint: do not drink there. The beer has been watered down). Talk to the woman knitting. Talk to her about Taligh. Examine the diary she gives you.

Go to the marketplace. Give the lockpick you got from Grub to Ratpouch. Look at the door of Taigh's house. Look at the lock on the door. When the skori (Wayne) comes to look at the door, tell Ratpouch to use the lockpick on the lock and open the door.

Go into Taigh's house (hint: save the game at this point). Look at the apparatus. Look at the tap on the right of the apparatus. Look at the oil burner, below and left of the apparatus.

Use the tinderbox on the oil burner. When the reaction has finished, use the flask on the tap. Drink from the flask. You should now be disguised as Selena.

Go to Middle Street. Talk to Uruka (the skori guarding the Town Hall door). Open the door. Go inside the town hall. Talk to any skori inside the town hall. Then go and find Wayne and talk to him.

Go to the Magpie tavern. Talk to Morkus. Go to the Apothecary workshop. Talk to Goewin (if she is not there or the door is locked,

then wait until she arrives).

Find Ratpouch and talk to him. Go to the Apothecary workshop. Talk to Goewin twice. Go to Blackfriar's Row. Look at the poster.

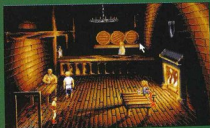
Find Mallin. Talk to Mallin (accept the book). Go to the Monk's Lodge. Give the book to the monks. Talk to the Monks several times until nothing new appears (hint: switch the text to slow).

Infusion: Houndstooth, Cowbane, Eleccumpane. Go to the Apothecary Workshop. Talk to Goewin about everything. Go to the Blacksmith's. Talk to the woman (Catriona) in the rocking chair. Ask Catriona for the cowbane.

Get the cowbane from Catriona's garden. Go to the apothecary workshop. Give Goewin the cowbane. When Goewin finishes, ask her if the infusion is ready.

Then go for a walk around the village, so the potion can reach full strength. Go back to the apothecary workshop, and talk to Goewin about the spell and the werigate.

Go to the Severed Arms. Talk to the barbarian (Ulltar) twice. Go to the werigate. Talk to the statues. Find Goewin and talk to her. Go to the werigate again and talk to her again. Walk through the werigate doors to the entrance cave.



THE CAVES

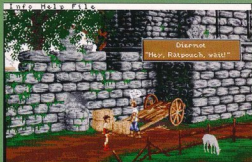
Look at the skulls. Look at the right skull. Go to the green cave and wait for Goewin. Look at the skulls in the green cave. Tell Goewin to go to the entrance cave and pull the left skull. Go to the blue cave.

Look at the skulls. Pull the right skull, and wait a couple of minutes for Goewin to enter the green cave. Pull the left skull to let her into the blue cave. Tell her to go to the green cave and pull the right skull. Go to black cave (hint: save the game here).

Go to the cave with the monster in. To defeat the monster, hold the left mouse button down. Move the mouse left to advance and right onto Diernot to attack. Repeat until the monster dies. If you get hit it is better to retreat rather than defend.

Go to the Dragon cave. Use the potion on the dragon. Talk to the dragon. Say to the dragon: "I command you to help us." Go to the blue cave. Pull the left skull. Go to the green cave. Make sure Goewin is always with you.

Pull the left skull. The werigate doors should now be open. Go to the marketplace. Wait for the skorf (Wayne) to go into Ewan's shop. Look through the shop window. When Wayne leaves the shop, talk to him. Then go into Ewan's shop. Talk to Ewan, then walk out of the shop.



DRAWBRIDGE

Here you will have to fight and kill another monster. Then walk through the door to the left of the drawbridge to defeat the evil temptress Selena.

WINE CELLAR

Look at the three casks in the foreground on the left. Look at the bung on the top cask. Go to the kitchen. Look at the carcass on the table. Look at the fat on the carcass. Get the fat. Get the tongs by the table. Go to the wine cellar.

When the boy is in the wine cellar, talk to him and tell him that you've come for Selena. Talk to Minnow again, and tell him to tell the skorf that someone is in the cellar.

Pull the bung out with the tongs, then hide behind the right pillar in the background. When the skorf walks past, go to the gateroom. Look at the lever.

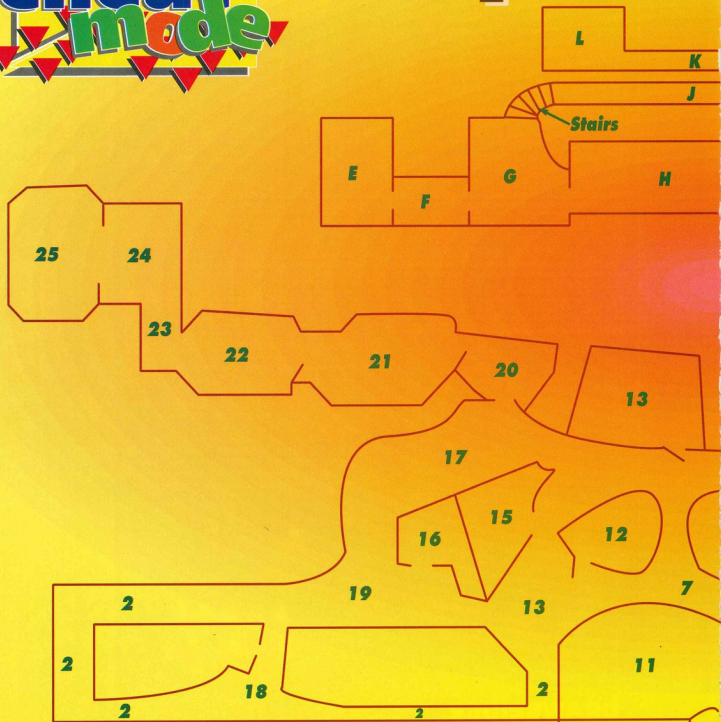
Find Minnow again to make him follow you to the gateroom, if he is not there already. Tell Minnow to pull the lever. At the same time you must operate the winch. The winch should turn.

Go up the stairs to the second floor at the dining room (hint: save the game here). Then go through the door on the left.





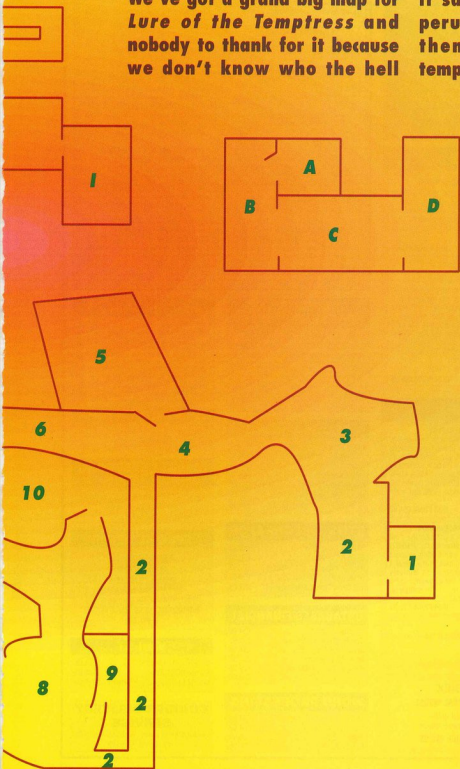
Map of



The Temptress

Now then, here's a thing. We've got a grand big map for *Lure of the Temptress* and nobody to thank for it because we don't know who the hell

sent it in. Well we don't care - it saves us a job anyway. So peruse at your pleasure and then, erm... lure the temptress. Or something.



KEY

A:.....	Cell
B:.....	Outer cell
C:.....	Guard room
D:.....	Torture room
E:.....	Wine cellar
F:.....	Kitchen
G:.....	Passage
H:.....	Dining room
I:.....	Gate room
J:.....	Dining room balcony
K:.....	Drawbridge
L:.....	Selena

1:.....	Sewerage
2:.....	Alley
3:.....	Castle gate
4:.....	Apothecary lane
5:.....	Apothecary workshop
6:.....	Castle wall
7:.....	Blackfriars row
8:.....	Maggie courtyard
9:.....	Unknown
10:.....	Monk's lodge
11:.....	Maggie tavern
12:.....	Tiadgh's house
13:.....	Marketplace
14:.....	Town hall
15:.....	Village shop
16:.....	Severed arms
17:.....	Weregate
18:.....	Smithy Street
19:.....	West Street
20:.....	Entrance cave
21:.....	Green cave
22:.....	Blue cave
23:.....	Black cave
24:.....	Monster cave
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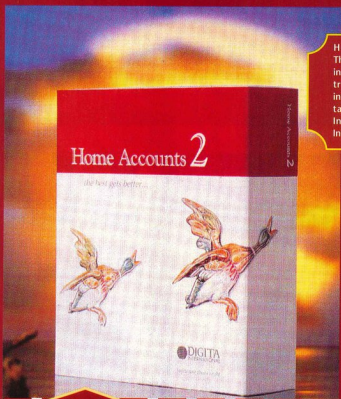
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COMPETITION

There's something very special (and exclusive) going on with Home Accounts 2 in next month's Atari ST User. Buy next month's issue - or you'll regret it!

Home Accounts 2 is a powerful package that can transform the day-to-day handling of your personal finances. It can genuinely help you to control spending and plan ahead. It's highly impressive, and we've got 20 to give away. All you have to do is fill in the entry form!



Home Accounts is now even better. There's no restrictions on the number of income accounts, expenditure types and transactions. As well as a pop up and interest calculator there is an option to take account of inflation. Digita International have also added Human Interface Protocol which is superb.

Display

- Fully supports the Desktop, with 3D look and feel
- Human Interface Protocol, a graphical environment which integrates the Desktop and automates the way you work
- Multiple windows
- Icons for major functions

Graphics

- Pie graphs
- Line graphs
- Scatter graphs
- 2D & 3D bar graphs
- Graphs for budgets, account balances and expenditure types
- Graphs are self-scaling to fit

Printing

- All reports fully configurable
- Detailed statements for specified date ranges
- Budget reports
- Totals of income accounts and expenditure types
- Net worth and portfolio report
- VAT report
- Full report searching

ENTRY FORM

All you have to do is answer the question, and give your name and address. Easy!

Tick the appropriate box, not forgetting your name and address, and send your entry to: Home Accounts 2 Competition, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP

Name

Address

Daytime Telephone

Please tick this box if you do not wish to receive promotional material from other companies

Question

Which of the following can Home Accounts 2 not be used for?

Home Accounting

Acupuncture

Hair Restoration

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Last month's winners:

Congratulations to the two lucky winners of September's draw. Well done Mr P Lynch of Darlington, Co Durham. The Secret of Monkey Island is on the way to you. And Ultima V Warriors of Destiny is on its way to Mr R L Gray or Rainham, Essex.

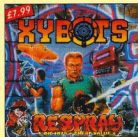
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TWO DOMARK GAMES

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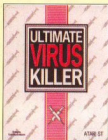
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you have the best protection possible for your Atari ST at all times.



FOUR DOMARK GAMES

Here is a fab collection of four games from top software house Domark. Welcome to "Shufflepuck Cafe" – the last place in the galaxy where air hockey is played seriously. Scorch your way through the skies in a rip-roaring fight to death in "Dragon Spirit". Find intergalactic flight 396 in "Typhoon Thompson". Join Major Rock Hardy and Captain Ace Gunn in their blast-em-up battle against invading Xybots.



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System requirements: any ST

ENTRY FORM

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Question

Which of the following is Concerto not related to?

- Music
- Jam Sandwiches
- Songs

Aspects of the ST

Six pages devoted to your favourite applications on the ST

midi and music ♦ emulation ♦ communication ♦ dtp ♦ business

Like classical music, those old composers sure knew how to write a good tune. Even if you've removed Radio 3 from the dial and don't know a concert from a concerto, you will have heard many classical tunes masquerading as pop and rock music.

Mozart's 40th Symphony is one such tune. Two versions of it actually made the charts at the same back in April '71 - one by the Sovereign Collection and the other, a better-known version, by Waldo de los Rios.

Classical

This version under discussion here is the original classical arrange-

ment, not a pop version, and it comes on disk as Midi files. It was produced by Paul Sanders and Philip Crewdson who together form Oscar Music.

It took around six months to put all the files together and then it was arranged by Dan Palethorpe, lead flute with the ENO.

There are five files - one for each of the four movements and one containing a Sys Ex dump for the Yamaha SY77.

The files were constructed in C-Lab's Notator but they are also available in Standard Midi file format.

Amazing

Using the SY77 dump, the result is absolutely amazing - one of the best performances of a piece of classical music ever to grace a sequencer. If you've ever tried your hand at arranging a piece of classical music you'll how difficult it is.

All the instruments have to balance one another and there must be dynamics (rock and pop is one of the few music few forms which only seem to recognise fff signals).

You've probably sneaked a look at the price. Well, a lot of work has gone into the production and Oscar are expecting a lot of inter-

Roll over... Mozart?

est from the educational market. The files let you isolate and analyse themes, harmonies and counterpoint. There can't be a better way to study the symphony.

If you don't have an SY77 you'll have to create your own orchestration. The instructions include suggestions to help but you'll still have

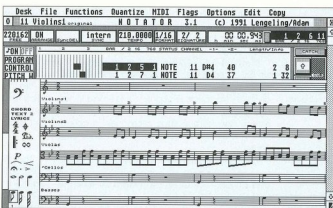
to balance the instrument sounds.

Oscar also produce a newsletter which is subtitled Information Technology in Music Education, so you can see where the guys are coming from. It's free to interested parties.

Oscar's Mozart Symphony No. 40 costs £49.99. More from Oscar Music, 91 Brick Lane, London, E1 6QN. Tel: 071-377 6294.



Oscar's version of Mozart's 40th Symphony on the main screen of Notator, ready and waiting to go



The opening bars of Mozart's 40th Symphony in Notator

Ian Waugh with all the latest ST music releases, including a versatile selection of sample CDs

Melville Marriott Music Media

Regular readers will know that there is a wealth of music software out there in PD land. In fact, many PD libraries have an extensive music section.

Melville Marriott, however, are music media specialists which just also happen to run a music PD library service.

Their policy is to include only useful programs in their catalogue which contains more than 50 disks. These include a complete set of utilities for owners of Yamaha PSS instruments, editors for many popular instruments such as Roland's D-110, Yamaha's DX27 and FB-01, Kawai's K1 and Casio's CZ instruments.

There are the main PD sequencers such as Alchimie Junior and the Accopanist plus song files for programs such as the Music Studio and the Waddington Sequencer. There is also a host of utilities and demo programs.

MM also operate a telephone helpline and can supply books on all aspects of Midi and computing and well as sheet music, cassettes, CDs and music sequencers on disc. They also have a second-hand equipment exchange service which costs ten per cent of the purchase price - payable only when you sell.

For a one-off fee of \$5 you become a registered user and will receive regular updates plus a ten per cent discount on everything except books.

All PD disks are £2.50 each with a 85p p&p charge for orders under four disks. It's well worth getting the catalogue disk to see what's out there in PD music land. More from Melville Marriott, 46 Market Square, Witney OX8 6AL. Tel: 0993 779500.

Beat 'n'



Bass

Yes, folks, it's another mega collection of grooves from Heavenly Music. This time it's a collection of drum and bass patterns. It's like Dr Beat but with bass and guitar tracks.

There are 50 styles here including rock, soul, pop, dance and Latin rhythms. The bass and guitar grooves are all in the same key. The idea is for you to use your sequencer's copy and transpose functions to create your own chord sequences.

There are a couple of demo files which show some of the possibilities but they only scratch the surface.

The way to use it is to find a pat-

tern or two that fit the type of song you have written - or are about to write.

I'd ignore the instrument parts at this stage (although you may like to use them for inspiration) and concentrate on getting the rest of the song done. Then you can play the

instrument parts and transpose them into the required key. Some of the patterns are 12 or 16 bars long but many are over 50 bars in length.

You may have to assign suitable sounds to the instrument tracks but the drums are on the now-standard MIDI channel ten. The docs

include a drum map so you can use the patterns with gear other than Roland's U220 or MT-32.

I love it! Beat 'n' Bass is £19.95. More from Heavenly Music, 39 Garden Road, Jaywick Village, Clacton CO15 2RT. Tel: 0255 434217.

Music Update - November

● *First, the bad news: Heavenly Music's complete rendition of the Psycho score in MIDI file format has not arrived. So, I can't review it! Perhaps next month. I've asked my mother to look into it. Even now I can hear her ringing 0255 434217...*

● *Now the good news - Fred Fee from Newport has written in response to the Kadinski Music Painter program which featured in the August column.*

With a little help from his wife's cousin in Zurich, he's translated the instructions and put them on a disk in ASCII, Protex and Timeworks formats. Nice one, Fred!

It's certainly cleared up one or two points. The files have been given to the ST Club and are available, along with the Kadinski program, on disc MID.50. More from the ST Club on 0602 410241.

● *I've got to mention this! Included in a recent press release from Casio was news of a new personal stereo. The W880 has few frills - Bass Boost and Auto*

Stop - but look at the price - £7.99! Available at a hi fi dealer near you.

● *Gajils have released yet another update to Sequencer One Plus - v1.2. Main improvements are the addition of keyboard shortcuts for menu bar operations. But the good news is - the update is free to those who have joined the Automatic Update Scheme. More from Gajils on 061-236 2515.*

● *The trouble with buying hi tech gear is that it soon goes out of date and loses its value. Ampsound, fairly godmothers that they are, have come up with a solution. If you buy some gear from them - this essentially means anything with a serial number - and return it to them in working nick five years later, they will give you back what you paid for it.*

Pity they won't work this in retrospect. I've a lot of gear which isn't worth the cardboard box it's resting in under the stairs. More from Ampsound on 0727 50075.

Sample Fever!

Sample CDs are now big business with several companies very active in the market. We've looked at two of these CDs in this column. Both cost a tidy £49.95 but offered excellent value for money containing 1,000 samples!

I've just received three new CDs from Time + Space which contains some super loops as well as sounds effects and off-the-wall stuff. And they're cheaper!

Looping (£29.95) contains over one hour of material - 250 loops, snare fills, background loops, effect loops, ambient FX, techno beats, subsonic waves and so on. There are also lots of individual drum sounds.

Inspiration

The really nice thing is that many of the tracks suggests bass and lead lines. It's really a great source of inspiration.

There is also a Loop Classics CD (£25) containing 75 classic rhythm breaks in stereo lasting around 30 seconds each. This wasn't in the review pack but if it's anything like the Loop CD it'll be well worth a listen.

Bizarre Planet (£35) is another hour plus collection of sounds. This time it's weird and wonderful outer space sounds - subsonic waves, phased noises, computer vocals (actually, your ST can do these just as well by itself), bubbles,

flanged sounds, atmospheres, sequences, planetary machines (!), and electronic percussion. If you're looking for something a little different, check this out.

Time + Space also has a CD called Science Fiction (£35) containing space and electronic FX but this wasn't in the review pack, either.

The final set is Sound FX Collection (£39.95) which contains not one but two CDs containing over two hours of material! The tracks are divided into seven sections - office and industry, sports and leisure, house and garden, nature and surroundings, moreover (a collection of miscellany), human, and transport and traffic.

You want ambience? Here it is, from a game of ping pong to a showing being turned on and off and someone brushing their teeth (is that an Oral B40 I detect?).

There's lots of atmospheric sounds such as wind, rivers, sea, surf garden and country sounds. There's even a sample of a cat and a vacuum cleaner (no, the connection escapes me, too).

The only niggle is the fact that some of the sub-grouping are spread over the two CDs which means changing them if you want to sample (hat) all the sounds in one section.

Sampling is an undiscovered art form. You can be very creative with it - turning breaking glass and a blowed bottle into a scraped flute sound, for example (well, you can try). In an ideal world, musicians would have to time to create their own samples. In our world this is not always the case.

Besides, how many plates will your better half/parents allow you to break to create the ultimate "broken crockery" sample?

No, sample CDs are an excellent way to access the sort of sounds which would be very difficult if not impossible to sample yourself.

Dedicated

These CDs are not beyond the pocket of the dedicated samplist armed with an ST-based sampler although, in truth, the quality of the CDs exceeds the quality of most computer-based samplers.

If you're really keen, you can buy the five CD sets for £139 which is almost like buying four and getting the fifth one free. I'll let you sort that out with your bank manager. I'm just wondering how to work a flushing toilet sample into my latest techno dance mega mix...

More from Time + Space, PO Box 306, Berkhamstead HP4 3EP. Tel: 0442 870681.


```

^ File Edit Settings Options Dial BackTalk Help
-----
0  Stalker: CIX 032/742bis 00:55
-----
Your job was (lines beginning DONE show completed transfers):
open ftp.coe.montana.edu
user anonymous
pass andred@cix.computink.co.uk
cd /pub/STAR TREK/st-tng/NC5B-PS-50B
DONE get sttng-5.ps

The ftp log contains:
Connecting to ftp.coe.montana.edu
220 pdq.coe.montana.edu FTP server (Version 6.9 Thu Oct 10 1991) ready.
--> USER anonymous
331 Guest login ok, send e-mail address as password.
--> PASS andred@cix.computink.co.uk
230 Guest login ok, access restrictions apply.
--> CWD /pub/STAR TREK/st-tng/NC5B-PS-50B
250 CWD command successful.
257 "/pub/STAR TREK/st-tng/NC5B-PS-50B" is current directory.
--> RETR sttng-5.ps
150 Opening BINARY mode data connection for sttng-5.ps (435562 bytes).
Get 435562 bytes (3722 bytes/sec)
226 Transfer complete.
--> BYE
-----
    
```

When you request a file via an ftpmail server, it will usually send you the full log of the FTP session. This is useful if the session fails for some reason

Global files

Last month, if you recall, we discussed the Atari Archive system in America, and the Bart Email server which accesses the material stored there. This site acts as an ideal repository for Atari-related files, but what if you want to look for other material?

There are a number of sites all over the world which provide access to much larger stores of files, usually using a system known as FTP – File Transfer Protocol. This allows any Unix computer in the world to login and download files from other Unix machines, normally via high-speed internet links.

Of course, this is all well and good if you happen to have a Unix machine costing several thousand pounds sitting in your front room.

You don't? Well, neither do most other people, which has prompted a number of public-spirited groups to allow the use of their site's spare capacity to fetch files, and Email them directly to your mailbox.

Free Email

One such group is the UK Unix User Group, based at Imperial College in London. Their service is available to any UK site with which they can exchange free Email – so that allows access from FidoNet BBS sites, larger services such as CIX, and any other bulletin boards which can send mail to their internet address.

I've been asked to point out that

the ftpmail service is provided on a "best effort" basis, and neither Imperial College nor the UKUUG will guarantee the service, nor be held liable for its use. They are offering an exceptionally useful facility, so please don't abuse it.

To access the ftpmail server, all you need to do is send an Email message to the address ftpmail@doc.ic.ac.uk. The message should contain a short series of commands telling the server where the material you want is located, and the required filenames.

Commands

If you send an empty or erroneous message, ftpmail will respond by sending you back a list of available commands.

For example, there is an archive site in the USA, called ftp.coe.montana.edu, which stores episode guide information on dozens of TV series.

As a big Star Trek: The Next Generation enthusiast, I was especially interested in a 500-page guide to the series, updated monthly with all the very latest information.

To access these files, I sent the

FTP Email commands

The commands used to access FTP Email servers vary slightly from machine to machine. The Imperial College server uses the following commands:

- reply-to Email-address** This tells the server where it should send its responses. Otherwise, it will try to work out your address using the From: line in your Email message.
- open sitename
username password** This line specifies the remote FTP site which contains the files you want. If the site provides anonymous FTP facilities (most do), you should omit both the username and password sections.
- cd directory** Tells the system in which directory the files you require are located. Note that Unix systems allow upper and lower case directory and filenames – for example, a directory called PUBLIC is different to one named public.
- dir directory** Asks for a listing of all the filenames in the specified directory. If you don't give a directory name you will receive a listing for the system's current directory.
- get filename** Requests a file to be sent to you. You can specify a directory here if you wish, but it's optional if you've already set it using the cd command.
- compress** If the file you are requesting is a large Ascii text file, you might prefer the system to compress it before sending – it'll save you a fortune in download telephone bills!
- mode binary** Tells the system that the files it will be fetching contain binary data (programs, ARCD files, etc.) rather than plain Ascii text. Normally you can omit this command, and binary mode will be assumed.
- mode ascii** As above, but specifies Ascii text files.
- uencode** Tells the system that any binary files it fetches should be encoded using the uencode utility before being sent to you by Email.
- btoa** Tells the system to use the BTOA utility for encoding binary files. It's probably best to stick to the default uencode mode.
- force uencode** Requests that every file sent back (even directory listings) should be uencoded. You'll only need to use this if your mailer seems to be having trouble with returned files.
- force btoa** As above, but forces the use of the BTOA protocol.
- quit** End of instructions. Anything after a quit command will be ignored.

following Email message to ftpmail@doc.ic.ac.uk, and within an hour or two, several large messages appeared in my mailbox:

```

reply-to andred@cix.computink.co.uk
open ftp.coe.montana.edu
cd /pub/STAR TREK/st-tng/NC5B-PS-50B
compress
uencode
get sttng-1.ps
get sttng-2.ps
get sttng-3.ps
get sttng-4.ps
get sttng-5.ps
quit
    
```

You'll notice the compress and uencode commands. The compress option works rather like the ARC program used on our

CoverDisks, packing large files down so they can be downloaded faster.

You'll need to get a copy of COMPRESS.TTP from your favourite BBS in order to uncompress these files. The uencode command forces these binary files to be sent over the Email network as plain Ascii text, and requires a similar WUENCODE program to unpack them (as described last month).

Message

Some files may be too big to be sent back as a single message, so the system will automatically split them into several parts which can be put together again later using a text editor.

If the parts are uencoded, just attach each message to disk using filename extenders, UAA, UAB, UAC, and so on. The decoder program will sort them all out for you.

**André Willey shows you how to
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Design a font

The PCG Font Designer has been around for some time but with the recent boom in the number of outline fonts available in the public domain, it is really starting to come into its own for real.

Basically the Font Designer program lets you load outline fonts in its own proprietary format, ECF, and edit them to your heart's content. There are even global editing commands to expand or compress font widths.

Great, I hear you say, but how many people feel like designing their own font from scratch? Not many, of course, but the best bit about Font Designer is its range of conversion utilities.

Outline fonts in Calamus, PostScript Type 1 and PageStream format can be freely converted to any of the other formats - instantly making several hundred PD typefaces available to users of Calamus, Didot and

PageStream. You can buy disks full of CFN fonts from any good ST-based PD library and there are plenty of interesting PostScript fonts available from PC-based libraries.

Another bonus is the ability to create bitmapped PageStream fonts which are much faster to load and redraw on the screen. The program costs £100 and is available from PCG, 11 Marsh Street, Barrow-in-Furness, Cumbria LA14 2AE or telephone 0229 836957.



Coming into its own - PCG's font utility

There is a certain thrill that comes with the acquisition of a new typeface, especially one of the more aesthetically pleasing classical designs, but there are dangers too.

The wrong choice of typeface can ruin a perfectly good document and as our collections get larger, more mistakes are made.

Over the next few months, I'll be looking at several different typeface categories and discussing the right way to use them.

Nothing will be written on tablets of stone - improvisation and experimentation is the key to good design - but hopefully it will provide a starting point for many of you who are just starting to expand your font collections.

The most widely used typefaces are undoubtedly the common or garden serif typefaces which are used as body text in magazines, newspapers and books.

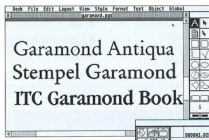
Most common of all is Times Roman, also known as Dutch in many GDS applications and Serif in Timeworks 2. This broad category of typefaces can, however, be divided up into three smaller categories - Old Style, Transitional and Modern.

Presses

Old Style typefaces were used on the very first printing presses and the category includes Garamond, Caslon, Goudy, Bembo, Plantin and Cloister Old Style, typefaces which are just as popular today as they were then. Caslon and Garamond are my own personal favourites but they are all very attractive.

Most of the Old Style typefaces are beautiful, elegant faces with a well rounded appearance. There is very little contrast between the

Choosing fonts



Garamond is perhaps the best known Old Style serif typeface. Examples here include PageStream's own Antiqua version and some PostScript variations



Didot body text in Didot Professional

serif and the thin strokes and the serifs are relatively heavy.

This is itself a reflection of the technology available at the time - thin strokes and delicate serifs were virtually impossible on the earliest hand-built printing presses.

This can provide an advantage for those of you with low resolution printers - Old Style typefaces tend to reproduce far better than later, more delicate styles.

Old Style typefaces are best used for text-heavy documents

such as newsletters, books and business reports. Such conservative typefaces can actually help convey stability and authority in a publication and many scientific and technical books and journals use Old Style typefaces for body text.

In the 15th and 16th century, when they were first introduced, many of the typefaces were used in subheadings and titles and the upper case letters can be used quite naturally for relatively unobtrusive crossheadings.

The Italic versions are characteristically angular with exaggerated serifs, very useful for captions or emphasising sections of text. The disadvantage of an Old Style typeface as body text is that the page can look a little grey owing to the uniform strokes.

Modern serif typefaces are completely opposite in appearance - there is a strong contrast between thick and thin strokes and the serifs themselves tend to be rather more ostentatious.

They can make pages look very black and action-packed - not bad for boxed out sections of text but tiresome when there is a lot of text on a page.

Serifs

Personally I would avoid using a Modern Serif typeface for body text, preferring instead to use faces such as Bodoni, Didot and New Century Schoolbook for subheadings or attention-grabbing purposes.

Most of you will have guessed that the most widely used typefaces fall somewhere in between the Old Style and Modern classifications.

This category is called Transitional and it encompasses a wide range of good, solid typefaces such as Times Roman, Century Old Style and Baskerville.

The typefaces are moderately stressed with smooth, even strokes. The serifs are visible but not ostentatious and the characters look well balanced and refined. In fact, they are probably the most readable of all typefaces.

Classifying type is the first step towards understanding its use, says Andrew Wright. Can you tell your Old Styles from your Transitionals

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The answer may well lie in software specifically written for your sort of business. For instance, an insurance salesman has completely different needs from that of the local newsgazer, but both will be using a database of some sort, tailored to their specific requirements.

The first thing to do is to ask others in the same line of business what, if anything, they use. The ST has been around for long enough now that a wide range of specialised software has already been written for it. Try letters pages and bulletin boards, and you might just strike lucky.

Assuming you do find someone with the software you need, the next problem is where to obtain a copy for yourself. If you're buying from an individual, make sure you receive the whole package including the manuals and original disks.

Destroy

The original owner may also destroy all backups and other copies at the same time. It's also worth checking that the owner is allowed to re-sell. Some software contracts prohibit this.

Using pirated software to run your business is never a good idea - it can bankrupt you. At the very least you'll have to destroy or hand over every copy of the software you possess, including your working copy, to whoever does own the copyright.

Think of the disruption to your business that might cause! The alternative is to pay for it all over again, and at the proper price to boot. For your own peace of mind, make absolutely certain that the seller owns the copyright.

No two businesses are exactly alike, so parts of the software that are vital to you might have been barely tested before you start using them. What do you do if you have a problem or find a bug? Is support available - is the seller capable of supporting you? - and if so, on what terms?

Software support can be an expensive and time consuming

Horses for courses

business, so don't be surprised if you are asked to pay for it. It's not unusual for support and maintenance of specialised software to cost more than the software itself.

Find out what to do if you come across any bugs. Will the supplier or the original software author fix them for you? Who pays?

It's vitally important to ask these questions, and to get satisfactory answers to them - preferably in writing - before you buy, otherwise you might find you've made an expensive mistake.

Ideally you'll find a piece of software that does exactly what you need at a price you can afford and with full technical backup. It's more likely that the software will do most of what you need it to, but not everything.

Even when the software is ideal, no two businesses develop in exactly the same way, so it's almost certain that at some time in the future you are going to need to have changes made to it.

Specialised packages are written by all sorts of people - software houses and one-man-band programmers - either under contract to someone like yourself, or to sell on for themselves. People in your line of business might also write software for their own use.

Software houses and individual programmers are usually more

than happy to oblige - after all, writing software is their profession - but arranging for changes to be made to software written by somebody else in your line of business can cause many, many problems.

Software writing isn't their profession. Are they capable of making the changes you need? Even if they do have the necessary technical skills, are they willing to do the work, and do they have sufficient time to do a good job for you as well as running their main business? Also, do you want a potential rival knowing exactly how you run your business?

Whoever you buy the software from,

ask them if you have access to the source code for it. Software houses are usually reluctant to do this, to say the least, but do try to ensure that you are guaranteed a copy of the source code if they go bust, or decide to stop supporting the package for whatever reason.

One-man-band programmers are usually willing to sell the source code to you as an optional extra - usually a very expensive extra - but again make sure that you are entitled to it for free if they are unable to do any more work on it themselves for whatever reason.

When you are buying from

somebody else in your line of business, it is vital that the source code be included in the price, even if they are willing to make any changes you might require.

What if there is no software available to do what you want - what are your options? Basically you have two choices - write it yourself, or get somebody else to do this for you.

There isn't the space here to give you a detailed run down on how to go about writing your own software, but the "software development cycle" as it's called is an area where a little knowledge can go a long way if somebody else is doing the coding for you.

Half decent

Start by writing down in a single sentence what it is you want the software to do for you. For example: "Automate the commission records and payments for my multi-level marketing scheme."

Then list, in rough order of priority, what the software must do to achieve this, such as:

- Record each sale by me
- Record each of my distributors sales
- Keep a list of customers and their purchases
- Calculate my commission on every sale
- Calculate my distributor's commission on their sales

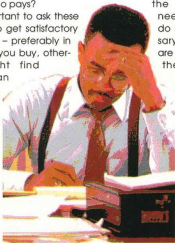
and so on. Believe it or not, you now have a basic software specification - and some very big applications have been written from less!

The next step is to think about how you will use the software. Think about how you already do what you will be asking the software to do.

You'll very likely find this exercise useful in itself, even if the software never gets written! Then write and draw diagrams, whichever is the clearest way, to give a description of the exact process of what you want the software to achieve.

And if you think of better ways of doing this meanwhile, implement them now, manually, before you've engaged a programmer. It's virtually impossible and extremely expensive trying to computerise a moving target!

Armed with your specification and description, you can go about finding someone to write the software - which is the subject of next month's column.



A computer is only as good as the software it runs. Getting the right packages for your business is extremely important.
Pat Winstanley has a few pointers

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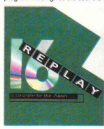
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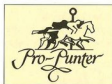
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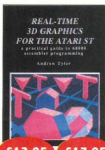
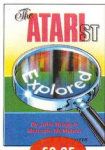
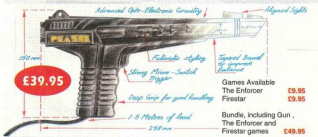
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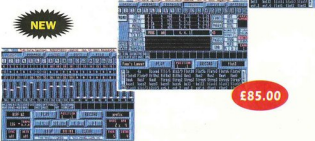
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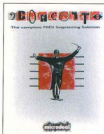
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