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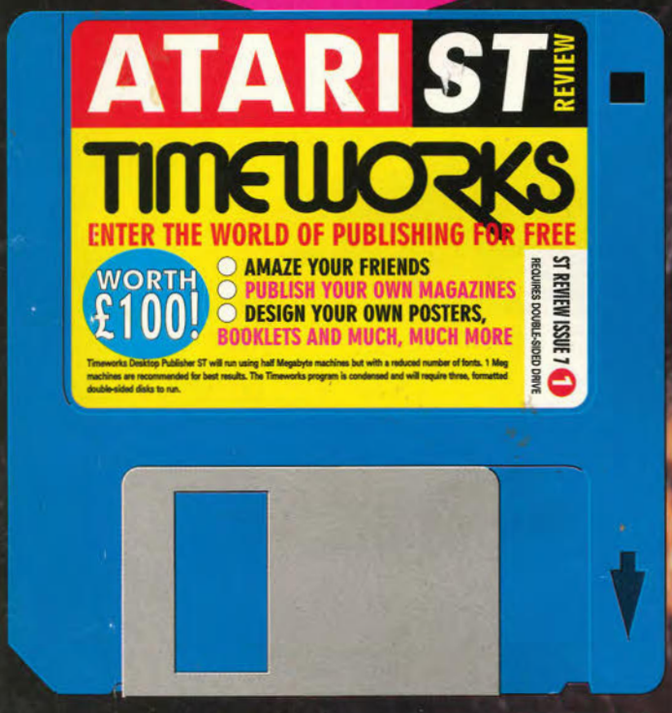

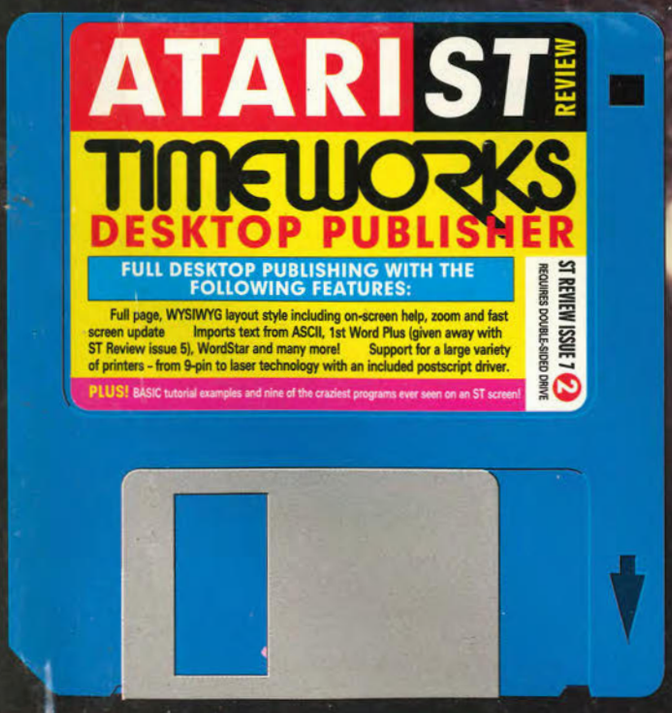

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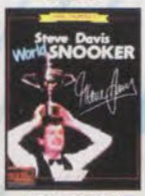

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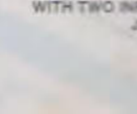

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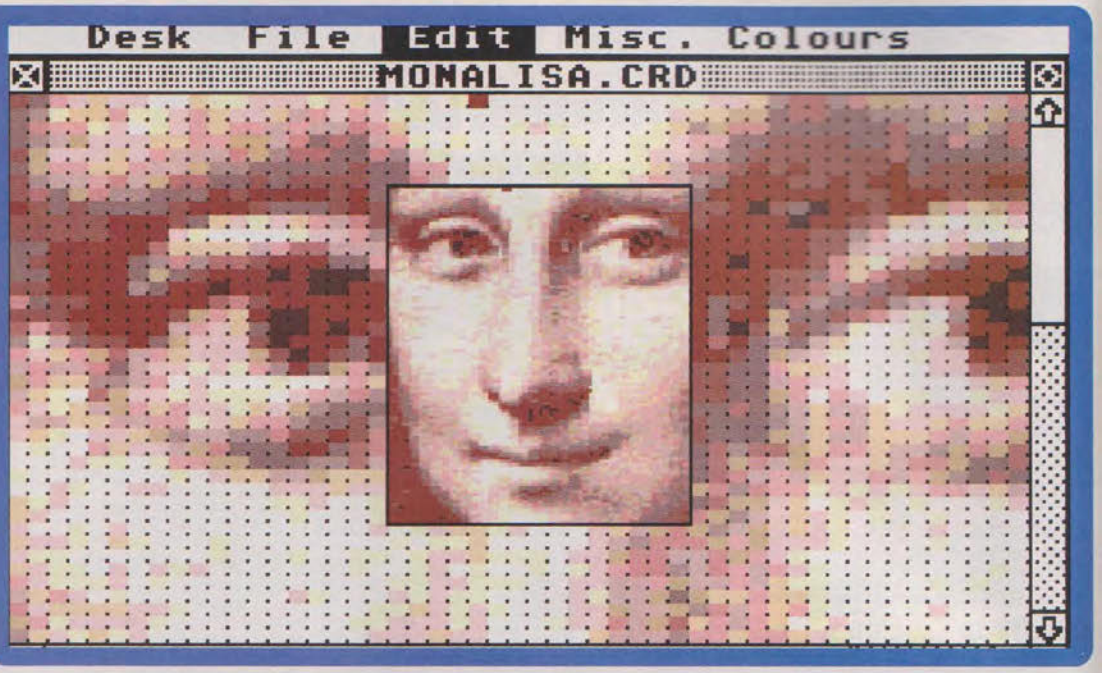
In a very strange feature ST Review looks at silly or irreverent ST software. Interested in the stars? We look at several strange packages – there's even a screen savers, one of which involves catching crabs!



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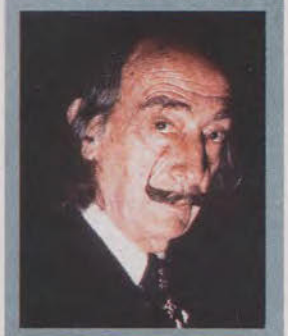

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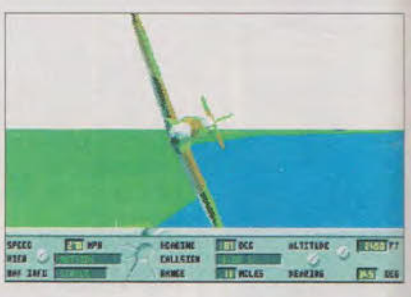


LEFT: The Chaos Engine from Renegade serves as a mystically poignant contrast to the ups and downs of ...
RIGHT: Reach for the Skies – Virgin's first ever flight simulation game. Both will be Xmas biggies so turn to pages 82 – 84 for details!

ON THIS MONTH'S COVERDISKS

TIMEWORKS DESK TOP PUBLISHER

This is the first time ever that a full, Desk Top Publishing package has ever been put onto a cover disk! And Timeworks is arguably the best there is!

THE COMPLETE PACKAGE!

Timeworks is an extensive, professional DTP program normally supplied on five packed disks. Others may have split the package over several issues but not so with ST Review. The whole package has been specially re-worked to fit onto two.

UNPACKING THE DISKS

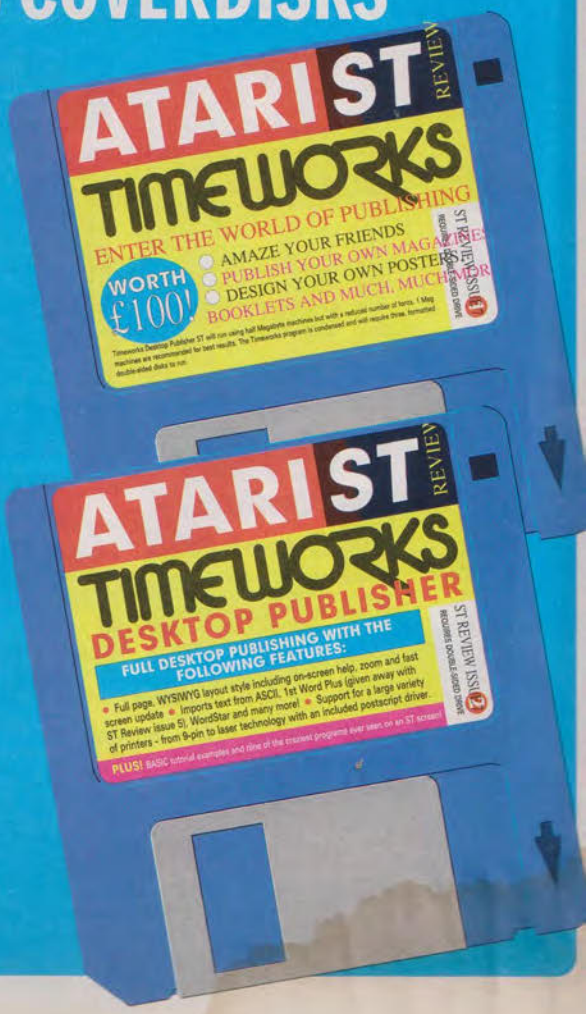
Starting on page 17, we show you how to use the disks – getting the most out of them with Step-by-Step guides that explain just how to do it.

ALSO APPEARING ON THIS MONTH'S DISK

The weird and wacky world of ST programs comes to your screen with a selection of really strange screen-melting programs....

NEXT MONTH

We'll be including some clip art files so you can add stunning pictures, graphics and logos to your designs. On next month's disks we will start the renowned Cyber series – and you can use it to create your own high quality designs and pictures to incorporate into your pages!



FEATURES

WIN A PHILIPS 8833 MKII COLOUR MONITOR!!!
PLUS A CHANCE TO WIN
- **GREMLIN'S LOTUS CHALLENGE II & III**
- **A TRIP TO THE 1993 GRAND PRIX**
- **A MODEL FERRARI**

19 TIMEWORKS
On the cover is the complete and amazing DTP program, ***Timeworks Publisher ST,*** and inside is a seven page step-by-step tutorial that will have you designing pages in no time!

26 TIMEWORKS UPGRADE!
If you like ***Timeworks***, and would like to take advantage of the latest version, try our amazing upgrade offer – a full, boxed copy of ***Timeworks 2*** can be yours for less than £40 (the recommended price is over £100!)

30 CURIOUSER AND CURIOUSER
The ST is a really serious computer that runs serious programs for serious people – isn't it? But you could be forgiven for thinking the ST world is mad, once you looked through this round up of zany, off-beat programs...

36 SEEING IS BELIEVING!
Seven wacky programs that all do something very strange to your screen. We look at them, shake our heads, rub our eyes and then look again!

38 TRIVIAL PURSUITS
Game trivia can be big business. Here the King of trivia, Gordon Houghton, opens your eyes to some real games and ST trivia.

42 CHEAP N' EASY
Atari have just released a compendium of utilities that is excellent value.

44 A LOAD OF OLD T.O.S.
There are several versions of TOS available for your machines, but how does each one differ from the rest? We show you what's what inside your ST.

REGULARS

6 NEWS
What's happening in the world of the ST. Do you know? We do.

19 COVERDISKS
With the full, commercial DTP package ***Timeworks*** on the coverdisks, we had to condense them to fit on two disks. For instructions on how to de-compact your disks and start your Desk Top Publishing career, start here!

60 OFFERS
ST Review is now renowned for its amazing reader offers. We don't run lots – we run the highest quality products at the lowest prices! Compare our prices with anyone. These are the best!

71 MIDI MONTHLY
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79 FIRST IMPRESSIONS
Everyone likes to know what's going on: who's doing what, where all the big licenses are and what's happened to Eye of the Beholder II — and what has the industry got hiding up its sleeves for Christmas? People need to know and we try to tell them.

86 CUE ARCHER MACLEAN
Virgin's biggest game this year could well end up being ***Archer Maclean's Pool***. We look at the game and the man behind it

107 PD ZONE
The biggest and best source of inexpensive software for all needs is the Public Domain. We look at some graphic utilities, the best of games and all the rest!

UPGRADE YOUR TIMEWORKS TO TIMEWORKS 2 FOR ONLY £39.89
TURN TO PAGE 27 FOR DETAILS

Is this the best ever sampling software for the ST?

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Our team of games experts look at what's hot in ST games as the software houses begin their Christmas run-up...

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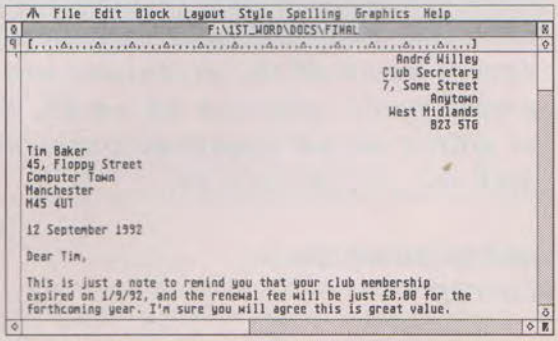

First Word Plus tutorial continues with part 3.

NEWS

Hello and welcome to the latest issue of ST Review, Britain's brightest ST magazine for everyone who's interested in Atari computers. For those of you who haven't read the magazine before, we are the biggest and best ST magazine you'll ever read – covering all that's happening in the world of ST. Inside you'll find a host of reviews covering leisure and productivity and a host of tutorials that really show you how to get the very best out of your ST.

With a shocking lack of games software available for review this month, the real flavour of this issue is DTP. Amazingly enough, this ties in nicely with our ground-breaking cover disks, which this month contain the blisteringly brilliant commercial DTP package, Timeworks Publisher, worth £100!. Inside, there's the first part of an in-depth Timeworks Publisher tutorial using our much copied step-by-step guide system that, over the next few issues, will take even the most humble newcomer to DTP and turn them into a DTP genius. Also, on forthcoming issues, we'll be adding new fonts, graphic programs and utilities, adding to one of the most complete DTP packages ever!

But don't get too carried away by the quality of our cover disks. Inside there's a huge off-beat feature that covers some of the strangest programs you'll ever see on an ST, some of which we've squeezed onto the disk for you to look at.

GARTH SUMPTER
EDITOR

AUTUMN COLLECTION

The European Computer Trade Show got to meet its press and display its wares for the Christmas buyer...

The Autumn E.C.T.S. show is generally regarded by the computer games industry as a launchpad for its Christmas products – so it was a particular pleasure to see Atari's stand in pride of place, and generating a level of interest from the normally conservative, if somewhat caffeine-ravaged, hordes of software developers present at the show.

The main reason for this flurry of activity was, of course, the Falcon. Sitting in its ST-shaped box, the machine ran idly through graphics demos whilst would-be developers sat and gaped as they realised that once the machine is released, there will be no question of porting stuff across from other formats cheaply, as they have been able to do for some considerable time.

Although some of the software companies confirmed that they had no plans to produce any ST games at present, all of the companies that hadn't already got Atari's latest expressed an interest in getting their hands on one.

New products for ST there were though, and a surprising number all jockeying for poll position in the Christmas releases. Virgin's *Archer Maclean's Pool* was playable and should be reviewable next month, whilst US Gold's *Legends of Valour* is now looking even better and is poised to take major Yuletide honours. There were a plethora of titles all under development - the latest of which are covered within these pages.

COOL TRAIN

All aboard: Transarctica, from French software programmers Silmarils, puts you amidst the icy wastes of a futuristic railway empire.

Transarctica, from Daze, sees a return to the golden age of steam trains, only this time it's set 300 years in the future, with the Earth in the grip of an ice-age.

The game is programmed by Silmarils, whose previous titles include ***Storm Master*** and ***Ishar***, and is a mixture of strategy and adventure. Those who survived the onset of global cooling now live in small communities linked together by railway lines.

The trains, and the coal which powers them, are controlled by a mega-corporation called the Viking Union. You play a character who attempts to execute a plan to warm the Earth up again. Naturally the Viking Union don't want to see their world-wide monopoly come to end, so they're out to thwart you any way they can.

WEENIE HERO

It's an itsy-bitsy-teeny-weeny, odd-name hero called Ween.

Heroes are usually expected to have names suited to their station, such as Dirk or Bret, but just for a change, the star of the latest adventure from Coktel vision goes under the rather unassuming guise of Ween.

Ween was a normal lad until, in true fantasy style, he was called upon to fulfil a prophecy. This particular one involves journeying to the heart of the kingdom of Blue Rocks, out witting the traps, puzzles and monsters there, then slaying Kraal, the demon lord whose evil shadow lies over the good folk of the land.

Many of the characters in the game are digitised from illustrations, and from what we've seen so far it looks rather promising. It's due out around about now.

WHAT'S UP DOC?

Call it ***Breakout***, ***Arkanoid*** or ***Pong***. Whatever the name, Daze has taken that classic style and transformed it almost beyond recognition.

The result is ***Bunny Bricks*** and, as you might have guessed, it stars a rabbit. There are still bricks to be smashed, but instead of controlling a rather plain paddle, you now control the rabbit who's armed with a large baseball bat which is used to slug a baseball into a completely inoffensive wall. When the wall has been demolished Bunny advances to the next level. Hindering him are nefarious villains with ridiculous names like Naf Naf and Angel Einstein. Luckily Bunny can tool up with machine guns and multiple-bats so he does stand a reasonable chance of getting through.

Bunny Bricks is programmed by Silmarils and is due to hit the shelves some time this month.

FALCON'S RETURN

In our recent review of the Falcon mission disks, re-released by Digital Integration on their Action Sixteen label, we said they were now all on one disk instead of the original two, but that the ST had problems recognising the Operation Firefight mission. It turns out that when the message 'insert disk and press space' appears you should, in fact, press Return, making the game read from the other side of the disk. So if you're having any disk-swapping problems, this should sort it out. D.I. will be updating the manual to include this rather vital piece of information. In the meantime, if you are experiencing any problems please phone them on 0276 684959

RETURN OF THE LITTLE PEOPLE

They're short, they're dumb, they have too many vowels in their names and they're back. The Gobliins are due to hit your screens again this Christmas in ***Gobliins 2, The Prince Buffoon***.

There are two of the blighters now, Winkle the Joker and Fingus the Diplomat, who are on a mission to rescue the local prince who has been kidnapped and replaced with a jester. They each have special skills which have to be employed to solve puzzles and dispose of the nasties which have been employed to stop them. ***Gobliins 2*** should be pottering into the shops in time for Christmas.

HOST THE MANSELL

He's won the Formula One World Championship, he's got his own computer game, he has the kind of moustache teenagers would kill for, and now Nigel Mansell has lent his name, publicity shots and facial hair to promote a joystick.

The Freewheel, from Logic 3, is a steering wheel-style controller designed specifically for driving games (hence Nige's endorsement). The unique feature of the this control is that it has no mounting, instead you hold it in mid-air and the tilt switches inside detect the movement.

THINK OF IT AS A WAY OF LIFE

(OR DEATH)

JOURNALISTS see new titles every week, each one claiming to be the best of it's kind, to date. Yet at the recent European Computer Trade Show it was the journalists themselves that could be found singing the praises of one new title in particular - LEGENDS OF VALOUR.

KEVIN BULMER (The Designer of Corporation) and IAN DOWNEND the creators of LEGENDS OF VALOUR, were literally jostled off their feet as writers, retailers and fellow programmers sought to experience what one prominent industry figure called "A game that's more a way of life - utterly extraordinary."

Demo disks can only scratch the surface, screenshots in magazines could never do the astounding graphics justice (that's why you'll see none here). The only way to really find out what all the fuss is about is to experience it for yourself. LEGENDS OF VALOUR - The Dawning will be available on Amiga, ST and PC very soon.

Ask your retailer for more details or send a S.A.E. to Danielle Woodyatt at the address below for an information pack.

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NEWS

OPERATIONS TO GET CHEAPER

The OS-9 Upgrade pack from Cumana. Six disks and a comprehensive set of manuals.

Cumana has announced that the price of its OS-9 professional upgrade kit for the ST has been reduced to £99.95 for private users.

Written in assembly language, OS-9 is an alternative multi-tasking operating system that is smaller and faster than Unix and offers better user performance. The package includes Sculptor, a fourth generation applications development system which offers languages, a database, a dictionary and several powerful utilities. It even boasts a powerful word processor, spreadsheet, C compiler, Basic compiler, screen editor, 68000 assembler, debugger and linker.

Managing Director of Cumana, John Simnett said: "This package is so attractive that potential users of OS-9 could well consider buying an Atari ST system in order to take advantage of this outstanding offer."

For further information, contact Cumana Ltd at Pines Trading Estate, Broad Street, Guildford, Surrey, GU3 3BH. Tel: 0483 503121.

MEMORY PEDDLERS RAISE £15,000

Powermark plc, suppliers of memory upgrades, recently sponsored a cycle ride from London to Paris, to raise money for leukaemia research.

The riders, Adam Green and Jonathan Chapman, rode from the Royal Geographic Society to the Eiffel Tower in August. It took three days to complete the journey via the Newhaven-Dieppe ferry route, to raise money for the Paul Vander-Molan Foundation, which will benefit to the tune of £15,000. Paul was an experienced adventurer and expeditionary who died of the disease.

Mark Simon, Managing Director of Powermark, said:

Adam Green and Jonathan Chapman ready for their trek. I wonder if they looked this good at the end of it?

"I'm pleased to be able to assist the Foundation. They exist to improve the quality of life for disabled people and I'm fortunate that we are in a position to help."

You can contact Powermark at Premier House, 112 Station Road, Edgware, Middlesex HA8 7AQ or ring them on 081 951 3355.

SOFTWARE GOES BARKING MAD

Record retailer HMV is introducing software into their stores, following recent successful trials. A new store that has just opened in Birmingham is stocking videos and computer software, as well as the full range of consoles and accessories.

The move will see the introduction of software into nine other HMV outlets throughout the country.

ROYAL RUMPUS AT PALACE BUST-UP

Palace Software recently went into voluntary liquidation, causing parent company, Titus Games to set up a UK base. Their first release, ***Crazy Cars III*** was reviewed last month.

ATARI REDUCE FAMILY PRICES

As we revealed in last month's news pages, the price of the STE has been reduced. The new 1040 STE Family Curriculum II pack now includes ***Play and Learn***, a reading program, ***Junior School***, a youngsters quiz involving Spelling and Maths and ***GCSE Revision*** and a package to aid learning in Maths, French and Geography.

Also included are ***Hyperpaint***, a graphics package, ***Music Maker II***, ***FirST Basic***, ***First Word*** and ***ANI ST***, an animation package. The price is now £299.99.

The 520 STE Discovery Xtra pack comes down to £249.99.

A special pack is available from Silica Shop (081 309 1111) who are offering a one megabyte 520 STE with the STart pack and the original Family Curriculum pack, as well as their own starter pack worth over £320 for £299.99.

16/32 TAKES OVER SWPD

The South West Software Library has closed following alleged copyright infringement on demo disks.

The remainder of the company's catalogue has been bought by 16/32 Systems. Nick Harlow, owner of 16/32 says: "This has given me one of the largest ranges of PD available in the UK."

For more details on stock available, write to 16/32 Systems, 35 Northcote Road, Strood, Kent, ME2, or ring them on 0634 710788.

LOW LEVEL DESKTOP UNVEILED

A new enhanced version of ***Easy Text*** has been released by zzSoft. ***Easy Text Professional*** boasts a host of new features. A full 135 page manual is provided with the package, which retails at £39.95. This makes it the cheapest professional quality DTP package available.

Add-on font disks are available and there's also a colour picture extension. For more details on the product, contact zzSoft at 25 Honeyhole, Blackburn, Lancs, BB2 3BQ. Phone 0254 672965.

Easy Text Professional from zzSoft.

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STARS IN YOUR PALM

A new range of joysticks are now available from Cheetah. Believed to be a world first, Cheetah has released a range of joysticks based on television and film stars.

The "Characteristicks" are claimed to be tough, reliable and durable, with each design looking like a favourite film character. There are five to choose from at present, Batman Returns, Batman, Alien3, Terminator 2, Judgement Day and Bart Simpson. Priced at £12.99, they are all ST compatible. Look for them at your computer shop. If you have any difficulty, call Cheetah on 0222 867777 or write to them at Cheetah House, Bedwas Business Park, Bedwas, Gwent NP1 8PU.

The full range of new Characteristicks from Cheetah.

ANALOGIC UPGRADE SERVICE

Analogic Computers has now been authorised by Atari for all repairs and upgrades. They offer a while-you-wait service, as well as fixed price repairs. They also offer a full range of upgrades and accessories for your computer including a switchable TOS 2.06 upgrade which can be disabled to let you run your machine with your original TOS.

For further details contact Analogic on 081 546 9575, or write to them at Unit 6, Ashway Centre, Elm Crescent, Kingston-upon-Thames, Surrey, KT2 6HH.

GAMES HOUSES CLOSE DOORS

Domark and Mindscape have recently announced plans to drop the ST from their range.

Both companies quote falling sales as the reason for their decision.

Domark still has some releases in the pipeline, however, including ***Shoot 'Em Up Construction Set II***, a Virtual Reality product, ***Rampart International Rugby Challenge***, and ***AV8B Harrier Assault***.

ANOTHER COMPANY TAKEN UNDER FALCON'S WING

Millennium has announced that it will be releasing two games for the Falcon. The games, ***Daughters of Serpents*** and ***Rome AD92*** will be released in the New Year.

Daughters of Serpents, one of many games being developed for the Falcon.

Both these adventures are expected to be hard disk installable with the protection being in the form of a manual.

Daughters of Serpents is set in 1920s Alexandria and could be described as ***Indiana Jones*** for grown-ups. ***Rome AD92*** is a power struggle, where you start as a humble slave. If the demos we've seen are anything to go by, both of these games are going to be impressive on the new machine.

CROSS CHANNEL INTERFERENCE

A small problem for computer owners has gone virtually unnoticed in the discussions for the introduction of the new Channel Five. Much has been said about the new company having to retune all of the video recorders that operate within a similar frequency range, but the fact that computers also come within this band has not been addressed.

However, David Mellor, ex-Minister for Fun, admitted that there could be a few problems. "Few people will have problems unless they live very close to the Channel Five transmitter or are tuned significantly towards the new channel," he said.

LLAMAS ON THE FALCON

The irrepressible Jeff Minter is at it again! ***Llama Zap*** is a new Falcon-specific game which is a re-hash of the popular ***Attack of the Mutant Camels***. ***Llama Zap*** joins a growing list of software being produced for the new computer. At the European Computer Trade Show in London last month, the Falcon was displayed with an art package written by HiSoft called ***True Colour***.

ST BOY JOINS MENSA

Playing problem solving games could improve your IQ. That's the message following 11-year-old Mark Shields from Greenock being invited to join MENSA after scoring 99 per cent in the official test. He listed using his ST among his hobbies, which undoubtedly helped him to become so brainy.

The entry level for MENSA is an IQ of 148 or above. Mark was assessed as having an IQ of 177. The average is 100!

ADVENTURE GAMES GO FOR GOLD!

US Gold is to release two new role playing games for the ST, ***Legends of Valour*** and ***Realms of Arkania***. This is in addition to the release of ***Street Fighter II***, which is due out at the end of the month.

Legends of Valour is a very involved RPG that should provide players with a lasting challenge. There are enough options to allow you to create many different styles of character and start in a choice of six villages. This means that the possibility of ever playing the same scenario twice are remote (unless, of course, you want to). The game uses a technique called "Virtual World" to give an enhanced play area. The screen shots shown are from the PC version of the game.

Realms of Arkania is based on a series known as ***Das Schwarze Auge*** (the evil eye). DSA outsells D&D and AD&D by about four to one in Germany. There have been more than a dozen board games with over 70 updates and add-ons since 1984. No screenshots were available at the time of going to press, but expect both games to be in the shops around the end of November.

PC screen shots from the new US Gold release, Legend of Valour.

Ladbroke Computing International

Ladbroke Computing International are the longest established Atari dealer in the U.K. 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 backup. All prices are correct at copy date 23/09/92 (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 £11 for Saturday courier delivery (mainland U.K only). Add £3 for postal delivery only on items under £50 (check with staff before ordering). All prices available on Mail Order, Shop prices may differ. Shop/Mail order premises: 33 Ormskirk Road, Preston, Lancs, PR1 2QP. Open Mon-Sat 9:30am-5:00pm. Phones answered from 9:00am. Ladbroke Computing International is a trading name of Ladbroke Computing Ltd. BFPO addresses overseas, deduct 17.5% VAT and add normal UK carriage.

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Please state version you require, STFM or STE.	
AT Speed STFM	£ 129
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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 factor of 8.2	

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

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STE Packs

The 520STE Start Pack includes: Battlezone, Crystal Caves, Missile Command, Super Breakout, Neochrome and 1st word.

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2Mb STE Start Pk	£ 274	2Mb STE Discovery II	£ 264
4Mb STE Start Pk	£ 320	4Mb STE Discovery II	£ 310

The 1040STE Curriculum Pack II includes 3 packs of Educational software catering for 5yrs to GCSE, 1 creativity pack consisting of Hyperpaint and Music maker software. 2 games, 9lives 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, TT Styling, VME Bus. We can fit extra RAM and hard drive mechanisms controlled by the ICD host adaptor, to the Mega STE 1 to give superior specification than Atari's Mega 2 or 4.

2Mb Mega STE	£ 459
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The NEW FALCON 030

The new Atari Falcon computer is based on a 32 bit Motorola 68030 processor running at 16MHz, the base model has 1Mb of RAM (upgradeable to 14Mb), High Density 1.44Mb Disc Drive, 8 channel 16 bit CD 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.

Atari Monitors

Atari SC1435 Stereo Colour Monitor	£ 179.99
Stereo, Colour monitor, includes green screen feature, cable, and tilt/swivel stand.	
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Auto emulation change	Compressed data mode	Sheet feeder available £69.99

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Please add £3 for cable and £5 for next working day courier delivery.

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1Mb Flash SSD	£ 184
2Mb Flash SSD	£ 274

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 dialler and a Time manager

Pocket Modem	£ 219

1200 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 TV's/Monitors.

New Seikosha OP104 Laser Printer £579.99

Comes with 12 months on site warranty.

.5Mb RAM upgrade £84.99

Toner Cartridge 2000 page life £19.99

Drum 10000 page life £90

Phone for further details

ST Repairs

Our Service department can repair ST's in minimum time at competetive rates. We can arrange for courier pickup and return delivery of your machine to ensure it's safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day. We can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc. We offer a Quotation service for £15 for which we will examine your machine and report back with an exact price for repair if you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge. Please note: The minimum charge covers labour, 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
TOS 2.06+switch STFM	£	65
TOS 2.06 STE	£	44.99
A/B Boot switch	£	4.99

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

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 incorperated the MAXTOR hard drive mechanisms which offer low power, cached 11ms 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 Autobooting and Autoparking.
- ☑ DMA device selector & On/Off switch on front of case.
- ☑ DMA Out port for daisy chaining extra drives/Laser printer.
- ☑ Full metal case measuring 300mm x 285mm x 51mm (wdh), providing good shielding and monitor stand.
- ☑ High quality ICD boards including on board clock and controller software.
- ☑ All drives include Vault archiver, Backup software, Virus killer, MCP shell program, Midistudio Master demo.

Data-Pulse Plus 40Mb ICD	£	289.99
Data-Pulse Plus 52Mb ICD	£	319.99
Data-Pulse Plus 80Mb ICD	£	379.99
Data-Pulse Plus 127Mb ICD	£	429.99
Data-Pulse Plus 213Mb ICD	£	539.99

Data/Pulse 20 Mb Floptical

The New Data-Pulse Plus Floptical drive, is a 3.5" SCSI mechanism, ICD host adaptor, high quality Data-Pulse Plus case and psu. The drive is capable of storing over 20Mb of data on a single 3.5" Floptical disk and can also read 720K and 144Mb 3.5" floppy disks. The average access time is just 65ms and the data transfer rate is 200K per second, 6 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) HD	£319.99
Diamond Back II	£29.99

New Unlimited Storage capacity

Aries Upgrades

The Aries Upgrade board is an in house designed, Multi layer board utilising high density ZIPP RAM chips. The board has been designed to allow progressive upgrading from the base 512K up to 4Mb. The board does require some soldering but once installed is very reliable. The board is hand assembled in our workshops by skilled technicians and is fully tested before despatch. It also comes complete with fitting instructions and test software. Our technicians can fit the board to any ST for a small fitting charge. We can arrange courier pickup and return to ensure fast turn around. A same day fitting service is also available. Please phone for further details of courier and same day service.

Aries Upgrades (any ST(FXM))

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.

* = Special offer

Data-Net

Data- Net is a high speed network solution developed in house at Ladbroke Computing for the ST/STE. Ladbrokes Data-Net hardware consists of an unobtrusive cartridge which plugs into the cartridge port of your ST/STE and connects via Coaxial cable and BNC connectors. The Data-Net hardware is fully Lantech compatible and can be used with Universal Network software.
The Universal Network software is a Multi tasking network package which does not tie up the 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.

NEW PRICE

Data-Net Node Consisting of 1 Datanet hardware node + 1 Universal Network Node software only

£99.99

Silhouette

Silhouette is a bit image and vector graphics drawing program with Auto tracing. The package offers Auto- Tracing, Beziers, B-Splines, High resolution grey scales. Supports FSM-GDOS, requires 1Mb ST or TT High resolution. Imports: IMG, DEGAS, TINY, MacPaint, GEM, SGF. Exports: IMG, GEM(1.3), SGF, DXF, EPS(Postscript).

Only £60

Aries SIMM's

Special Offers

512K SIMM Upgrade for STE

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2Mb SIMM Upgrade for STE

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4Mb SIMM Upgrade STE

£92.99

Please check configuration before ordering

Golden Image

GI Hand Scanner £119.99

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 grey. The high quality hardware is backed up by two of the most respected graphics packages around. Migraph's Touch Up for scanning and editing hi-res and grey scale images and Deluxe Paint art package for lower resolution colour.

- ☑ 100, 200, 300, 400 Dpi scanning resolution
- ☑ 105mm scanning head
- ☑ 1 letter mode, 3 photo modes
- ☑ Includes Touch Up
- ☑ Includes Deluxe Paint

Scanlite: is an accessory which allows the scanning and saving of files whilst your favourite editor or DTP package is running. The accessory supports Golden Image, Migraph, GenScan and DAATAscan Hand Scanners. £20

GI External drive £54.99

The Golden Image External 3.5" Floppy drive for the Atari ST features 720K formatted capacity, double sided double density, Through port compatibility for older ST/STM machines, external PSU.

- ☑ 720K Formatted capacity
- ☑ New Low price (no track counter)
- ☑ External Power Supply
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The NEW Brush Mouse

- ☑ 150 Dpi resolution
- ☑ 500mm/SEC Tracking speed
- ☑ Switchable between ST/Amiga
- ☑ Opto/Mechanical Mechanism
- ☑ Includes Deluxe Paint ST
- ☑ Direct mouse replacement

£24.99 with D-Paint **£19.99** without D-Paint

GI Optical Mouse £24.99

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.

- ☑ 250Dpi, 500mm/sec tracking speed
- ☑ Fully Optical
- ☑ Mouse mat included
- ☑ Switchable ST/Amiga

GI Mouse

The Golden Image Opto/Mechanical Mouse offers 290 Dpi resolution, 2 Microswitched buttons for greater reliability and crisper, more positive response, Anti-static silicone rubber coated ball. Also includes mouse mat.

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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 mouse featuring 290 Dpi resolution, 500mm/sec tracking speed, Anti-static silicone rubber coated ball.

Only £9.99

Telephone (0772) 203166
FAX (0772) 561071

In the beginning
there was Void

The Health and Safety Commission recently found that screen radiation isn't harmful. But working with a computer can cause problems. . .

BACK TO BASICS

Much has been written about back problems and other ailments caused by using a computer. Most of them can be avoided by setting up your work environment properly and observing some basic rules.

SETTING UP YOUR ENVIRONMENT

It is important that you sit correctly. Too much strain on the back or legs will lead to problems when you are spending a lot of time working at a keyboard.

The first thing to check is that the computer is in a position that is comfortable to work with. The height of the keyboard needs to be such that your forearms are horizontal to it. In operation, there needs to be a minimum of wrist movement. The monitor must also be at a comfortable angle so that there is no undue strain on the head – a tilt and swivel monitor stand is ideal for this.

A good chair is essential if you intend to spend any length of time in front of your computer. It needs to have good lumbar support and be adjustable to the correct position. The height also needs to be adjustable so that there is no pressure on the underside of the thighs or knees.

REGULAR BREAKS

When you've found your ideal seating position, you then need to look at the monitor itself. It's a good idea to plan some breaks from your work session to adjust the focus on your eyes. Don't try to do too much in one go and if at any time you feel strain or tiredness, stop and make a cup of tea or sit down and close your eyes for 10 minutes or so.

Turn the monitor contrast down slightly (but not so much that you have to strain to see your work) and try to find a position for the monitor that has minimum glare and reflection.

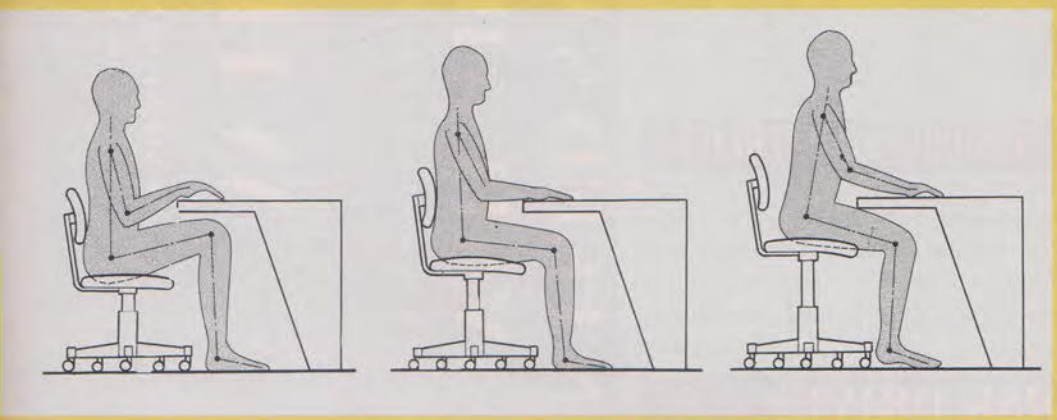
SOME COMMON PROBLEMS

Most of us have sat at the computer too long and felt the effects. Backache is one of the most common problems and one of the easiest to remedy. Strain in the legs and thighs can be due to your chair being too low. But there might be other less visible hazards. Some of the problems suggested in connection with monitors include radiation emissions, cataracts, photosensitive epilepsy and facial dermatitis. In the home and, to a large extent, in the office, there is little cause for alarm, but if you want more information write to the address below.

PLANNING YOUR WORK STATION

It is important to plan out the area that you spend your time in. Here are some things to look for when laying out your computer workstation.

1. Make sure that your desk and chair are at the correct height. Look at the diagram and, if possible, adjust your own situation accordingly.
2. Make sure you have adequate lighting. The light should be bright enough to read and see by without straining your eyes, but not so bright as to cause glare and discomfort.
3. Allow yourself regular breaks. Don't let someone else bring you coffee, get up and make it yourself. At least break up the routine, as sitting in one position for a long period can be damaging to your back and staring at the monitor can also cause eyestrain.
4. If you are doing a lot of detailed work, get a monitor. A television is all right for playing games, but reading fuzzy text will shorten the time you can concentrate and can cause eyestrain.



The middle picture shows how you should sit to reduce the likelihood of back problems. On the left you are too low and on the right too high.

FOR FURTHER INFORMATION...

The information contained in this article was mostly taken from literature available from the Health and Safety Commission. They have produced several documents on the introduction of computers into the workplace, as well as correct seating and working with VDUs (visual display units, another name used for monitors).

If you would like to know more about anything regarding your working environment, contact the Health and Safety Commission at Broad Lane, Sheffield, S3 7HQ (0742 752539) or Baynards House, 1 Chepstow Place, Westbourne Grove, London W2 4TF (071 221 0870). Relevant documents can also be found in the HMSO bookshops in London, Birmingham, Bristol, Manchester, Belfast and Edinburgh.

Analogic Computers (U.K). Ltd

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520 ST/STM/STF/STFM to 4 Meg	£139.95	* 520 STE to 4 Meg	£114.95

*FREE FITTING

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PC Speed	£89.95	Vortex 386 SX-16	£349.95
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AT Speed	£199.95	AD Speed STE	£169.95

STE, MEGA STE, FALCON 030 COMPUTERS

	512K	1MEG	2MEG	4MEG
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520 STE Dicovery Xtra Pack				
1040 Family Curriculm Pack II				
Mega STE				
Falcon 030				

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All Protar Hard Drives with Disk Cache have 2 year replacement series warrenty.
New Protar series 2 accept a second internal drive
- Support upto 7 extra SCSI devices
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Atari SC1435 Colour Monitor	£215.00
Phillips CM8833 Mk II	POA
Phillips 14' TV/Monitor (Designer Model) + Remote Control + Scart Cabel	£255.00
Phillips 15' TV/Monitor + Remote Control + Scart Cabel (Model 3332)	£239.00
Phillips 15' TV/Monitor as above with Teletext (Model 2331)	£269.00

ACCESSORIES and INTERFACES

STE/STFM Scart Lead	£14.95	Dust Cover	£14.95
STE/STFM Lead to Phillips CM8833	£12.95	Mouse Matt	£4.95
Phillips CM8833 Dust Cover	£6.95	10 Blank Discs	£5.95
Twin Joystick/Mouse Port		AD SCSI	£69.95
extension lead	£5.95	AD SCSI with clock	£79.95
Squik Mouse	£14.95	Forget Me Clock	£16.95

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STFM/STE Power Supplies (Service Exchange)	£34.95
NEW STFM/STE Power supplies with ONE YEAR GUARANTEE	£44.95

DISK DRIVES

High Density 3.5" Internal Drive	£54.95
1 Meg 3.5" Internal Drive	£44.95
1 Meg 3.5" External Drive with its own PSU	£59.95

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Star LC20 Mono	£139.95	Citizen 120D+	£129.95
Star LC200 Colour	£199.00	Citizen 124D	£179.95
Star LC24-20	£204.95	Citizen Swift 9	£189.95
Star LC24-200 Mono	£254.95	Citizen Swift 24E (Colour)	£289.95
Star LC24-200 Colour	£279.95		

* All prices include VAT and **NEXT DAY DELIVERY** subject to availabilty
* Fixed charge for repair does not include Disk Drive Replacement & Keyboard
* All prices subject to change without notice
* We reserve the right to refuse any ST Repair

Access VISA

GUARANTEED SAME DAY DISPATCH (subject to availability)

NOW AVAILABLE TOS 2.06

NEW OFFICIAL

STE ROMS.....£39.95 All other.....£59.95 includes Decoder and ROMS. You have an option for Hardware/Software switch to use New/Old TOS as and when you wish

Proffessional Service with no surcharge

WHILE - U - WAIT!!

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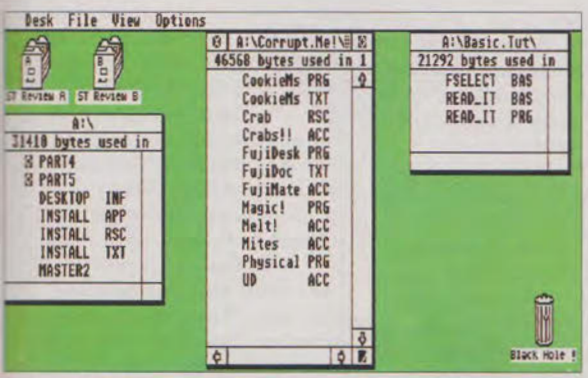
✦ EMULATORS ✦ ACCELERATORS ✦ many REPAIRS

ANALOGIC ANALOGIC ANALOGIC

NEW! RENT - A - COMPUTER NOW!

INSTALLING TIMEWORKS

If you find the thought of installing a huge DTP package a little daunting, in the words of Douglas Adams, Don't Panic! Here is a complete guide to installing Timeworks on your system...



This is the title screen that should appear when you boot cover disk 2.

Setting up a DTP program can be a difficult process, so we've written a special installation program that does most of the work for you..

Assuming you have one double-sided disk drive, the first thing to do is to format three blank disks. Label the disks STARTUP DISK, DATA DISK and FONTS DISK. Make sure that you write protect your cover disks (move the write protect tab up so that you can see through it) so you don't accidentally copy over them.

Place cover disk 2 in your drive and switch on. Your screen should look like the one in our picture (above). The window we need is the one on the left, so move the mouse into it and click the left button once to activate it.

Program files are usually identified by the extension .PRG, .TOS and .TTP. The fourth executable extension (program that runs) that you may not have come across is .APP (indicates an application). Double click on INSTALL.APP to call up the ***Timeworks*** installation screen.

THE INSTALLATION PROGRAM

Following this information will make the installation process quick and painless. When you add extra memory or change your printer, you can change the settings and re-install the program.

Starting with the top left corner of this screen, select the Atari System that matches yours. If you have expanded the memory to one Megabyte, then that is the selection you need. Don't be tempted to tell the program that your machine has more memory than it has, as it will attempt to load extra fonts which will make the program crash. If you've expanded the memory to 2.5 meg, choose two Megabytes from the list.

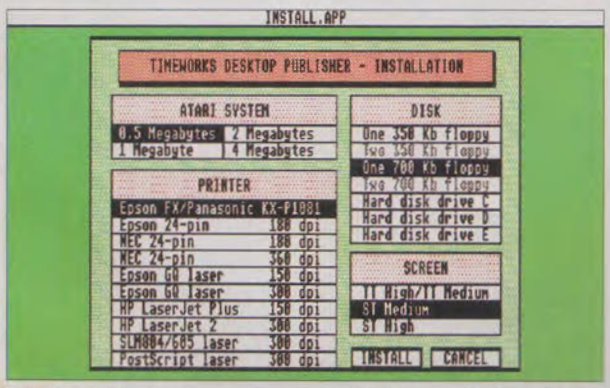
Under the heading Disk, select your setup . The program has set routines for each setup, and will use all the resources you have.

If you're using a colour television or monitor, the screen setting will be ST Medium. If you have a mono monitor or are installing the program on a TT, change the screen settings .

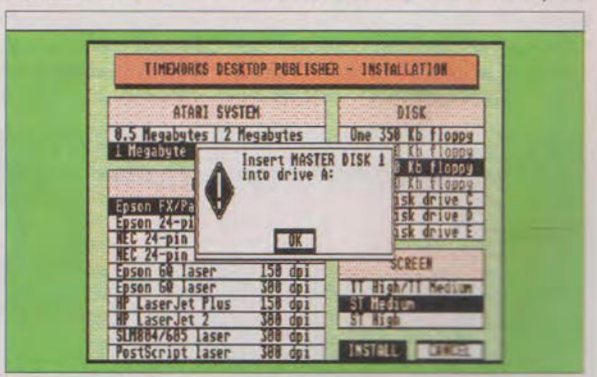
Finally, select the printer. The Epson FX/Panasonic KX-P1081 setting should cope with most 9-pin printers. Remember that you can change this later if needed.

When these selections have been made, click on Install and the program will install itself according to the configuration you have chosen. Just place each disk into the drive when prompted to do so. You will now appreciate the need to mark them up.

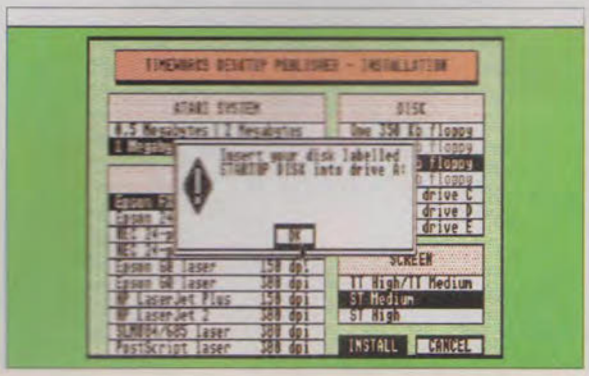
Once the installation is finished, there is one thing left to do before you can begin. Switch the computer off and place the Startup Disk into your disk drive. Switch the computer back on. You will need to do this whenever you want to run ***Timeworks***, as it has created an Auto folder with GDOS in it. This program loads the fonts and ***Timeworks*** won't run without it. You now need to run a program called FONTWID.APP. This sets up the screen displays and the printer widths for you.



The installation program screen. This setup is for a 520 colour system with a standard Epson compatible printer.



The program will tell you when to swap disks and which one to put in. Master disk 1 and 2 correspond to the cover disks.



Your first blank disk, labelled Startup Disk, is inserted at this point.

HARD DRIVE INSTALLATION

To install ***Timeworks*** on a hard disk drive, just follow the instructions on this page. Obviously, you do not need the formatted floppy disks. Simply select the partition that you want to put ***Timeworks*** in and follow the prompts. You will be asked if your hard drive autoboots and then all the files will be copied into a folder on the selected drive called Publish. GDOS will be automatically placed in your Auto folder. When the installation is finished, the computer will reset. All you need to do is run FONTWID.APP and you are now ready to become a newspaper magnate.

WORKING WITH YOUR COVER DISKS

Timeworks has taken up most of the space on the cover disks this month, but we have still managed to cram in no less than TEN other great programs!

There's something strange in the air this month. Could it just be a little Autumnal madness? Well, if you turn to page 30 then you'll find out. That's where you'll find our weird and wonderful special feature on Wacky Uses. We've even selected nine of the programs featured in those pages for you to play with to illustrate the sillier side of the ST. You'll find them all in the folder called Corrupt Me!

READ_IT.PRG

The other program on the disk is READ_IT.PRG. Details about using this program are included in the HiSoft BASIC tutorial which starts on page 118.

To run the .ACC programs, place them in the root directory of your boot disk (outside any folders on the disk in your computer when you switch the power on).

BE PREPARED

There is one piece of advice that we can give you to make sure you get the most from these disks. Try each program in the Corrupt Me! folder on its own and have a normal boot disk handy. Some of these programs do some wonderful things and, although they cannot harm your ST, you may find that you are not able to return to the desktop on that disk without getting rid of the program.

WHAT TO DO IF YOU HAVE PROBLEMS WITH YOUR COVER DISKS

DON'T PANIC!

In the unlikely event that your cover disk won't load or gives any other problems at all, remove all cartridges and peripherals and try again. Please note that to restart the computer, you must SWITCH IT OFF for at least five to 10 seconds to clear all traces of resident programs before continuing.

If this doesn't solve your problem, return your disk, with a brief note of the problem and a stamped addressed envelope to P.C. Wise Ltd., Dowlais Top Business Park, Dowlais, Merthyr Tydfil, Mid Glamorgan, CF48 2YY. They will test the disk and send a replacement as soon as possible. You can contact the P.C. Wise Helpline with any urgent problems. Please note that they will deal with faulty disks only and not general enquiries. They can be contacted by telephone on 0685 350505 between 10.30 and 12.30 on weekdays.

STEP BY STEP

BACKING UP YOUR DISKS

This guide is based on a single disk system. If you have two floppy disks, place a blank formatted disk in floppy disk B and proceed as shown. For a single disk system, follow the instructions. You will be told when to swap the disks. In both cases, make sure you have a blank formatted disk ready before you begin

1 *Format a double sided disk by placing a new disk in the floppy disk drive. Click on floppy drive A and go to the File option at the top of the screen. Click on Format and then click on OK for both of the next two dialogue boxes. Write protect the cover disk (but not the blank disk) so that the disk cannot be written to by the ST, moving the small black notch on the back of the disk so that you can see through it. This will save mistakes later on. Place the cover disk in the drive.*

2 *Click on Floppy Disk A to highlight it and hold the left mouse button down.*

3 *Use the mouse to drag the floppy disk icon towards Floppy Disk B until that is also highlighted. The computer will treat the floppy disk drive symbol as being A for the source drive (the cover disk you are copying) and B for the destination floppy disk drive (the blank disk you are copying to). Don't worry, the ST's not going to expect you to have another disk drive connected.*

4 *Release the mouse button. You should then be presented with a dialogue box telling you that the computer is copying disk A to disk B. It will also tell you that all of the info on floppy disk B will be erased. As you have just formatted disk B there is nothing to erase.*

5 *Click on OK and another dialogue box will appear with the word Copy highlighted. Click on OK again. The computer will read as much as it can from disk A and hold it in memory before it asks you to insert disk B. Swap the cover disk for your blank formatted disk and then click on OK. You must remember that disk A is always the cover disk and disk B is your blank formatted disk.*

6 *Swap the disks as requested and you will end up with a copy of the disk on your blank formatted disk.*

Make sure that you put the original disk somewhere safe and work with the copy.

In the unlikely event of anything subsequently going wrong with your coverdisks, you'll have the original to refer to whenever you need it.

TIME ON YOUR SIDE

TIMEWORKS TUTORIAL PART ONE

It's easy to become a publishing legend in your own lifetime with our free commercial Desktop Publishing package, Timeworks. Tony Kaye runs through all you need to know to create and print your first newsletter.

Before you begin to design a page with ***Timeworks*** you must first define the paper size and style of the document that you want to create. Point to the File menu, click on "New" and a dialogue box appears asking if you want to load a style sheet. Click on "No" and a new box appears with the heading "Page Format".

This is where you select the paper size and whether the document will be portrait or landscape in its orientation.

You can also select whether all of the pages will run concurrently or as left and right pages, each with slightly different margin settings as you'd find in a magazine.

GUIDING LINES

You are now presented with a blank page. The six dotted outlines are the default column guides. They are there to help you line up your pictures and text and you can have up to nine of them. Each of their widths can be defined – as can the distance, or gutters between them. At this stage it's important to have a rough idea of what you want the finished document to look like as it's far quicker to move the boxes around and change column and gutter widths before the text and pictures are in place.

You will find toggles to show tools, frames, columns and rulers under the Options menu. Keep all of these visible until you are familiar with the location of the relevant menus.

One handy feature is the hide pictures option, since every time you change the view size it takes a while for any pictures to be redrawn.

SIZE IS IMPORTANT

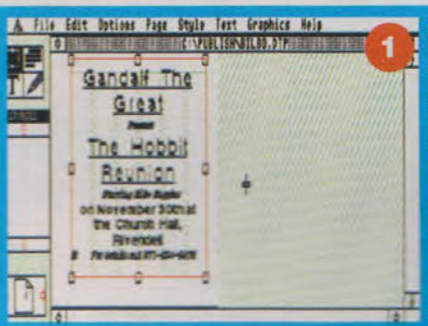
Now you have to set the view size. A full page view will give you a good idea of how the finished page will look, but the text will be 'Greeked' i.e. represented as lines but not actual letters.

Selecting double size will show you readable text, although most of your layout will be off-screen. Actual size is usually best to work with as it allows you to see most of the page whilst text remains readable.

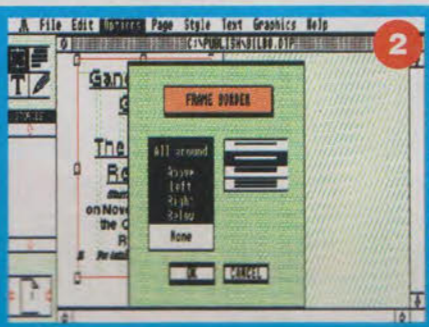
STEP BY STEP

ADDING A DROP SHADOW

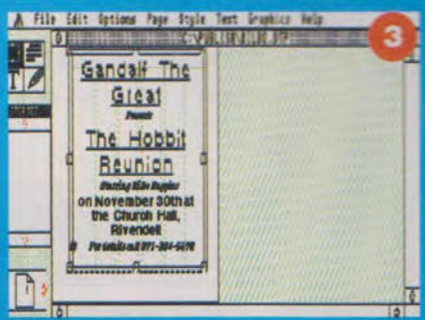
One way of adding a little depth to your flyer is by putting it inside a shadowed box. Follow this guide and you'll find it easy. But, be warned, at one point, your text will disappear completely!



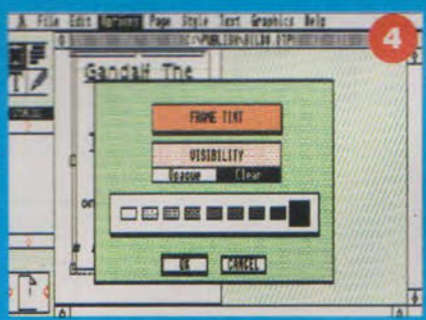
1 ***Place your original poster on the screen. Make sure that you are in frame mode and that the frame around the screen is activated.***



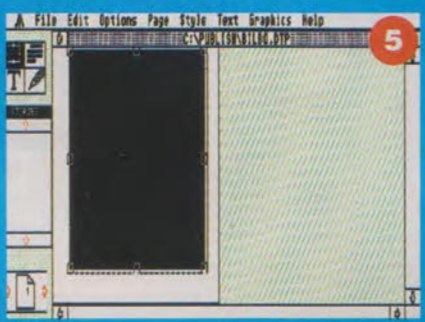
2 ***Select Frame Border from the Options menu and this box will appear. Select one of the thinner borders and click on All Around, then click on OK.***



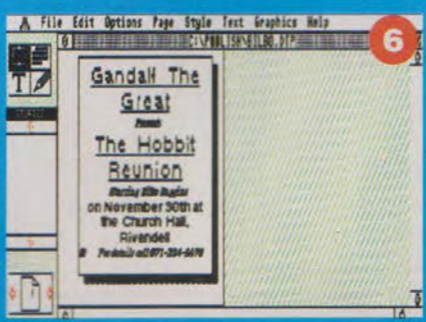
3 ***By pressing Alt C or selecting Copy, create a duplicate. Then place it using the menu or Alt V. The top (copied) frame will be selected.***



4 ***Call up the Frame Tint dialogue box from Options. Select Black and Opaque, then press Return. You'll see the text disappear.***



5 ***Don't worry, the text is still there, but it's masked by the new frame. The original is underneath the black mask.***



6 ***Move the mask down and right of the original. This is easier with Snap to Guides off. Select Send to Back from the Page menu.***

IMPORTING TEXT AND PICTURES

Text and pictures can be imported into ***Timeworks*** from a number of word processors and art programs. If the format of your word processor is not supported, you can always save your text as an ASCII file, but that removes special character attributes such as underlining.

The picture import option covers most major formats, enabling you to use illustrations and pictures from a variety of sources.

CREATING A STYLE SHEET

The Style Sheet is a template which contains information about the type of printer paper you're using, the size of the printed page (not to be confused with the view size mentioned earlier) and the Master Page. This information can be saved by using the Save style sheet option under the File menu.

For example, if you are going to produce newsletters that are always A4 in size, you can set up a style sheet called NEWSLETT.STY and use this whenever you want to produce a similar styled newsletter. Each style sheet can be modified to a new use by changing the fonts, margins and so on, and saving it under a new name. All your changes will then automatically load into a page each time you use that particular style sheet.

BOXING CLEVER

Now you are ready to create a document. Click on New from the File menu and then click on No in reply to the new style sheet prompt. Set the paper size to A4 or letter and draw a large box. Frame or Box drawing is the default mode, so select the full page view and place the cross-hair cursor in the top left hand corner of the page, about level with the first column. Hold down the left mouse button and drag down towards the bottom right hand corner of the page. You should see a growing box with the corner expanding with the mouse movement. Release the mouse button when the box is near the corner (see Step by Step page 25). Next, click in the tools box at the top left hand corner of the screen that has a large T in it.

WRITE ON

You're now in text mode. Click inside the the frame and type the following text (CR shows that you need to press Return):

Gandalf The Great{CR}
Presents{CR}
The Hobbit Reunion{CR}
Starring Bilbo Baggins{CR}
on November 30th at the Church Hall, Rivendell

You may find that the size of text is too small to read, so simply change the view so that you can see what you're doing.

Clicking on the top-right icon of the tool box will place you in paragraph mode. This enables you to alter the style of individual paragraphs without affecting the rest of the text. As you see the preset style is called Body Text.

SETTING OUT IN STYLE

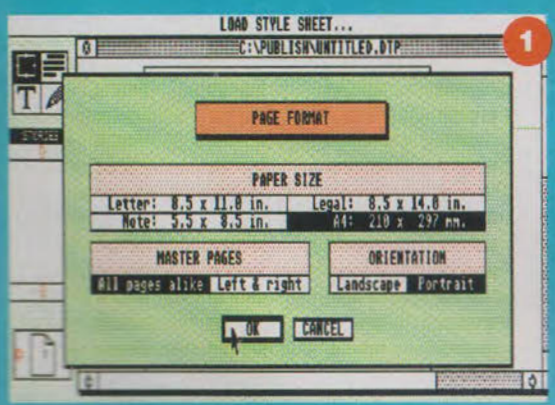
Highlight the first line by clicking on it and then select Headline from the font styles panel on the left. You can change the font and style to one of the others or create you own style using the Paragraph Style option which you will find under the Text Menu.

Change each line of text in the same way until you've achieved what you consider to be a pleasant design. Now save your work, calling the file BILBO.DTP, and then print it out by pressing Alt P and then Return.

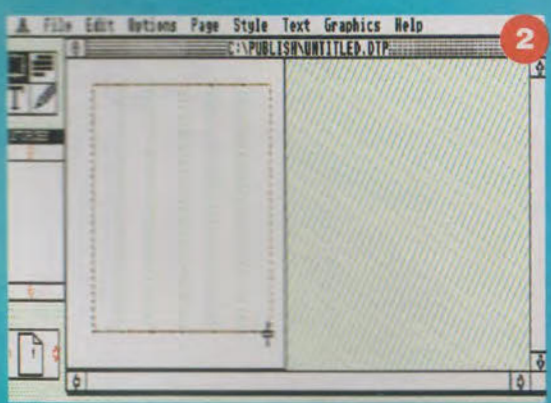
If the printout isn't aligned on the paper properly, select the column guides option again from the Options menu and adjust the page offsets in small increments. You may have to do this a few times before you get it right, but

STEP BY STEP

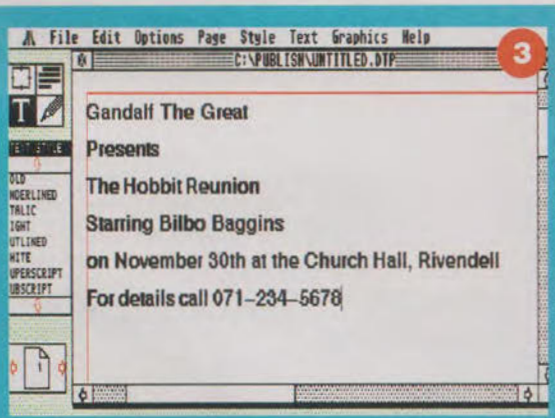
Well, now you've got Timeworks installed and you're probably itching to get your first newsletter produced. Here is a step by step guide to getting started...



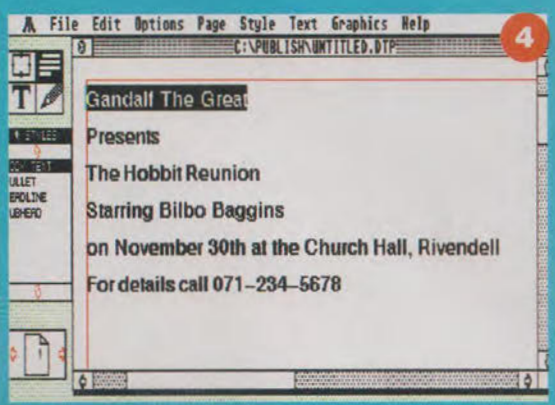
Select New from the File menu; you'll be asked if you wish to load a style sheet. Type No and the Page Format box will appear. Select the paper size and orientation.



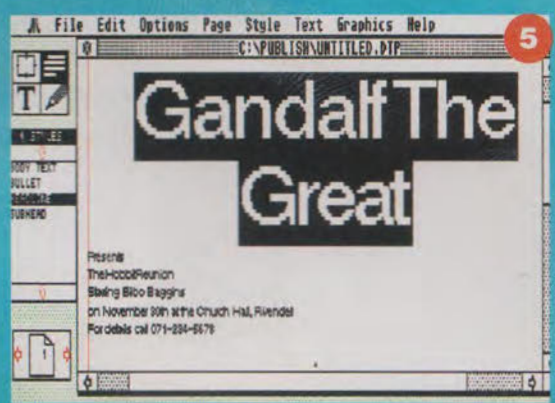
Draw a frame by pressing and holding the left mouse button in the top left part of the screen and dragging it to the bottom right. Release the button when the box is the size you require.



Type in the text as shown. Use the Return key after each line for this example. For larger amounts of text, it's easier to import them from a WP document.



From the Toolbox, select Paragraph mode and highlight the first line by clicking on it. You'll notice that there are some options in the Style box to the left of the screen. Body Text is highlighted.



Click on Headline in the style box and see what happens. You can change all the text in paragraphs while in this mode.

when you do, save your style sheet to disk.

By following these instructions, you should have produced a simple poster. And yes, it really is as easy as that.

A LITTLE LIVENER

There are many things you can do to liven up your work. Remember that if you clutter your poster with fancy effects, its message may be lost, so as with print styles, it's important at this stage not to get too ambitious. You could try creating some simple borders though. Click on the Graphic Tool icon (a pencil) and a series of boxes will appear. You can select different shapes for bordering boxes, circles, straight lines and freehand drawing.

This is quite apart from the facility to import a picture from an art package. Border boxes are created in the same way as the original frame that we drew when we started our poster.

TOOLS EXPLAINED

Frame tool. This tool is used to create the boxes that are required in order to insert text and pictures. It is also the tool for moving the frames around the screen and re-sizing them. It is a very powerful tool and is particularly important for adjusting the style and layout of the page.

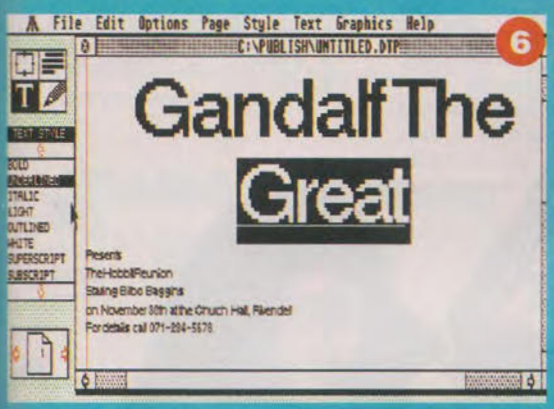
Text tool. Use the text tool to insert text and type directly in to Timeworks. By highlighting individual words, sentences or even several paragraphs, you can change the style of these too. For example, change the size of the first letter or word at the beginning of each paragraph for an interesting effect.

Paragraph tool. Linked to the tag box (see below), this is used to set up the style of each paragraph. This is where you can stylise your headlines, sub-headings, body text, caption text and any other bodies of text you are likely to use.

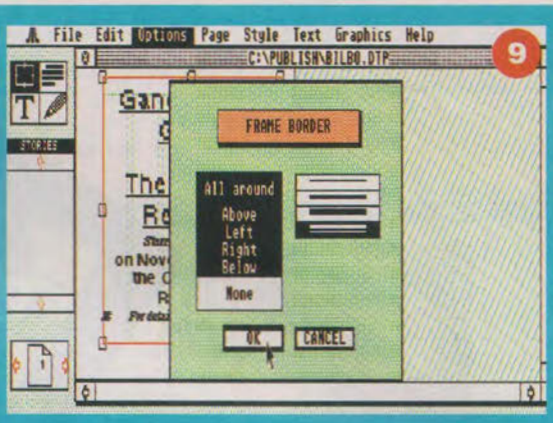
Drawing tool. The tag box will be transformed to show you the drawing styles available, from freehand to rounded boxes. A variety of effects can be created here, including shading and highlighting. Remember that you must be within a frame to use this tool.

NEXT MONTH

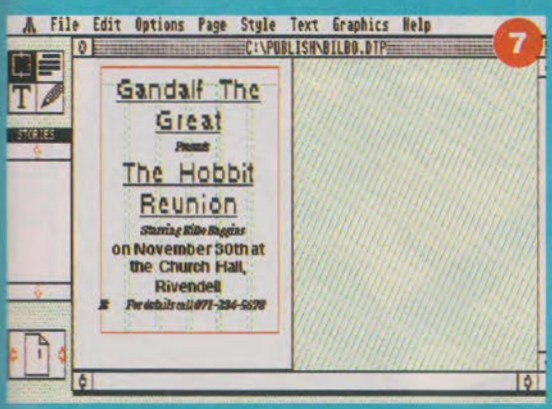
We'll take a more in-depth look at the facilities offered by Timeworks and look at creating business forms and stationery, and using columns to give you that 'newspaper' feel.



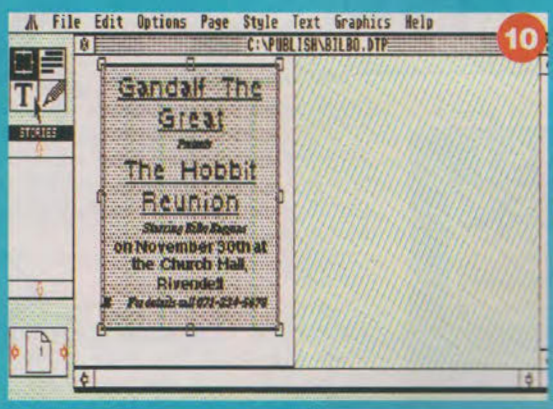
In Text mode, by highlighting part of a paragraph, you can just change that part without effecting the rest of the text.



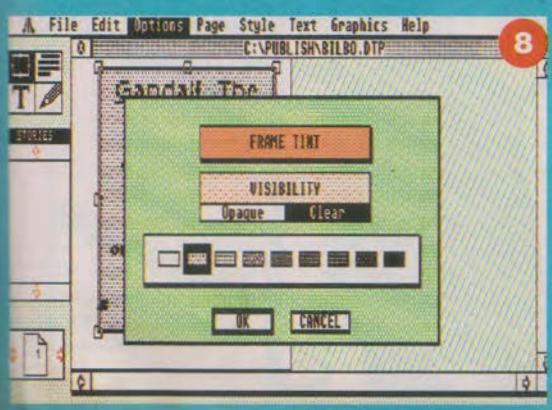
Place a border round your work. This is the double line. You'll find this under the Options menu.



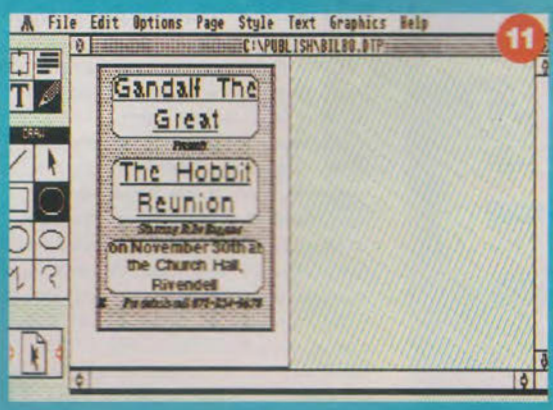
Page view now reveals that your poster is taking shape. It's starting to look quite professional now.



Now you have a tinted poster with a border around it. The text is slightly hard to read though.



Now we can add tint to the background if required. Select Frame Tint from the Options menu and choose a light shade. Leave it clear too.



Select the pencil symbol in the Toolbox, then the rounded box icon and pull out some boxes to frame the text. The end product is much more pleasing to the eye.

TRICKS OF THE TRADE

When you start to lay out a page, sometimes you find that things do not fit. Here's a little 'insider information' on how to achieve a professional looking result.

When you first start working with a DTP package, you get lots of ideas of what you want to produce with it.

You then actually start to work with it, and you find that the ideas run out. There may not be enough to say in the text, or the pictures don't fit or many other problems may occur. For example, you think that you have enough text to fill a page, but a large gap is left at the end. What can you do? To leave it like that would look odd, wouldn't it?

Well, if you think that everything we write in our office fits the page perfectly, then think again. We use several little tricks to help us fill the page.

For the sake of argument, let's assume that you do not have enough text. The first thing to do is to examine what you've written. See if you can add extra information to the piece without waffling. Change words like can't to cannot and I've to I have. Go through the text and add as much as you can.

CROSSHEADS

Right, so you've done that and there's still space in your copy. The next thing to do is to add 'crossheads' (like the one above). These are small headings within the copy that serve two purposes. Firstly they break up the text and make it easier to read in chunks. Secondly, it stretches out the text. You'll notice that the text is getting nearer to the bottom of the page as you add them. Make them relevant to the copy. This will add interest to the article.

Now you should be getting pretty close to filling your page. There are still a few more tricks up our sleeves. If you have a set style, as in these hallowed pages, then the next couple of points are a little more difficult to use. But if you're producing a newsletter, then, provided you do nothing too drastic, you can try them.

The next weapon in the arsenal is to make the headline slightly larger by taking the headline size up a step and increasing the size of the box. This can be applied to the subhead too, but it's a little more noticeable.

OK, so you've done all of the above, but the text is still a little bit short of the page. What can you do next? There is one more basic thing to try. Increase the size of the picture by dragging the box out a little. Things to watch, though, are that you don't place the picture too close to the side of a column. This will make the text unreadable. And don't make the picture too big so that it shows up the flaws of the artwork. I have seen games reviews in magazines where a small piece of a character from that game has been blown up so far that it looks like a series of square blotches!

ORPHANS AND WIDOWS

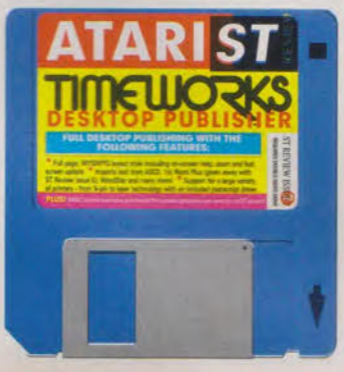
No, this isn't a sob story! Orphans and widows are two small problems that can occur and make the finished product look very poor. An orphan is when the first line of a paragraph is left on its own at the bottom of a column and a widow is when a single word is left on its own at the top of a new one. Both of these are cured by using the various techniques outlined above. Just use a combination of crossheads and the other tricks to ensure a good looking document.

A WORD ABOUT FONTS

One point to note when using fonts. It is important not to use too many in one document. Different sizes of font can look very good for headlines, subheads and body text, but if you try to be too clever by using many different fonts in the same document, the result is a jumbled mess. It can take the emphasis away from the point you are trying to make, too. So remember the golden rule - KISS - Keep It Simple, Stupid!

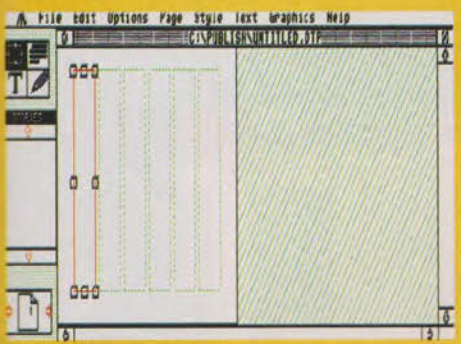
A FINAL NOTE

Don't be afraid to try things out. It costs nothing to experiment - except, of course, your time. Some publications, including ***ST Applications***, are typeset using ***Timeworks v2***, so you can see that it is possible to achieve a very high standard.

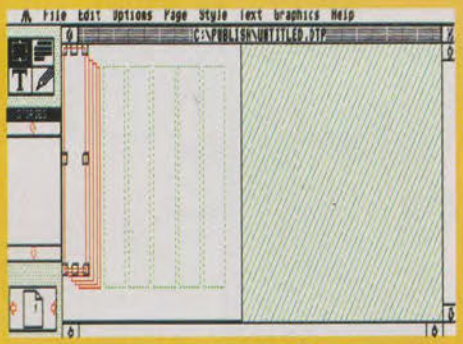


PROFESSIONAL LOOKING NEWSLETTERS

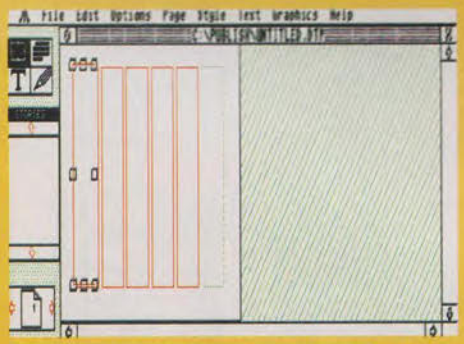
Newsletters look good when they are created using the same style used in a newspaper, making the best use of columns and pictures. Here's how it's done....



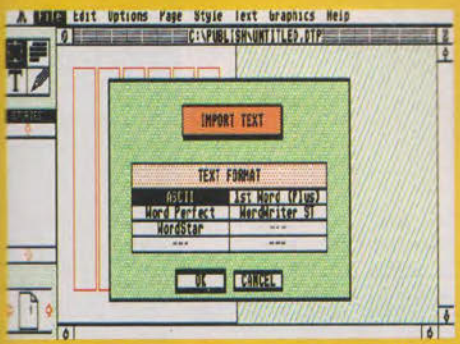
Create a frame by dragging the mouse as described earlier. For this example, make it the same size as the guides on the screen. The Snap to Guides option will make sure that the frame is the same size as the guides that you've defined.



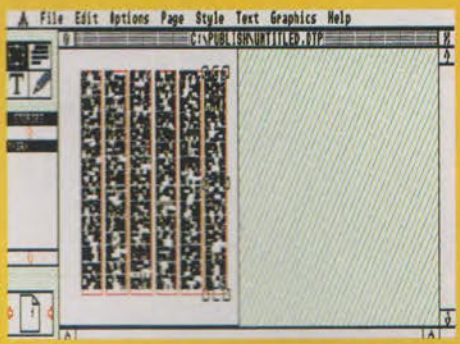
Use Alternate C to copy the frame into memory. By then pressing Alt V five times, you will create six identical frames. You can get the same effect by using the Copy and Paste commands in the drop down menus.



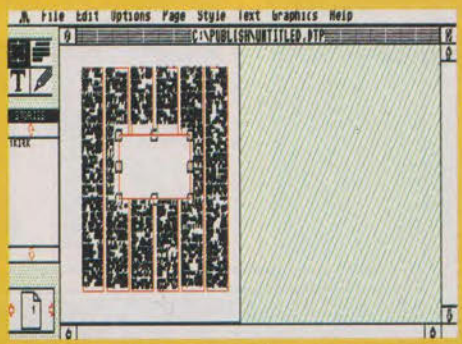
Drag each box to its relevant position on the grid by placing the pointer in the middle of the box and holding the left mouse button down.
You have now created the base for your text.



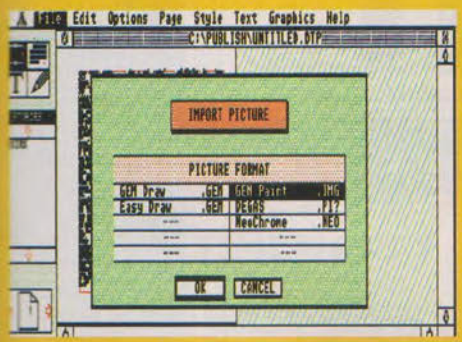
From the File menu, select Import Text and this dialogue box appears. Note the different formats that Timeworks will recognise and import. Our text is in ASCII format, so that's the box selected.



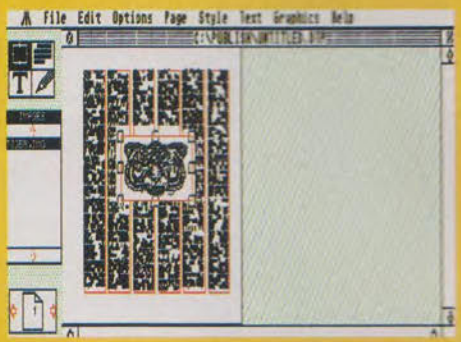
The file name of the text appears on the left in the Stories window. Click on the first box and then on the title to insert it. Continue to click on each frame in turn followed by the story title and the text will continue to flow from one box to the next.



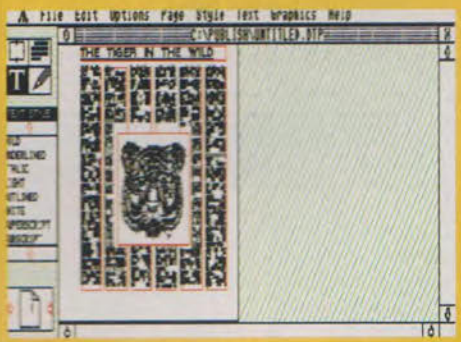
All that text looks a bit heavy, so it's a good idea to break it up with a picture. Decide where you'd like to have it, then switch to frame mode and pull a box over the text. The text will automatically re-flow around it. Make sure that there is enough clear space near the end of the page so none of the text is pushed off.



Go to the File menu and click on Import Picture. Again, note the different formats that the package can handle. The picture imported is from the Paintpot package that we gave away on last month's cover disk.



Once your picture is selected it will automatically be resized to fit the box that you have created. You can change the size of the box by moving the small boxes on the sides of the frame.

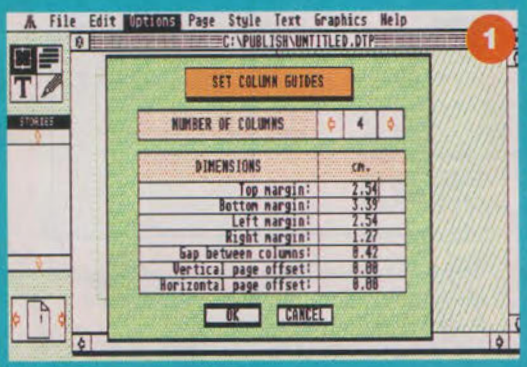


The finished item. With a title at the top, the newsletter is a little more interesting to look at. You could even add a sub-heading for a better effect.

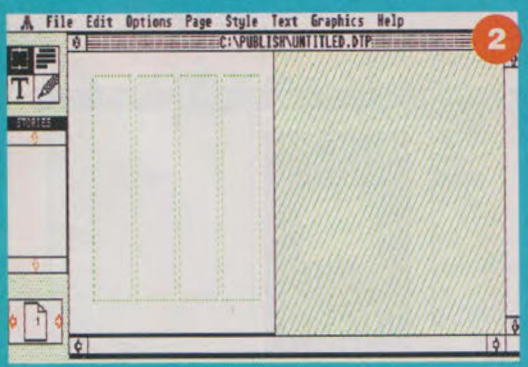
STEP BY STEP

DESIGNING A DOUBLE PAGE SPREAD

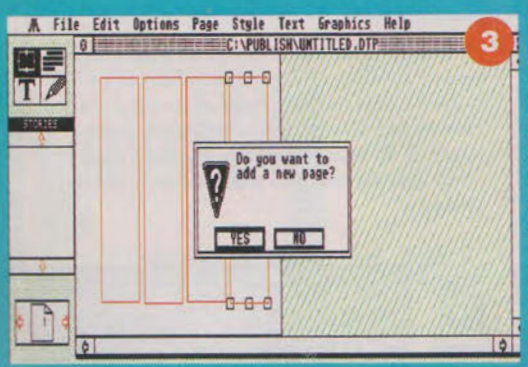
A newsletter can be a single sheet of paper with text on just one side, or it can be more involved. This step-by-step guide takes you through planning a DPS (more jargon for you!) and laying it out. The material used is all from the text and pictures used in this tutorial, using facilities available to you at home.



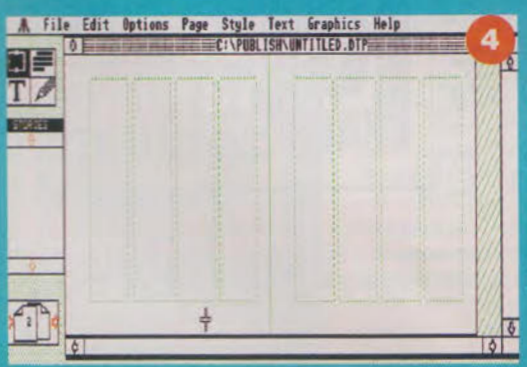
The first job is to set the column guides. Changing the number of columns to four will automatically alter the dimensions, so that's all you need to do. When this is done, click on OK.



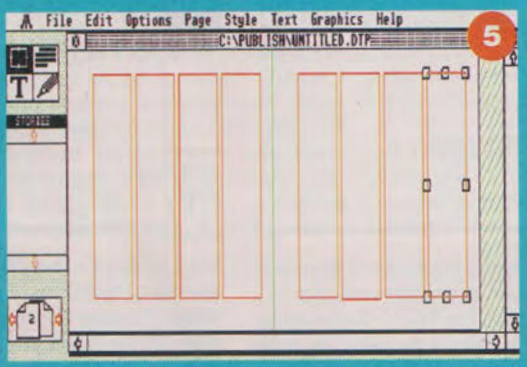
Now, instead of the six column guides you had before, there are now four.



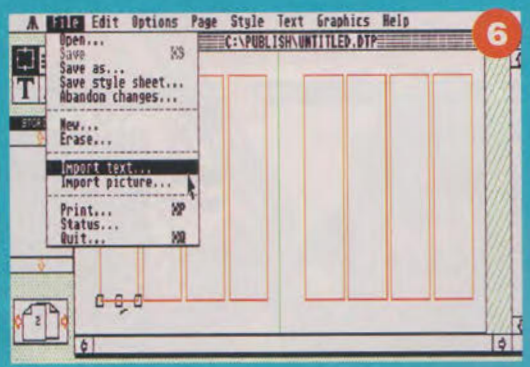
The bottom left-hand corner has a page emblem with a figure on in it. To look at two pages on one screen, you need to use pages two and three. Leave page one as it is and click on the right-hand arrow next to the page image.



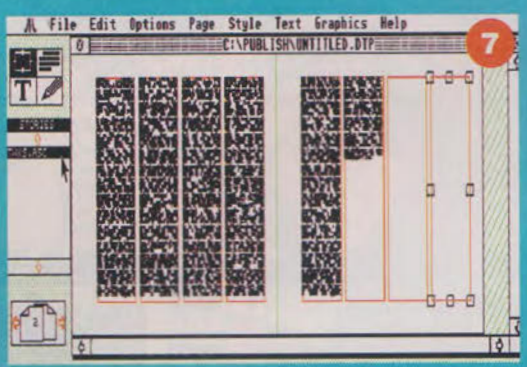
Select two pages to view from the Page menu. You will need to change the view several times by the time you've finished, but it's easy to do and will not effect your work.



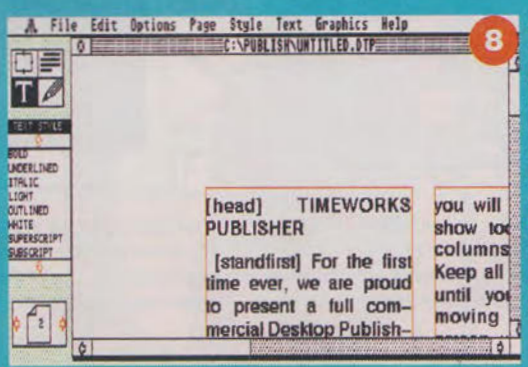
Using the guides, create four columns on each page. When this is done, click on the first box on the left (to activate it). This could save a mistake later on.



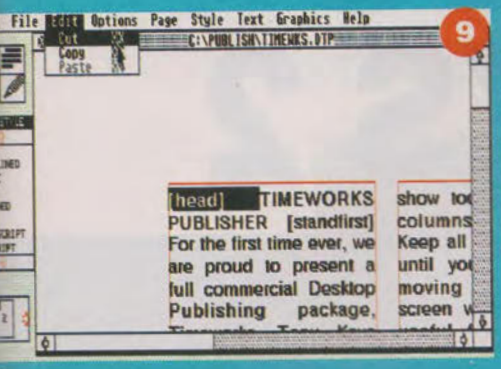
Click on Import Text from the file menu. This will bring up the dialogue box asking you what format the text is in. The text used in this example was created on a Macintosh and saved as an ASCII file.



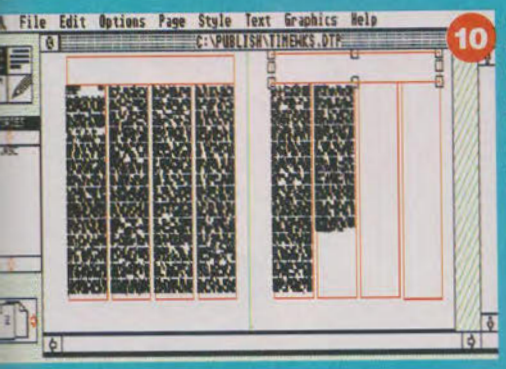
By clicking on each frame in order (starting from the left) and then on to the text file in the Stories window, the text is automatically flowed into each column. You may need to extend the flow later on.



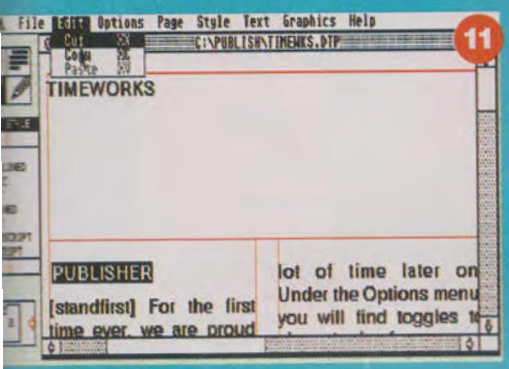
From the page menu, select Double Sized text and go to the top left corner. There are two commands in square brackets. These tell the designer what style is required for each piece of text.



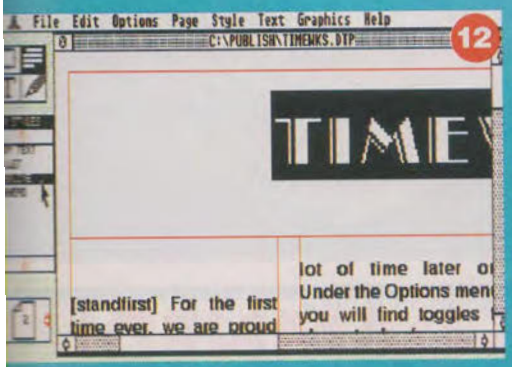
9 *The commands have to be removed so that they do not appear on the finished copy. Note that the space after the command is also being removed.*



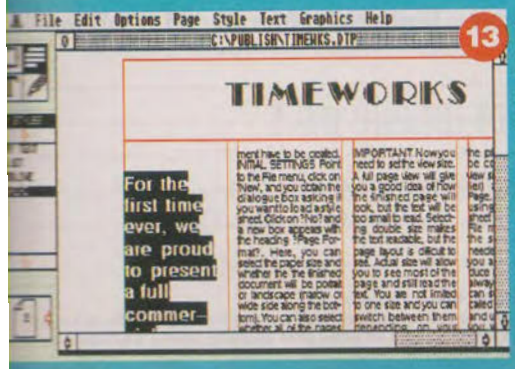
10 *Going back to two pages to view, create two more boxes for the headline, one on each side of the page.*



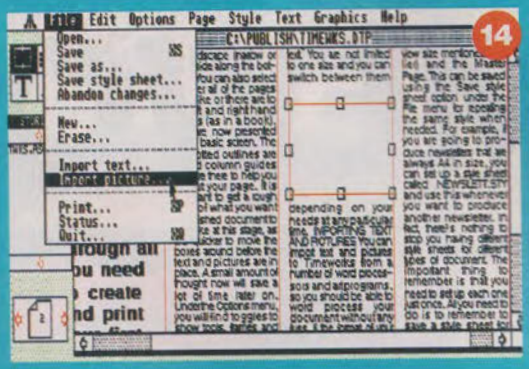
11 *In text mode, highlight each word of the title and cut it from the text. In this example, we are going to put one word on each side of the spread, so paste each one in the boxes you've just created.*



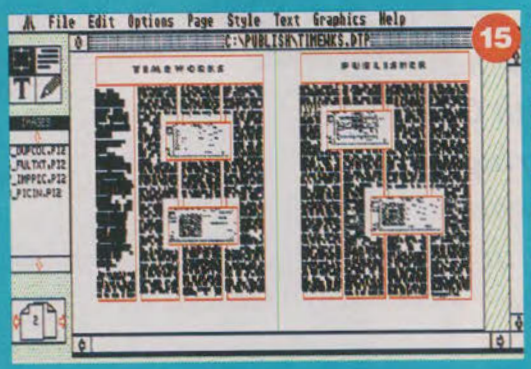
12 *Going into paragraph mode, you can click on the words Timeworks and Publisher one at a time and define them as headlines. With one highlighted, go to the fonts menu and change them.*



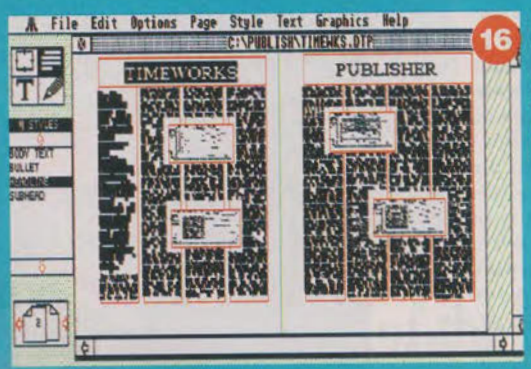
13 *After removing the command, it's time to create the 'standfirst' or subhead. You can have both, one is a secondary headline (subhead) and the standfirst is a larger text commentary.*



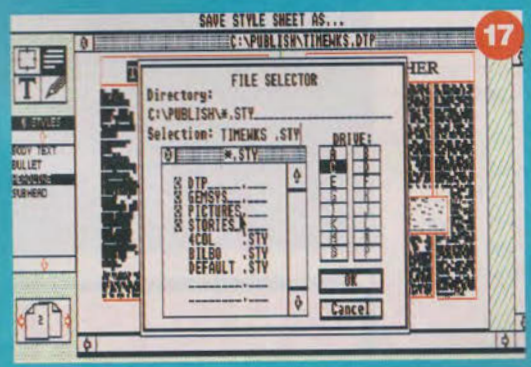
14 *Now import some pictures. These were created using a snapshot program and saved in Degas PI2 format.*



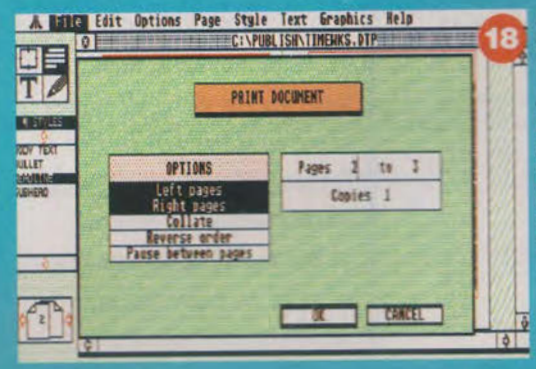
15 *Once you've decided what pictures you're going to use, insert them. You'll need to adjust their size to make the text fit. Our page is nearly finished, but the heading looks a bit small, doesn't it?*



16 *That's better, we've changed the style and font to Dutch 56pt. Not bad for an amateur, eh?*



17 *Save your finished document and then save a style sheet. Give it an appropriate name. When you do a new newsletter, all of your style points are saved.*



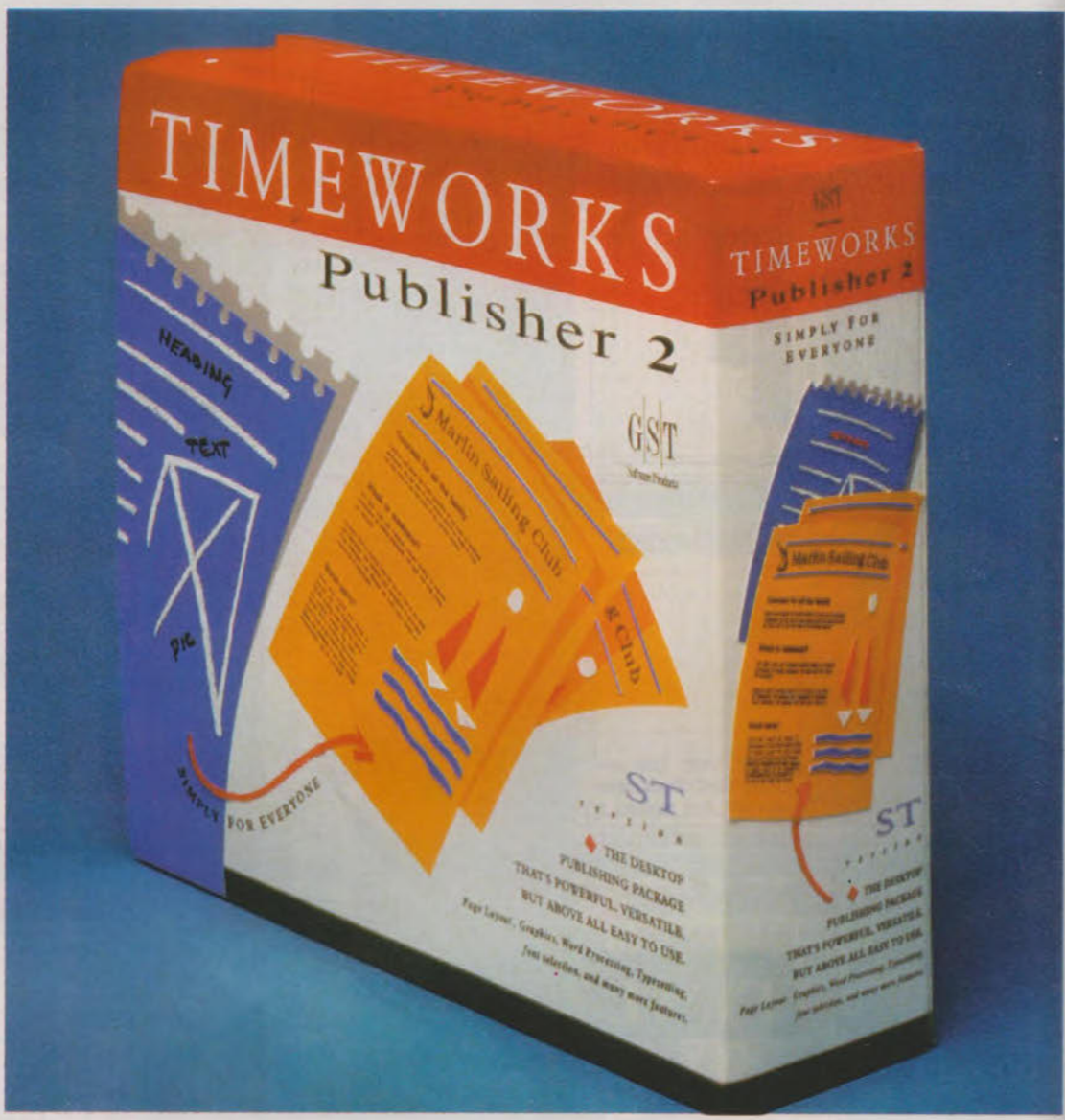
18 *Let's see what the creation looks like on paper. Remember that you're using pages two and three, so before you print, change the page setting accordingly.*

UPGRADE TO TIMEWORKS 2

You've used Timeworks which came free with this month's issue, and now ST Review has teamed up with GST Software to bring you the Timeworks 2 upgrade pack at almost half the normal price

For only £39.89 you'll get the software that turns your copy of ***Timeworks*** into ***Timeworks 2***. You'll also receive the full manual which explains the existing features and plenty of new ones to help you create stunning DTP designs on your ST. It's compatible with all ***Timeworks*** files, so you can breathe new life into your old designs. There's also greater printer compatibility, more file versatility and a host of features such as:

- More typefaces, including Courier, Autumn, Brushwood, Diamond and Sage.
- Text wraparound which flows text around any shape frame, so you no longer have to have to rely solely on square pictures to illustrate your designs.
- Frame grouping, which lets you resize and scale groups of frames so you don't have to go through them individually.
- Many more graphic import possibilities. ***Timeworks 2*** supports TIFF and EPS files as well as ***Deluxe Paint*** and ***PC Paintbrush*** pictures.
- To speed up your work, ***Timeworks 2*** also uses quick keys. This means that, instead of going through pull-down menus, a simple button press does the job.



PUBLISH OR BE DAMNED!

This is the cheapest copy of Timeworks 2 that you'll ever get. All you have to do is fill in the form and send it off with your cheque or postal order for £38.89, or simply fill in your Visa or Access card details

Please send me my upgrade to Timeworks Publisher 2 for £39.89 (fully inclusive of VAT and P&P).

Name.....

Address.....

.....

Day-time phone number.....

Visa/Access number.....**Expiry date**.....

Signature

Cheques should be made payable to GST Software Products
Please pay only by cheque or postal order, making it payable to GST Software Products, or by Visa or Access. Your upgrade will be dispatched as soon as possible, but please allow 28 days for delivery. Send your order to: Softline, GST Software Products, Meadow Lane, St Ives, Cambs, PE17 4LG.

Tonight you could prang an F-19, shatter enemies from your M1 tank or have a smashing dogfight in your F15

Alternatively you could crash out in front of the TV

With incredible animated graphics putting you squarely in the hot seat, there's no excuse to be sluggish!

These realistic simulations give you a 3D perspective of combat in the sky from your jet fighter cockpit or on the ground from your tank turret. Each game demands that you use your finely honed skills to decide on strategy, missions and campaigns. More of a challenge than waiting for a rerun of Top Gun, really.

MICROPROSE™
SIMULATION · SOFTWARE

Seriously Fun Software

F-19 Stealth Fighter, M1 Tank Platoon, F-15 Strike Eagle II - all classic games from Europe's Number One Software Publisher

MicroProse Ltd. Unit 1 Hampton Road Industrial Estate, Tetbury, Glos. GL8 8LD. UK. Tel: 0666 504 326

WHO'S THE MOST CRAZY!

Us for selling PD at this price or you if you don't buy some?

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At COMPUTER CONNECTIONS we have six years experience of supplying PD with a fast and friendly service. We believe in giving the best possible value for money. We are not in it for a 'fast buck'. We have people committed full time to providing the service you are entitled to expect!

Catalogue: Disk based - 75p Printed - Free. Please send S.A.E.

Characters between asterix's show special requirements:
***M* = Mono Res** ***C* = Colour Res**
***D* = Double Sided Disk** ***X* = 1 Meg Ram**
***S* = Not STE or Rainbow TOS**

DESK ACCESSORIES & UTILITIES

301 Dir printer, RAMdisks, .ACC loader etc.
302 Clock, calculator,free Ram checker, Breakout .ACCs
328 Calendar, clock, Disk Manager .ACCs
303 Fast copier. Hex Dump. Degas to Neo, Koala to Degas & Neo to Degas. Seced disk editor.
337 Utils for Hard Disks
333 Printer drivers for 1ST Word, Degas & Gemfont.
385 68000 assembler, an Address/ Mailing list.
824 PICSWITCH 7 changes all graphic res. Hi-Res/Colour emulators. BBOOT, drive. SWITCHER, 2 progs in memory.
517 STE BOOTUP, med res bootup.
886 DIY DEMO, Make scrolling demos featuring a title screen & scrolling message.
836 ARC file compiler. BICLOCK to set time/date. KEYEDIT reconfigure the keyboard to print any characters. MONOEMU v5.0.
881 100% IBM compatible formatter. ARC SHELL v1.91. DC clock. STARGEM. VIRUS DESTRUCTION UTILITY V2.1.
854 The DATABASE CONSTRUCTION SET. Spellchecker. DEFSEL.
379 GULAM CLI shell/Command Line interpreter.
383 DRFLOPPY, a disk sector editor.
829 Various progs for printing all kinds of labels.*M*
882 CHK 2.3 Everything you need to know about a disk. DCOPY v3.02. Desktop Manager v2.1.
585 ANTIDOTE, Superb Virus killer.
857 DISKMECH is a powerful disk analyser/ archiver/editor. CPANEL vastly improved control panel.
561 GENESIS is a Fractal landscape generator. FORMAT 10. VKILLER . PCOMMAND. XUTILS.
884 AMC GDOS, GDOS replacement. ARC SHELL v1.98. DISK TOOLBOX v2.03.
387 BOOTGEN, maintain disk sectors Boot.
584 MOUSE TRICKS, a .ACC extensive control over mouse movement & menu style.
883 MX-2 v2.3 a multi-tasking & multi-user enviroment.*D*
834 DOUBLE CLICK format v3.03 9/10 sectors, 80/82 tracks.
842 DEC edit clone, Disk engineer v3.01.
382 Archive utilities, including ARC, EXSQUZ, SQUEEZE, STPACK, STSQ etc
324 ADDRESS LOG, limited address book & label printer, Disk catalogger.
844 WPTOOLS, written for 1ST word, inc, alarm clock, Printer selection, Wordcount, Relabel(Disk volume), Format, Undelete file.
747 TURTLE, A HARD disk backup utility.
728 HEADSTART V1.1, excellent program that allows you to autoboot programs, inc. GEM from an Autofolder. +
730 GEMINI Desktop replacement. All English version of a replacement Desktop simular to NEODesk. *SX*.
384 On this disk is a prog called LABEL EXPERT good label maker. Preset formats for floppy disks, video, & cassette tapes. *M*.
643 AUTOGEM autoboots any Gem program when booting. XFORMAT2 extended formatter & VC Spreadsheet.
745 STAR LC-10 UTILITIES. PRINTER config utils for 1st WORD & 1st WORD PLUS. TRANSPORT 90 download alternative character sets. STARACC.ACC control the usual functions of the Star LC-10 multi-font printer.
746 SUPER VKILLER detects 5 different viruses,recognises 7 anti-viruses & 133 other types of boot sector.
573 Files to assist in graphic print-outs for 24 pin Dot Matrix printers.
572 GEM PLUS. This is a great variant of Neodesk.
749 RECOVER is a file recovery utility.
438 REAL TIME MULTI-TASKING OPERATING SYSTEM. *D*
439 GEMDOS USERS GUIDE.
572 GEM PLUS. This is a great variant of Neodesk. Alter desktop icons, design your own, and do the same with progs.
381 dbMAN tutorial. Visicalc style spreadsheet. Disk formatter. Multi-purpose file print util. Mramdisk. acc. +
882 CHK 2.3 - Disk checker. Desktop Manager v2.1. IBM MODIFIER alters DS Atari disks so that an IBM can read them.+
885 PROMOUSE self-adjusting mouse accelerator. RATTRAP locks out menus. TURBODOS. MAXIDISK reset proof Ramdisk.
333 Printer drivers for use in progs such as 1ST Word, Degas & Gemfont.
444 XCONTROL: ATARI's latest TT control panel accessory for all STs.
448 CYPHER: Encodes pics so that they cannot be loaded into normal art packages. LITTLE GREEN SELECTOR.
454 MEMFILE 2.0: Memory & powerful disk editor.
457 HD SCAN 1.6: Comprehensive shareware hard drive manager.
481 STDCAT V4.0. disk catalogger
623 SUPERBOOT V7.0

GRAPHIC, FONT AND ART/DRAWING DISKS

323 Great digitised pictures. 5 from Raiders of the Lost Arc & 12 from Ghostbusters.
375 FONTEDIT v3.0, Editor & loaders for Ram & downloaded fonts. not STE.
577 PALART. art program with full docs.*C*
390 E-PLAN CAD, stock list facility.*M*
391 COLUMBIA, drawing prog part 3D. Studio (*X*) menu driven drawing package. Both German.
397 DOODLE, art package, Mono & Colour versions.
578 ST GRAPH. comprehensive graph program
376 FONTS2, Screen & desktop fonts. Columbia, Devoll, Hudson, Saturn, Spokane, Thames & Universal Roman.
876 DELUXE FONTMASTER v2.0 *MD*
757 CANVAS, a great art package, fully supports STE.
879 PALETTE MASTER, art package, great features, up to 512 colours.*C*
388 Pics, Mona Lisa, Moon, ST keyboard, Planet, Yoohoo, Saturn & others.
803 Amiga & Macpaint pic files plus PICSWITCH which can read Neo, Degas, etc.
808 FRACKTAL is a fractal drawing program from Germany. Fractal landscape prog.
850 FONTKIT 3.31 An excellent font program. * D *
880 COLOURBURST 3000 v0.2, add different colours to pictures from other packages.*CX*
888 ANI-ST, HIGHLY PROFESSIONAL quality animation system.
396 MASTERPAINT, drawing package, Mon & Col. LITTLE PAINTER.
394 PICWORKS, utility for enlarging, reformatting & manipulating pics.*M*
809 AIM v3.21, An image processing package.*DX*
540 PUBLIC PAINTER An excellent German art package.*M*
820 SNOOPY, 25 cartoons with display prog.*C*
577 PALART. Excellent art program with full docs on disk. Excellent features. *C*
556 VAN GOUGH(Dutch)& STUDIO2(*X*), art packages.*C*
401 LOW COST CAD 6.20. PD demo version.
442 ST CAD v2.1, med/high res CAD package.
393 THE ARTIST, drawing package*M*
469 JILCAD, a good shareware CAD package. Lots of features (2D)Add-ons available. *XD*
471 FONTS, Calamus PD fonts from USA. Advert, Babyteth, Barnum, Carolina, Casual, Celtic, Chancery Bold, Chancery + others *D*
785 MOVIE CONSTRUCTOR: animate objects & text. FACE ANIMATOR.*M*
775 FULL SCREEN CONSTRUCTION KIT V1.9.*DX*

CLIP ART

521 Various human figures, different cartoons, Titles & more.
522 Sports figures of high quality, July 4th logos.
523 Children's whimsical & elaborate fonts & Christmas card images.
524 Food images, Atari ST & Fuji logo etc. Disks, Computers, Robots & other Sci-Fi.
525 Faces & Eyes, concentrating upon expressions, Horses, Building plan symbols & some different Christmas images.
526 American trademarks from the 1920's & 1930's. Some very atmospheric images.
527 Various borders, tints etc. High arty & cartoons - Picasso to small fluffy animals.
732 IMGSHOW, IMGVIEW show progs.Various fruit, over 20 arrows & Access symbol.
733 Occasional Clips, Various Characters etc,
734 Loads more fruit, Vegetables.
735 Herbs & Kitchen parts.
736 More Arrows, Artdeco, Breakfast, cups/glasses & more kitchen parts.
738 Humorous clips plus the individual letters A-Z.
737 Babies, Boys & girls.
739 More Girls, Scrolls & Occasional clips.
740 More Artdeco, Baby Boy & Girl
741 More Varied Humorous clips.

WORDPROCESSING & DESKTOP PUBLISHING

727A-F TEX, 6 DISK PACK, Includes TEX the document processor & typesetting system.*DM*
835 1ST WORD Wordprocessor. Fully GEM based professional wordprocessor.
831 (SS)/841(DS) EASY TEXT v1.2 Fully working Desk Top Publishing demo.
482 ST WRITER ELITE,4.1. Latest version. additional utils on disk 363.
758 STPAGE is a super fast editor. It produces pure ASCII files for writing programs.
450 REVENGE V2.01: Super intelligent document displayer.
877 ST FOLDING EDITOR v0.9A Shareware 'folding' text editor which allows sections, sub-sections & paragraphs to be made invisible so the structure of the document can be clear.

GAMES DISKS

All games are in colour unless otherwise stated.
343 SHERLOCK, A cluedo game Sherlock. El Bozo City, Sci-Fi text adventure. Around The World In 80 Days, collect 17 souvenirs in order to succeed.* M *
317 Battleships, Checkers, Maze, Megaroids (Mono), Pool.
547 ADDICTION, card game patience, graphics *S*.
863 SLEUTH, A CLEUDO style whodunnit. LOCATION CRISSLEFRIDGE.
891 SUPERBREAKOUT, 40 brick types.*M*
894 DEEPLAIR, 2 player underwater shoot' em up.
554 NAPOLEON, conqueror Europe.*M*
352 Eamon is an Adventure game writing write your own games. Comes with 5 games.
856 CHESSNUT, is a 3D chess game. SPOOKS is a great PACMAN clone. BELLUM INTERNECINUM, Galaxian clone. *S*
781 MAKE A BREAK, A great Trivia game leaning heavily towards Snooker rules.
761 EMPIRE BUILDER property development, LOST TREASURE. JUMPSTER.
762 RUSH, move bricks to create a way out for the ball.*S*
763 BUMPER JACK superb platform game.*S*
764 YAHTZY. *S*
545 UPSTART shoot the cherries *S*.
765 COMPANION shoot'em up in outer space.
548 ENGLAND TEAM MANAGER. Football team management. MILEGAME.
566 DIE ALIEN BLOB, shoot the coloured balls & avoid the laser cannons.
344 Baller, arcade castle & cannons game graphic adv.*M*
309 ADVENTURE WRITING SYSTEM.
766 TUNNEL VISION, maze game. PATIENCE card game.
552 BERMUDA RACE 2.
562 INVASION. adventure set on a huge spaceship.
544 AYATOLLA, Defeat the terrorists.*S*
868 ROBOTZ, highly addictive & very playable game. 40 levels.
847 FRUIT MACHINE fruit machine simulator.
546 SLIDER, good quality puzzle game with 3 levels.*S*
507 SKULDUGGERY runs in Mono & Colour. 100 levels.
508 ATOMS is a mentally challenging game for 2-4 players. KILLERCHESS. AMMOTRACK race & blast'em game.*S*
565 SKIDPAN, motor racing game.*S*
529 STOCKMARKET, Wheel & deal. GALACTIC WARRIORS, a good shoot-'em-up.
346 ADVENTURE Colossal Cave type Adventure.
855 EXPLODE outwit an opponent on a Chessboard type layout. BALLZONE an Arcanoid clone. JITTERBUG, try & rescue aliens.
528 FLOYD THE DROID, an ultra fast shoot'em-up.
530 AIR WARRIOR, a Flight Simulator.
531 COMPUTER PINBALL. DEVASTATOR & a DARTS game.
576 TALESPIN. The wolf and the 7 kids.
513 FUZZBALL a great platform game
515 SHIPWRECK, educational maths with graphics. *S*
512 ZOG a great blasting game. SUPER SENSORI.
514 A DUDLEY DILEMMA, great adventure game. You guide a student at Harvard University in an attempt to get a Diploma.
518 Cribbage, Othello, Yahatzee, Wheel of Fortune
519 WIZZARD'S LAIR complete text & graphic adventure.
780 UNDER BERKWOOD massive graphic adventure
782 NAVAL BATTLE A good version of the good old Battleships
705 HARRIS WENT SKING, *S*
783 CHESS,MONOPOLY, BACKGAMMON, LASER CHESS
709 CORE WARD, You have to write rival programs.
710 VIRUS, a game with great graphics and sound.*S*
403 FLYOVER, a bombing raid game.
404 GLOB, you collect cherry cakes while avoiding pursuers.
405 BOXING CHAMP,*S*
406 TRACKER, drive your tracker through enemy.
407 OVERLANDER fly in & destroy the enemy base.
408 CHANCE, destroy the Archons
409 ESCAPE FORM THE TOMB OF RA, collect jewels to prolong your life, find the secret passsages.
410 MUTANT, A reactor goes out of control. Workers mutate. You must get to the end cavern and destroy it.
411 KEY TO ATLANTIS, excellent scrolling shoot'em up.
412 GRAND PRIX, good fast racing game.*S*
413 MARS MAZE, good platform game.*S*
414 STEEL, blast everything in sight.
415 BATTLE COMMAND, Missile Command clone.
416 WHEEL OF FORTUNE, good quiz base on TV program.
417 HEDGEHOG, FROGGER clone.*S*
418 THE NAME GAME, based upon the Sun puzzle.
419 CHESS, a very good implementation.
421 COMPANY, business simulation.
422 MOTORBIKE, drive your bike around the track.
423 TARK, great text adventure. D & D type.
467 BATTLE FOR THE THRONE, a role playing adv.
449 LLAMATRON: A great Shareware game.
451 VIDEO POKER, Las Vegas poker playing machine.
452 DERRICK THE DROID: A great mix of platform, Shoot'em up & puzzle game.
772 PORK I: A parody of the Infocom adventure ZORK I.
784 PORK II: Another send up of the ZORK series.
773 MORIA: A fantasy role playing game.*D*
779 PICTURE CONCENTRATION: Children's recognition & matching game
788 ROLL 'N' NUDGE:fruit machine game.
789 DUNGEON!: Multi choice fantasy adventure with some humour.
778 C ADVENTURE TOOL KIT.
712 ASYLUM: Text adventure set in an asylum.
713 HACKMAN: 509 level Pacman clone.
714 ELVEN CRYSTALS II
716 FROGGY: Frogger arcade classic.
460 NETHACK THE ADVENTURE, text based adv.
461 STARMAZE: Guide your craft around the various levels.
896 A NIGHT ON THE TOWN text graphic adv.
897 TILE GAME, rearrange letters. *S*
899 SOKO, 50 levels. *S*
596 QUIZ CONSTRUCTION KIT. STOS TRACKER FILESPY 1.2 *D*
597 MEGAROIDS, RIPCORD, SPACEWARE, BUGS.
491 BATTLE SCAPE game
600 FRUSTRATION & CRISS CROSS; ZPOKER.*M*
601 BACKGAMMON & POKER SQUARED. *M*
605 OZONE arcade game
606 FLY ROBIN & SANTAS WORKSHOP
607 PENGUIN, shareware.
608 CROCODILES PASTIMES.
609 ARTHUR OF THE BRITTONS; Adv/ Arc game.
620 KOZMIC 2; *XD*
625 REVENGE OF THE MUTANT CAMELS.
628 MR DICE, KLATRIX
629 SPACE INVADERS
631 BLOCKADE
617 INFILTRATION, game
799 BOMB OUT BROTHERS, Compilation disk No.1. MAD MOLE, great version of the Boulderdash, LASER RACE, defeat enemy laser cars in the arena., ALIEN BLOCKADE, based upon the arcade game QIX.
563 DARKNESS IS FOREVER, adventure full graphics in Mono or text only in Colour.
354 Diamond Miner is a multi-screen game with a built in games editor. Snafu & a card game called Skat.* M *
402 JITTERBUG,The ship contains rare alien lifeforms which you have to catch.
326 Arcade games including Warzone, Daleks, Haunted House & Mousemess.
547 ADDICTION, a great version of the card game patience, great graphics (not STE).
329 Checkers, The Original Adventure, Pool & a fun Chess game. * M *
891 SUPERBREAKOUT, There are over 40 brick types all with special features.*M*
351 HACK 1, a Dungeons & Dragons text adventure with graphic maps.
511 SCANNER a checkers game, SPACEWAR, 2 space ships battle it out
707 CENTAURI, a Horizontal scrolling shoot 'em up.
786 SIMPLE DRAW V3.4: A great art package that works in medium & high Res. Degas compatible samples included. (Docs foreign)
787 HYPERTEXT: Shareware prog suitable for the production of very professional documents. Simular to a DTP but more flexible, pics & text easily mixed on screen *MD*

Introducing Atari ST Machine Code Book & Disk £20.00 (+ 2 free PD)
Easy Text Plus (Full Version) £18.50

BULK DISKS
10 DS/DD £5.99 25 DS/DD £11.99
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458 TETRIS:Classic 2D tumbling blocks game that's highly addic tive(MONO). PUZZLEMANIA: Multi level mayhem, highly addictive puzzle game wher you have to plan your way around the maze, turn on the generator and trap the droids.(COL)

PROGRAMMING/LANGUAGE DISKS

574 6800 ASSEMBLER.
702 STOS SOUND FX CREATOR.
325 XLISP v1.7, Experimental object orientated language. Includes masses of docs.
828 STOS RUN, is a utility that enables you to run STOS programs without STOS.
312, 313 & 314, C LANGUAGE DISKS 1, 2 & 3 of Elementary C, 3 disks.
305 CPM EMULATOR, This is a CPM-8 version 2.0.
306 CPM UTILITIES, for 305.
334 C COMPILER, boot up utility, ram disk, & CLI.
813 PROGRAMMING EDITORS, CONTEXT v2, PRO-ED & P-EDIT.
839 Nigel Smith's ST 68000 Ref. pop up guide v2.0
887 SOZOBON C, the best PD C compiler with full K & R compiler support.*D*
759 Sprite designer & editor.
440 C TUTORIAL, superb disk manual that provides an excellent intro into C programming.
474 GNU GDB, capable source level debugger. SZ ADB, debugger for SOZOBON C.*D*
475 MKRSC, GEM resource construction utility.
476 MODPAS, Pascal Compiler with CLI.*D*
711 6800 M/C course by Mark Van Der Boer.

COMMUNICATIONS DISKS

364 PACK-ET-TERM v3.3A, radio package. YARP split screen RTTY terminal prog.
316 XMODEM, MODEM 7, a multiple file transfer utility, transfer a whole disk in one go. Plenty of docs.
366 UNITERM v2.0a, docs inc. Superb comms package. Tektogem transformer prog
752 VANTERM 3.71 & 3.8 PD Communications package. FLYING START, standard RS232 comms pack.
616 HagTerm Elite V3.3

APPLICATIONS SPREADSHEETS, DATABASES ETC.

826 DATABASE 1, GEM driven database.
827 ST SHEET spreadsheet *C*
830 HOME ACCOUNTS v1.0 Pullin. 43 different statements in memory. 100 entries per statement *C* NOT STE.
755 PERSONAL DTB is a database for storing your names & addresses & creating labels or personalise mail shots.
873 B/STAT v2.01, graphing & statistical analysis program.*DX*
874 OPUS v2.2, GEM based spreadsheet & charting program.*DX*
543 WG DATA, no frills high quality database.
537 DOUBLE SENTRY, fully working accounts package, no VAT.
541 INVENTORY PRO V2.0 is a fully featured stock control system.
432 TCOS a great database that allows data to be structured in a tree arrangement.
433 ZAPCARD, card type database. BANKER, keep track of your bank account.
434 SHEET V2, fully featured spreadsheet.
495 NAMENET:An excellent database, Med & High res.

MUSIC

575 COMPOSER, A music creation program.
570 CZ SOUNDS, transfer data from CZ101 to ST midi.
720 MUSIC WRITER, create music on screen.
721A-B -SOUNDTRACKER PLAYER & MODULES. ZOWEE, TIMDEMO, SHORT, AUSIFOOT, GRILLED MUSIC1, MUSIC2, DELTA2, ECSTASY, HOWDEEP, BALLJAM, TOXOPLAS, IVORY, MADNESS, OPERATE.* 2 Disks ! !
550 Digital sound demo, Degas & Neo graphics. Quartet demo, 4 channel sequencer.*C*
870 SINGING CALIFORNIAN RAISONS 4 piece group of singing raisons *DX*.
536 CASIO CZ SOUNDS & EDITOR,2 synthesizer editors/librarian programs.
871 CHANNEL SCOPE, an early version of Midi Monitor. HIGH-TECH TRIVIA v1.2 +
753 XBIOS Music Construction Kit.
754 PERCUSSAMAN is a 4 track, 16 instrument, digitally synthesised sequencer.
750 SOUNDTRACKER PLAYER & MODULES. D_DREAD1, D_DREAD2, PAT_MIX, RVB_DEMO, SPREAD.
767 MICHAEL JACKSON BAD, digitised song & graphics.
718 TWB DIGI-SYNTH 4: 9 MOD files with player.Shadow Warriors Intro, Stress, Show, Alf, Biomix, Grandmix, Harleymix, Horney, Sanxion *D*
598 MIDI v 2.0 Med/High res Midi monitor. EX800v2 DATA LIBRARIAN, Med/High res. TUNING 2 v2.
486 MIDI editors, AKAI X88 & YAMAHA DX100.
487 Daybreak Step Time Sequencer v.3.
466 GHETTOBLASTER, a simple but enjoyable demo designer. LOW RES.
477 MFP, music design package from Yugoslavia. Comprehensive package in English *DX*

EDUCATIONAL

859 REBUS WRITER, This is a superb program, design & print Rebuses.
341 BARNYARD the animals from memory.*C*
555 WELCOME TO CHEMISTRY V2.8.*S*
564 CHUNNEL, A Fench to English game & vice-versa *SC*
539 TYPING TUTOR(2) A very good package, full documentation.
557 SPELLING MADE EASY, The computer speaks the word & you then type in the correct spelling.
558 MATHS MADE EASY, great prog with speech synthesis.
872 KIDGRAPH, painting prog. which lets children. KIDMUSIC, KIDPIANO, KIDPOTATO.*C*
559 KIDPUBLISHER, DTP for the young.
424 DOT2DOT, join the dots to make pics. Also create your own. KIDCOLOUR, introduces colours to young children. KIDSHAPE.
426 THE BODY SHOP, introduces the locations of all main bones & organs.
427 SOLAR SYSTEM GEOGRAPHY.
428 GEOGRAPHY TUTOR, a great shareware package. Covers Europe.
429 ZOO MAKER, you are asked questions & the computer tries to guess the animal.
430 ME FIRST, put pics in the correct order. BUTTERFLY IN THE PARK, find the hidden boxes in the park.

GENERAL

575 CONSTELLATIONS. A comprehensive Astronomers disk *M*
701 PLANETARIUM, statistics on various planets/moons.
802 THE PLANETS, slide show around the planets, plenty of pics, facts & figures.*D*
549 POOLS PREDICTION SYSTEM.
462 AUTOROUTE DEMO, covers just the south of England.
832 ST TOUR, guided tour of your ST.
833 YOUR SECOND ATARI MANUAL A 250 kbyte text file of the book.
776 ST TECHNICAL MANUAL: ATARI GEMDOS REFERENCE MANUAL, ENGINEERING HARDWARE SPECIFICATION OF THE ATARI ST, A HITCH-HIKERS GUIDE TO THE BIOS and PROFESSIONAL GEM.
437 BUSINESS LETTERS, 100 business style letters in ASCII code.
717 ASSISTANT CHEF 1: 42 great recipes.
478 ASTRO 22: a professional Astrology program.

DEMO's

586 LIFE'S A BITCH, demo by The Lost Boys *D*
587 STEVE'S COMP' DEMO NO.1 Bat Demo, Micromix II, Fuji Bonk *D*
588 STEVE'S COMP' DEMO NO.2 Megabang, Robomix, & Magiceye.*D*
589 STEVE'S COMP' DEMO NO.3 Micromix, Stingray & Ballit.*D*
568 THE DEFINITIVE DEMO, by The Lost Boys.*D*
569 SLATATANIC CULT, Music Bemo 1 & Music Demo II*D*
591 ASTERIX DEMO, digital sound & pics.
593 TRANSYLVANIA DEMO by The Lost Boys *D*
542 REFLEX DEMO, THE OPPOSITION *D*
542 REFLEX DEMO, THE OPPOSITION *D*
599 COUNTERPOINT DEMO
479 CUDDLY DEMOS *D* Not STE
488 POV23, TCB Sound tracker, Micromix 3, TLT & Yello demos.

NEW ADDITIONS

610 FASTBASE, great DTB
611 INTRO CREATOR, spectacular effects *D*
615 COMPACT OFFICE MANAGEMENT PROG comprehensive*D*
626 EDSYNTH V1.2.
627 MASTER DOODLE.
632 EZ ART, Low Res
633 DAYLIGHT ROBBERY
634 MAGASNAP,FASTRAM(ACC)
636 TENNIS.
639 MOUNTAIN, LSYSTEM.fractals
643 ACCOMPANIST 2.4.
644 ARTPRINT *M*
653 FCHECKER V3 & FLISTER AUTOLOADER.
658 ARCSHELL 2.05.
665 ARMOURLYTE game
666 JAMES desktop butler.
667 GRAV, rotate & thrust game.
674 TOP DOG, Greyhound form prediction system.
100 BLACK DAWN, Adventure with very nice graphics. Destroy the Lord Darn of the Narcollisis. *D*
101 FORMFINDER V2.1, loads of features, limited to 10 runners per race & no print option. RIP IT UP, over 30 questions to teach & test your knowledge on road signs & symbols. Both shareware.
102 MASTERTIME, Educational Shareware program to teach the time with Digital & Analogue clock options. The difficulty level is graduated.
103 RAMWORLD, 3D World & Object creator & viewer released as shareware.
104 COLLECT, vertical and horizontal scrolling game. Battle the robots & obstacles.
107 SHOWMEM V1.5, runs a .prg or .acc on all STs & TTs. A technical utility for utilising & minimising memory usage. N_SYSCOM1.1, use to see Gemdos, Bios, Xbios & Gem actions your computer is doing on screen. + much more.
110 HPCHROME, This program prints Degas & Neo pics in colour on HP Deskjet printers.
111 SLAYER. The game is not like a standard text adventure whatsoever. It has over 650 locations, no verb input and over 50 different endings. Docs on disk *X*
112 PLOTTING, full instructions on the disk. Comes with a construction option. Eliminate blocks by hitting them with the same marked block.
115 1st WORD .IMG FILES. 188 *.img files. A great selection. Something for everyone, courtesy of L. G. Robinson.
117 UTILITIES by A. Sutton, The Address book v1, address database with print options, search etc, load & edit printer drivers. BRAKCHCK, is a short bracket checking programming aid. DENCRYPT, disk encrypter for encrypting "personnel" files. .FORMATER, formatter with a fast load format option, simple but effective. SATTRIB, a short file attribute modifier which can be used to hide or protect files.
119 GAMEPACK 2 from Erictronics, AWARI, Ancient African game played with 14 bowls & 36 beads. NIBBLERS, Eat away at the biscuit, the person who eats the last piece is the loser. QUEEN (*S*) Based on the moves of the Queen in chess, player verses computer. SOLITAIRE, simple variant. TRAFFIC JAM, Control London's traffic lights.
140 BLAT, great 3 in a row falling block game (STE only).
141 MYSTIC WELL, Dungeonmaster type adv.
142 MINDLOCK, Trivia quiz game, various subjects STE only. *X*
143 ANARCHY ACADEMY, great 3D shareware game.
144 T-GAME, good falling block Tetris type game.
145 GRANDAD & THE QUEST FOR THE HOLEY VEST, the ultimate adventure? *DX*
159 VIOLENCE!, vertical scrolling shoot 'em up in the Xenon mould.
160 CYBERSNAKE, variant of the classic 'snake game'.
161 UNKULJAN UNDERWORLD, large fantasy text adventure. *X*
162 PABLO & THE GLOD OF MONTEZUMA, Fast action boulderdash type game.
163 NUTHOUSE, Massive demo with 18 minutes of digital music. *D*
164 SO WHAT, 17 great demo's from the Care Bears.
165 OVERDRIVE, Plasma fractals etc, demo by Aggression.
166 ALCHEMIE JR, Great Swiss multi-window/multi-task sequencer. *X*
167 SAGROTAN, great virus killer. *X*
168 CRACK ART, Excellent German art package. *D*
169 STAC, The ST Adventure Creator, now PD.
170 JC MEGA MENU, Menu creator with smart fonts, music, program selector etc.
171 JIGGERS, a strategy game of coloured squares to make you think hard,

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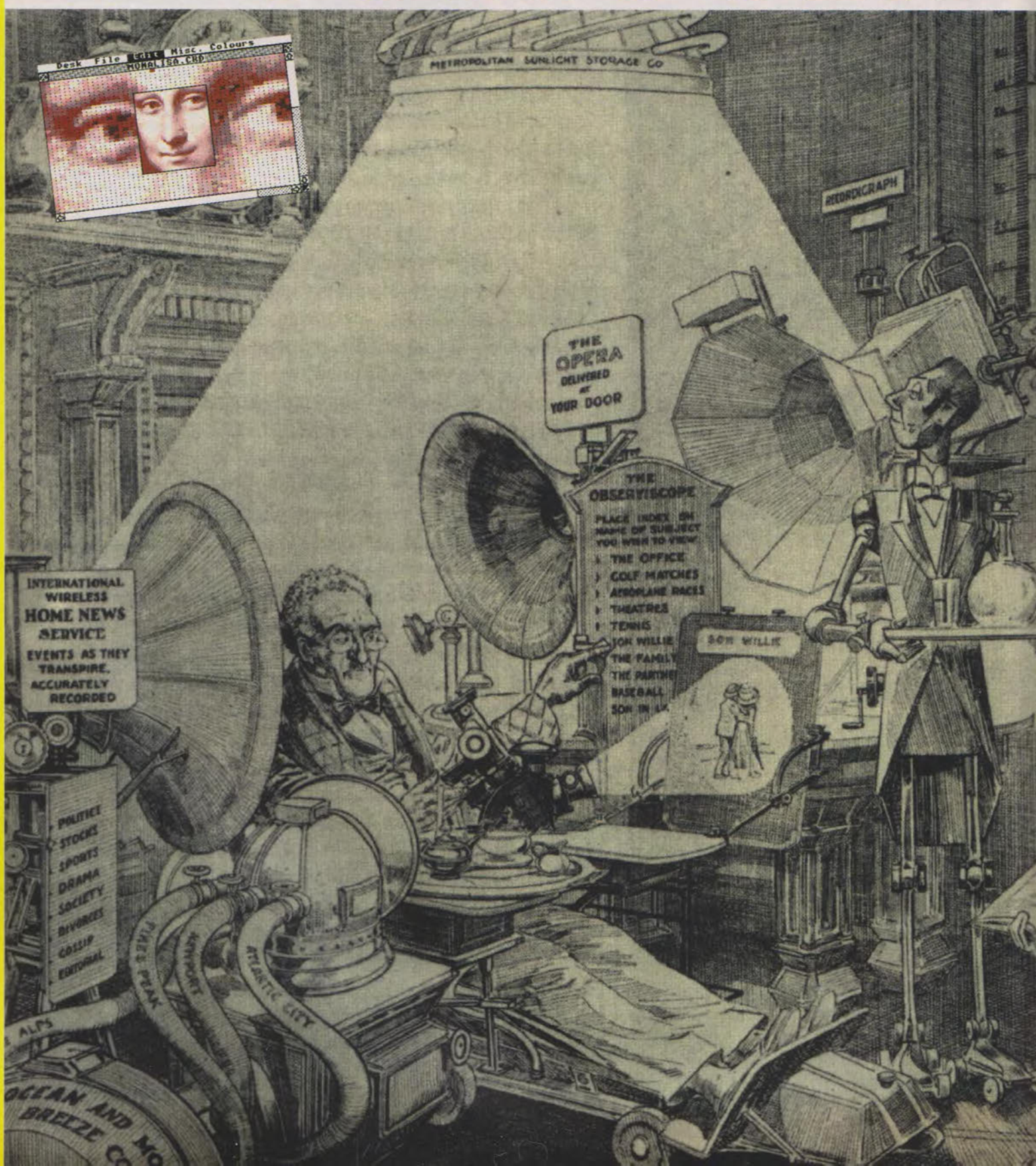
Any computer can lend itself to curious programs, and the ST has more than its fair share of these...

CURIOSER & CURIOSER



ASTRONOMY

There must be an awful lot of people interested in the stars and planets if the number of ST astronomy programs is anything to go by. Here are five of the best. . .

ORBIT

ORBIT 1.2 • MONO ONLY • TOM CLARK

Orbit is a satellite tracking program which gives you the current position of up to 10 satellites whose information has been programmed in. For a particular date, which is entered manually or read from the ST's system clock, a table of parameters is drawn on-screen for the different positions of the satellite for that day. While the tabulation is a bit slow, it includes all necessary information such as azimuth and elevation.

This table can also be printed out or shown graphically. A map of the earth is placed on-screen and a large cross, signifying the satellite, then tracks across the map showing you the path that it takes. Even the number of orbits to date are given; Salyut 7, the one I tried, has traversed the planet 60,695 times – it must be getting tired by now!

TECHNICAL SCORE: 85%

ASTROCAL

ASTROCAL 1.7 • MONO/COLOUR • CADENZA SOFTWARE

While the title sounds like a typical American boy's name, ***AstroCal*** is actually quite useful. Describe where you are in the world (no, not "in front of my computer", but by entering the latitude and longitude) and ***AstroCal*** will generate three types of report. The first is a calendar giving sunrise and sunset times, along with moon ascent and descent times.The second informs you of any lunar or solar eclipses that can be seen from your location while the third tells you when various planets will be visible in your area.

AstroCal can also give you the distance of the moon from you at any particular time, although the calculations involved take a fair time to work out. All tables and information can be printed to an Epson-compatible printer.

TECHNICAL SCORE: 79%

STERN

STERN • MONO/COLOUR • DIETRICH ZUCHT

Rather nice this. ***Stern*** allows you to observe every constellation of stars in the sky from a chosen distance and direction. A total of 88 constellations are included, along with two surrounding areas of the sun, with a total of 1,496 objects mapped out; someone has obviously spent a great deal of time and effort on this.

Constellations are chosen from by clicking on a particular entry from a hefty list. You then choose the viewing point, with the sun being the default, and the magnification, and voilà, instant Star Trek time.

Even if you nothing about astronomy, ***Stern*** has the advantage of being colourful (in medium resolution) and quite interesting. All I need to do now is to learn how to set the earth as the viewing point. . .

TECHNICAL SCORE: 87%

PLANETARIUM

ATARI PLANETARIUM • MONO/COLOUR • DELTRON

Planetarium, which has now been around for over seven years, loads up with a map of the world on which you mark your position on the globe.

The maximum magnification available is 64x, which means that you tend to see where the stars and planets are along with their neighbours. Viewing the stars that make up a constellation isn't as easy as with ***Stern***.

However, you can see the position of the planets relative to the sun which will give you a good idea of what you will actually see in the sky at night time.

Graphics are very good with intelligent use of colour, and the planetary symbols wherever necessary.

TECHNICAL SCORE: 86%

SKY MAP

SKY MAP 4.0 • MONO ONLY • J. A. WROTNIAK

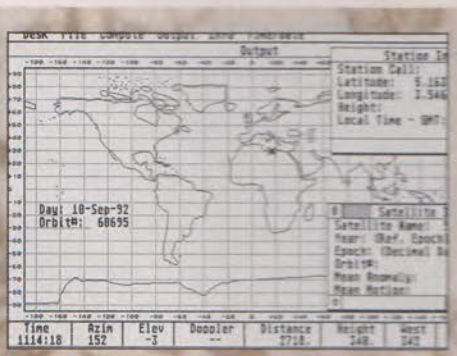
This is obviously more highbrow than the other programs looked at in this section, which immediately makes it less pleasant to look at and considerably harder to get to grips with!

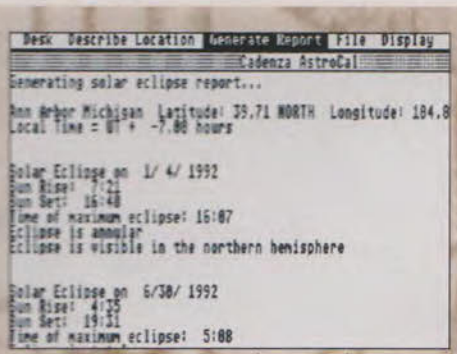
The globe representing Earth has no countries marked on it, which means that you have to know the latitude and longitude of your viewing point.

Click on a star and you'll be told its name and the constellation it lies in, there's a also a very good zoom function. Admittedly, ***Sky Map*** doesn't look very good, but for the technical astronomers out there it probably means a great deal. Then again how many of them use an ST?

TECHNICAL SCORE: 88%

Apart from creating a calendar with sunrise and sunset times for any place in the world, AstroCal will also tell you when there are going to be eclipses.

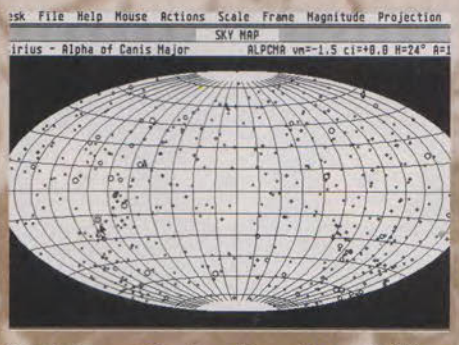




The constellation of Ursa Major – the Great Bear, but commonly known as the Plough – is shown in graphic detail in Stern.

Written as a professional application, Sky Map uses high resolution to avoid compromising detail.

Using Planetarium, Mercury can be viewed in full colour with the sun in the background.



Orbit is a professionally written satellite tracking program with comprehensive details of satellites and tracking stations.

ASTROLOGY

"And in my crystal ball I see an ST being used for horoscopes and all kinds of astrological programs. Cross my palm with silver and I'll predict your future with my lucky dominoes. . ."

CHINESE HOROSCOPES

CHINESE HOROSCOPES • COLOUR ONLY • ANDY OSBORNE

You've all heard of the various names attributed to the Chinese years - cat, dog, snake and so on. ***Chinese Horoscopes*** lets you find out which animal you were born under and its significance.

Being a typical STOS program, the user interface is a bit poor, you use the mouse to click on +/- boxes on-screen to change values. To use ***Chinese Horoscopes***, you simply enter your name followed by your date and time of birth. The result? Your animal year and companion sign along with the element for the type of year – fire, water and so on. If you wish, you can get further information about your sign, inner voice and element.

What did I find out? I was born in the year of the monkey, my inner voice is a dog and I should be a storyteller or a politician. But I thought they were the same thing. . .

TECHNICAL SCORE: 72%

DOMINOES

DOMINOES • COLOUR ONLY • ORACLE CONSULTATIONS SOFTWARE

This is actually a preview version, being rather cut-down from the final product. However, it is still fully usable – it just gives you less detailed information on your selection.

There are many ways of having a reading, and using dominoes is just one way of going about it. The screen presents you with a set of them, from which you select three, and then fades away to give you your reading.

Although this is probably one of the least popular methods for readings, it is certainly simple and quick.

TECHNICAL SCORE: 55%

I CHING

I CHING • COLOUR ONLY • ORACLE CONSULTATIONS SOFTWARE

The ***I Ching*** is the ancient Chinese book by which complex readings are given.

The usual method is to use 50 yarrow stalks, but it is possible to use three coins, and it is the latter method that is synthesised in this program. It's a preview version in that it only gives scant details of your reading.

You have the option of using either real coins or computerised ones. It's more fun to let the computer flick the coins for you, especially as there's a rather good "tinkling" sound effect.

Type in your question, or simply think it, and let the computer flick the coins. For each throw, Yin or Yang is chosen depending on the majority decision.

At the end of the throws, a hexagram is built based on the six decisions and a simple reading is given.

TECHNICAL SCORE: 60%

AZTEC ASTROLOGY

AZTEC ASTROLOGY • COLOUR ONLY • ORACLE CONSULTATIONS SOFTWARE

The Chinese weren't the only culture to use astrology. In fact, many of the peoples of the ancient world had their own way of contacting their spirits. One such culture was the Aztecs.

Aztec Astrology is very similar to ***Chinese Horoscopes***, which is hardly surprising bearing in mind that it was written by the same programmer, Andy Osborne. Once you have entered your name and information on your birth, you are given a short reading based on this information.

You can definitely become paranoid when using these programs for readings; apparently my life is ruled by the Jewelled Turkey. . . (Ican believe that – Ed).

TECHNICAL SCORE: 64%

NUMEROLOGY

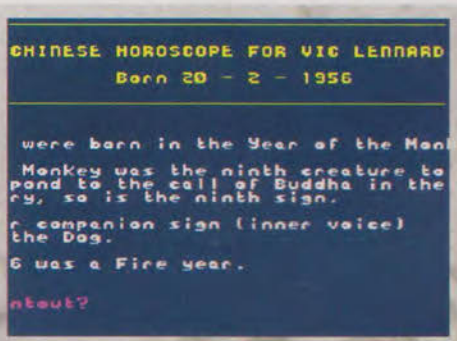
NUMEROLOGY • COLOUR ONLY • ANDY OSBORNE

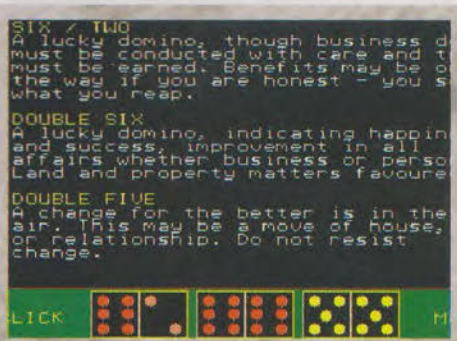
It's that man again! Andy Osborne reappears with ***Numerology***, which tells you which numbers are important in your life by making calculations based on your name and birthday.

On entering your details, your various numbers are given to you. For instance, the Love number tells you how compatible you are with your partner. On one occasion when I was using the program, an extra couple of pages appeared giving times during the week when I would have the benefit of physical and intellectual advantages, but this didn't happen on subsequent uses.

TECHNICAL SCORE: 58%

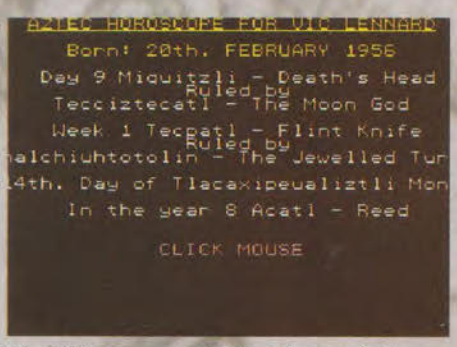
Chinese Horoscopes appears to be telling me that I'm a cross between a monkey and a dog. . .



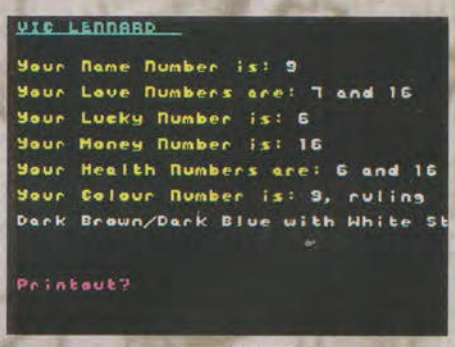


This preview version of Dominoes gives a quick, rough and ready reading.

Flick the coins six times and find out what the I Ching oracle has in store for you. . .



The Chinese weren't the only people to consult the spirits – the Aztecs also had their own system.



By typing your date of birth, Numerology will tell you which numbers rule your life.

OFFBEAT ODDITIES

So what else is on offer? Just read on and find out. . .

BIORHYTHMS

BIORHYTHMS • COLOUR ONLY • REPUBLIC

Biorhythms are accepted by many to give a good indication of a person's well-being in three respects, physical, emotional and intellectual. Each figure is based on a formula which is dependent on your birthday.

This is another typical STOS program in that it is awkward to enter your details, but once entered, your statistics are saved to disk for further use. Hit the Calculate button and away it goes, drawing you a graph to show the position in their cycle of the three aspects mentioned above. The following page then averages the three percentages and gives you a final score.

Thank goodness my reading came out at 97% – I'd hate to think what this article would be like if the score had only been 20%!

TECHNICAL SCORE: 85%

PUNCHER

PUNCHER 2.0 • COLOUR ONLY • MARK LANCASTER

Bearing in mind that not all oddities are useless ones, ***Puncher*** will be of great use to anyone using a knitting machine as it allows you to design a pattern in great detail and then get the knitting machine to closely follow the constructed pattern.

The facilities appear to be quite extensive. Set the size of the card, define the 16 colours to be used and click on the stitches to build a design. ***Puncher*** even counts how many stitches there are of each colour to allow you to order the correct quantities!

Degas Elite (.PI1) and Neochrome (.NEO) images can be imported and a rectangle cut out for the pattern. All in all, this is a very comprehensive program.

TECHNICAL SCORE: 90%

CROSSWORD CREATOR

CROSSWORD CREATOR 2.23 • MONO/COLOUR • IAIN MACCALLUM

Whether it's an evening with friends or a fund raiser, a custom-designed crossword puzzle always goes down well. Crossword Creator lets you do just that – think up the clues and let it do the rest.

First set the size of grid and then enter various words for the crossword along with their clues. One nice touch is that you can enter clues after the crossword has been built, or you can alter any that you feel you can do better with. You can ask ***Crossword Creator*** to trim the size of the grid and there's also an on-screen help feature.

Only Epson 9-pin printers are catered for – which is a shame, but the program can certainly be recommended.

I can see many schools getting hold of this for those awkward "now what am I going to do with 3C today" lessons!

TECHNICAL SCORE: 88%

AI DOCTOR

AI DOCTOR • MONO/COLOUR • RON SCHAEFER

AI Doctor is essentially a database of symptoms and diseases; by answering the questions put to you, ***AI Doctor*** can tell you the probabilities of you having certain illnesses. The supplied database covers 69 symptoms and 89 diseases.

Deciding that I felt a little under the weather, I studiously followed the questions, giving frank and honest answers. And what was the result? An 87 per cent chance of chicken pox and an 84 per cent chance of rheumatic fever! But I only have a headache. . .

You should be warned, though, that used for more than just fun, ***AI Doctor*** could be downright dangerous. Fortunately, the program does carry a warning stating that "this program is intended to be an example of artificial intelligence and not a substitute for a physician. If you are ill you should see a real doctor, not an artificial one". Quite.

TECHNICAL SCORE: 40%

POOLS

POOLS 2.3 • MONO/COLOUR • BRIAN CAMPBELL

Pools purports to be an "expert results predictor". It's shareware in that you are provided with a fully working version, but a payment gives you any update versions as they become available.

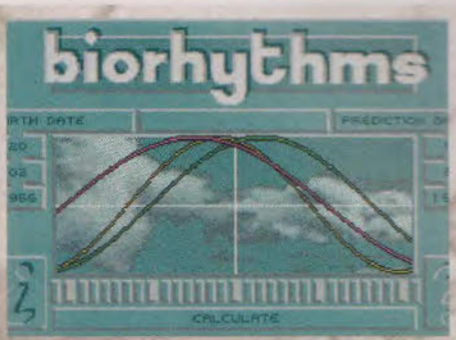
By using results as they build up through the season, along with encounters from previous years, ***Pools*** gives a percentage figure for home, away and draw.

You need to continuously input the match results and add any mid-week results as necessary.

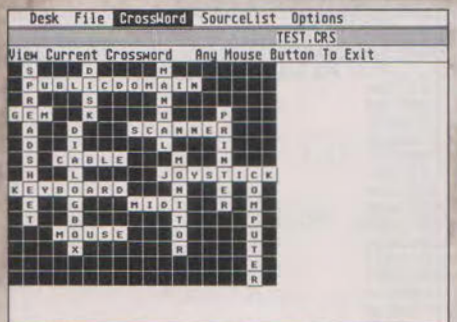
To make ***Pools*** as useful as possible, it would certainly be worth updating it by paying the shareware fee of £10.

TECHNICAL SCORE: 64%

Based on science, Biorhythms gives you an indication of your physical, emotional and intellectual at any particular time.



For use with a knitting machine, Puncher lets you take an image and print out the design. It even gives you an idea of how much thread you are going to need in each colour!



Ever fancied creating your own crossword, complete with questions and grid? Crossword Creator allows you to do just that.

Intended for fun, AI Doctor diagnoses your illness according to your symptoms, but don't take its word for it.

Although this list is based on divisions from two years ago, Pools can be updated at a small cost.

FASTYPE

FASTYPE • MONO/COLOUR • JIM DAVIDSON

Ever wished that you could type at 200 words per minute? More to the point, ever wished that you could convince someone that you were typing at 200 words per minute? If you have, then ***Fastype*** is perfect for you.

On loading up, you're presented with what appears to be a bona fide word processor called Phase-One. Nothing out of the ordinary; a row of function keys at the bottom of the screen and the tab marks as you would expect. However, when you hit any keys, something sensible appears like a nursery rhyme or piece of prose.

The only function keys that actually work are F1 to load a new piece and F10 to quit. Manic and totally useless, but then again what would you expect from a programmer with a name like Jim Davidson?

TECHNICAL SCORE: 30%

(FUN SCORE - 90%!)

MORSE CODE

MORSE CODE • MONO/COLOUR • JOHN DAVIDSON

Morse code is one of those subject areas which appears to have become a dying art. How many people are really interested enough in radio to wish to take radio ham exams? Well the existence of this program would seem to suggest that the art is not completely dead.

Morse Code is ... a Morse code program. Type a letter, number or symbol and the equivalent Morse code is flashed up on the screen – and "spoken" through the ST's monitor speaker. Yes, Morse Code uses the ubiquitous ST Speak program to make life a little more interesting by using "Dat" for a long and "Dit" for a short. Admittedly you could always turn the speaker off.

TECHNICAL SCORE: 75%

PIG LATIN

PIG LATIN • MONO/COLOUR • JIM DAVIDSON

Do you remember back at school how kids often used to create their own foreign language so that they could swear at teachers to their face without them being able to understand what was being said?

Pig Latin is one such method. The rules are simple: if the first letter is a consonant, you remove it from the start of the word, put it at the end and then add "ay": if the first letter is a vowel, just add "way" to the end. So "ST Review" becomes "TSay Eviewray".

To help you on your way, you can type in any English phrase and see the pig latin equivalent.

This is another totally useless program, with no applications at all ... but definitely unfay otay uckmay aroundway ithway! Jim Davidson does it again!

TECHNICAL SCORE: 33%

(FUN SCORE: 80%!)

WORD SEARCH CREATOR

WORD SEARCH CREATOR 2.12 • MONO/COLOUR • IAIN MACCALLUM

For those of you who are unaware of such things, a word search is similar to a crossword except that where a cross word has black squares, a word search has all the letters in place, all you have to do is, quite simply, to spot the words.

Using the Create option, you set up the size of the grid and enter words and the questions pertaining to them. Once finished, ***Word Search Creator*** makes up to five attempts to pull them all into a word search or then allows you to exit.

Once completed, you can print out to an Epson-compatible printer or save as an ASCII file for a word processor. It's a very nice idea – but I wonder if the programmer expects any royalties if someone compiles a book of word searches from this program?

TECHNICAL SCORE: 91%

MONO EMULATORS

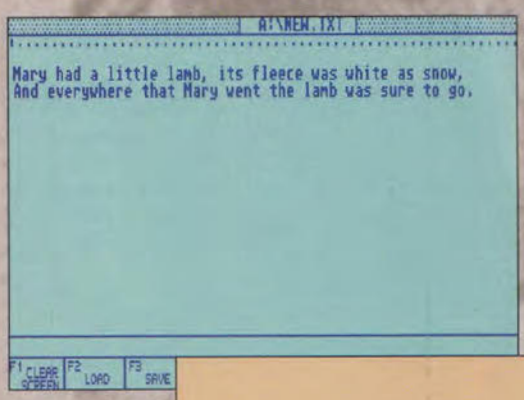
The most offbeat oddities of all have to be the emulators which purport to give you the ability to run mono programs on a colour screen. Do they work? Do they heck!

The problem lies in the resolution, or number of pixels (dots), on the screen. A mono screen has 640 horizontally and 400 vertically while, in medium resolution, a colour monitor or TV set can only give 320 dots vertically. Consequently, any vertical line which is one pixel wide in mono disappears on a colour screen.

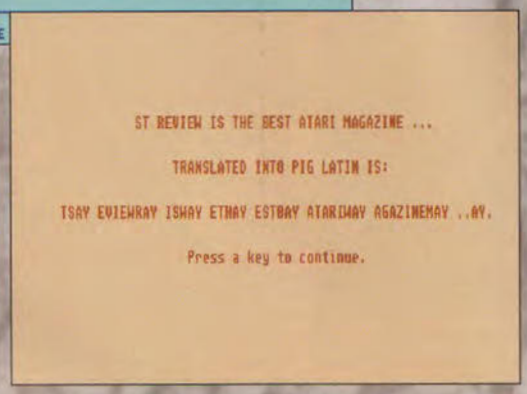
The other serious problem is the speed at which mono emulators allow you to move the cursor. The motion is usually somewhat akin to the mobility of treacle and screen redraws are very slow.

TECHNICAL SCORE: GENERALLY 0%

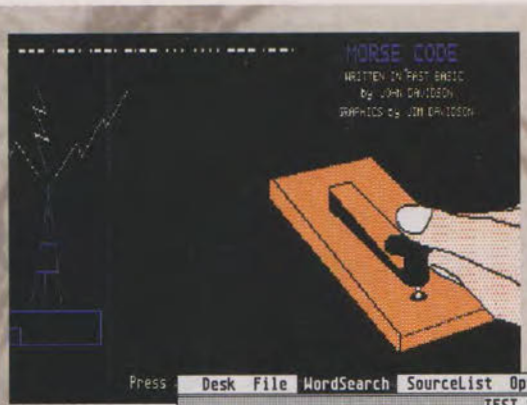
Thanks to Nick Harlow of 16/32 PDL (0634 710788) and Steve Delaney of Floppyshop (0224 586208) for providing most of the PD programs for this article.



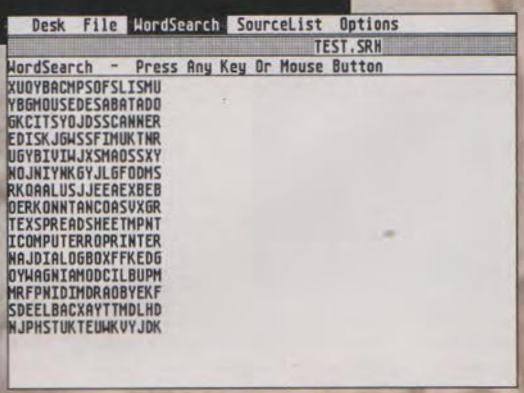
While it looks just like a standard word-processor, Fastype is anything but. No matter how fast you type, you still get perfect English appearing on-screen!



Want to hold a conversation without anyone being able to eavesdrop? Pig Latin could be just the solution.



By using the ST Speak program, Morse Code actually "speaks" the various letters to you in Dits and Dats.



If you've ever tried to create a word search, you'll appreciate how essential a program like the Word Search Creator is.

Tonight you could take Covert Action against foreign agents, deploy Special Forces on a secret mission or fan the Flames of Freedom

Alternatively, you could have a game of draughts

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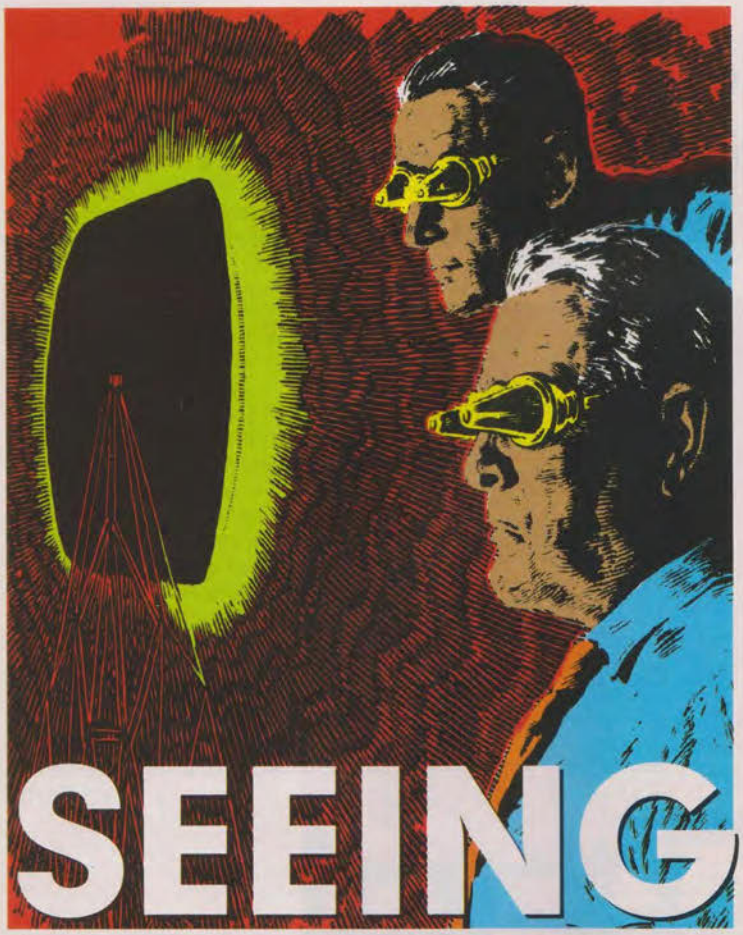
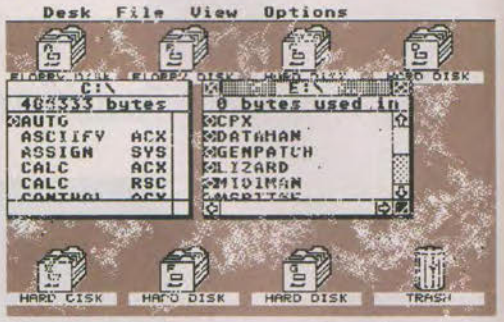


SEEING IS BELIEVING!

Some programs for the ST really are weird and wacky in the way that they treat the screen – and here are seven of the best

MITES

DESK ACCESSORY • PD • ALL RESOLUTIONS



This has to be the worst case of wood, err, screenworm ever!

Have you ever wondered what it would be like to record woodworm on a video camera and then play the tape back at high speed? Put the ***Mites*** desk accessory onto your boot-up disk, sit back and watch.

That's not quite true. Nothing happens ... until you click on the left mouse button, after which all hell breaks loose. A mite flies off the end of the cursor and starts converting the screen into Emmenthal cheese. Each time you click on the left mouse button, another mite appears - after a dozen or so clicks, no more screen! Not even the menu bar is sacrosanct.

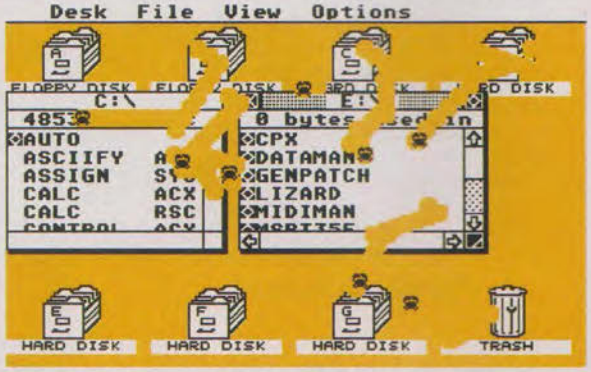
There's no entry in the desktop menu so we don't even know who to thank for this, err, useful program!

SILLY SCORE: 78%

CRABS!!

DESK ACCESSORY • PD • ALL RESOLUTIONS

A desk accessory, ***Crabs*** is one of those programs which produces a result that could form the basis of an 18-rated film. The moment the desktop appears after loading, a bunch of crabs appear on-screen and proceed to munch away at it, piece by piece. If you didn't know better, you'd swear that the worst conceivable virus on earth had hit your ST!



Take a good look at the screen, because in another five seconds only your memory will tell you where to double-

It's very much a visual effect, because if you click on the space where a program or folder was a few moments ago, it reappears. However, unless you have a photographic memory you quickly lose sight of what was on your screen. The Desk menu gives you an information box, but doesn't let you turn the nightmare off ... reboot time!

Thanks go out to Alex Leavens for grabbing our attention with this one.

SILLY SCORE: 70%

UPSIDE-DOWN

DESK ACCESSORY • PD • ALL RESOLUTIONS

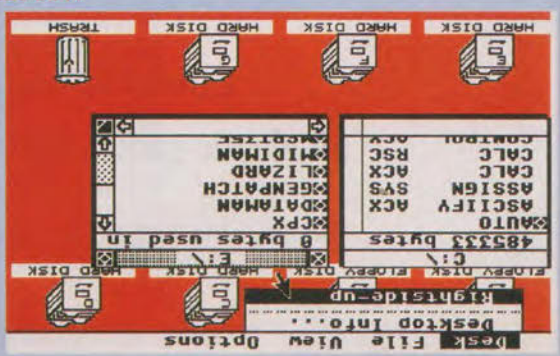
Enough of the screen destruction programs. ***Upside-Down*** is far more sensible; go to the Desk menu, click on Upside-Down and the entire screen inverts. Oo-err!

Now try moving around. Not easy because all mouse movements are reversed. Opening folders, changing menu bar options ... it's absolute hell. There are two ways to get out of Upside-Down. The easy way is to double-click on a program in which case the screen rights itself, while the difficult method is to make your way back to the Desktop option and find the Upside-down entry which is now called Rightside-up, although it's written upside-down if you get my meaning.

Needless to say, no-one wants to claim responsibility for this one either!

SILLY SCORE: 85%

Either my feet are on the ceiling or else this is one evil attempt to confuse the issue ...



Melt has a distinctly unfriendly effect on your screen ...

MELT!

DESK ACCESSORY ● PD ● ALL RESOLUTIONS

Time for something a little more sensible? Not in this section! ***Melt*** is a great temper-tamer in that it disintegrates your screen in front of your very eyes, by showing what would happen if your screen were made of wax and someone stuck a candle underneath it ... meltdown!

The top of the screen melts towards the bottom and within 10 seconds your entire screen is an amorphous mess. At least ***Melt*** has the saving grace of not requiring you to reboot your ST because a single click on a mouse button makes the screen re-appear in pristine condition.

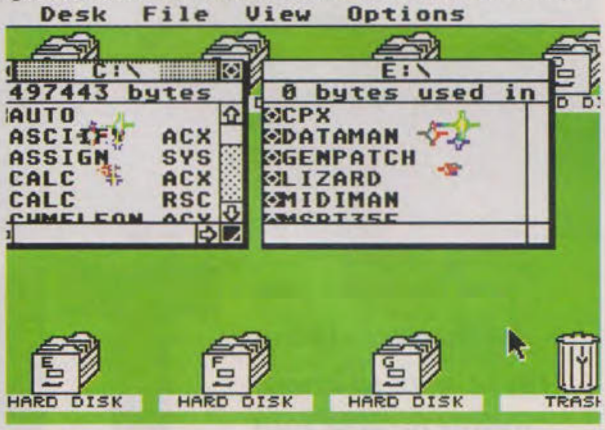
Thanks go out to Ken Newman and Stephen Coy ... wherever they are!

SILLY SCORE: 74%

MAGIC & PHYSICAL

PROGRAM ● FREEWARE ● ALL RESOLUTIONS

"It"s a kind of magic", so the song, and the title of this program, goes. Every time that you move the cursor, a flood of stars will appear on the screen using the current colour palette. This means that you get black and white varieties in high resolution through to a colourful swathe of stars in low resolution.



Installing Magic behind someone's back will certainly make them see stars!

As you can no doubt imagine, this is of absolutely no use whatsoever – in fact, you won't even be able to turn it off without rebooting.

Meinolf Schneider has put his name to this, and also has another, err, star with the program ***Physical*** which makes your cursor behave as though it is affected by gravity. The result of all this? Absolutely no control over movement! Just try double-clicking on a program when this is installed. Close but no cigar, as they say ...

SILLY SCORE: 88%

ST JUGGLER

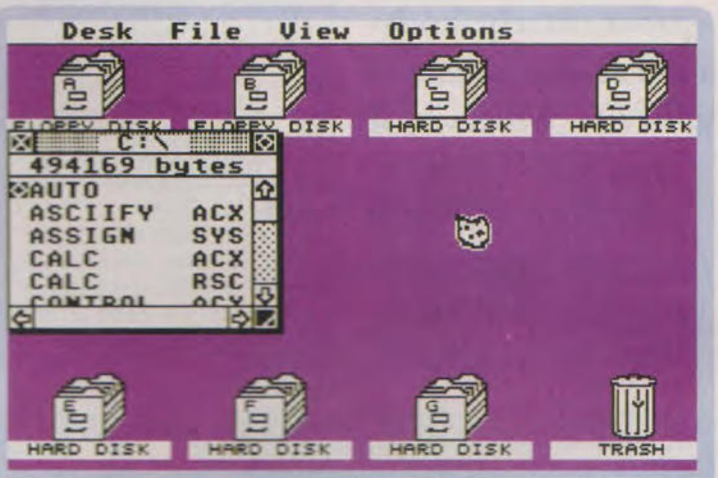
ANIMATION ● PD ● LOW RESOLUTION

Any animation can do wild and wonderful things on an ST screen, but ***ST Juggler*** is something special. Do you remember the original animation for the Amiga? The one that has a juggler with three balls, with the surface of each ball reflecting the ground, sky and juggler himself? That animation required 4096 colours and used a special technique called ray-tracing to achieve the effect.

Tri-Vision felt that a similar animation could be accomplished on the ST with its meagre 16 colours (pre-STE). ***ST Juggler*** is the result of that and can even run on a standard 520. A PD animation program called ***Shower*** is included so that the demo can be run without any other software. Good stuff. Any use? Of course not!

SILLY SCORE: 80%

Just think – on an Amiga this takes 4,096 colours and ray-tracing technology...



*"Just wait 'til I get my hands on the ***** who took a bite out of me!"*

COOKIE MOUSE

PROGRAM ● FREEWARE ● ALL RESOLUTIONS

All this hilarity is likely to make you just a bit peckish and in need of something to fill that gap. ***Cookie Mouse*** would appear to be custom-made for the occasion, being a chocolate chip cookie. Unfortunately, someone has already got to the cookie jar because there's a bite-sized hole in it!

It certainly is fun trying to click, or-double-click, on icons with this. It's rather large and it's difficult to decide which part of the cookie is equivalent to the tip of the cursor. There again, how many of you are going to have this on the screen for more than 30 seconds? How many?? Oh well, maybe I misjudged its usefulness!

Thanks go to Wizworks for this particular gem of programming skill ...

SILLY SCORE: 75%

What has this rural scene from Loom got to do with Archer Maclean and Jeff Minter?

The programmer of Cadaver likes to take long walks in the Lake District – who is he?

TRIVIAL PURSUITS

If you thought you knew everything there was to know about games and programmers, think again. The next couple of pages will fill you with the kind of snippets of information that will prove utterly irrelevant to any aspect of your life. However, if you really want to discover dozens of facts you never knew you wanted to know, read on...

STRANGE CONNECTIONS

What animal links Archer ***"Jimmy White's Snooker"*** Maclean, the Lucasfilm game, ***Loom***, and Jeff ***"Trip-a-Tron"*** Minter? Any games trivia fan worth his sodium chloride will immediately know the answer: a sheep.

But why? Well, for a start, Archer Maclean once found a member of this particular ruminant family dead in his swimming pool, ***Loom*** features a shepherd who has lost his sheep, and Jeff Minter happens to give the run of his farmland to two of the cud-chewing clan, whom he has chosen to christen Mollie and Flossie.

Sheep aren't the only ruminant that Minter has been associated with in the past, either: his games include ***Attack of the Mutant Camels***, ***Mama Llama***, ***Sheep in Space***, and ***Revenge of the Mutant Camels***, and there are even rumours that he has actually gone so far as to sponsor a llama himself...

THE THINGS THEY DO

If you thought programmers were a bunch of dull, mumbling, scruffy idlers who played games all day, then it's time to think again. We asked just a few of them what they did for a hobby, and this is what they said... Hugh Riley, Vivid Image Design's artist, is a former fire-blower and juggler who specialised in flaming tennis balls... Steve Kelly of the Bitmap Brothers enjoys walking in the Lake District... Sensible Software began their career together by forming a band called Deuce... Pete ***"Arkanoid"*** Johnson and Dan ***"Infestation"*** Gallagher both play musical instruments... Paul Shirley (***Spindizzy Worlds***) has a degree in cybernetics... Archer Maclean enjoys flying, hang-gliding and Jaffa Cakes... Jonathon Griffiths (***Campaign***, ***Conqueror***) used to enjoy gluing Airfix models and scratch-building his own model tank creations... Matthew ***"Nam"*** Stibbe confesses to clinging to a security blanket when feeling insecure, and has a working knowledge of medieval Latin ("it's useful for my diary")... and Mike Day (part of the ***Hard Drivin'*** programming team), is in the ***Guinness Book of Records*** for breaking the unicycling

TEN FACTS YOU SHOULD KNOW ABOUT ATARI

Astound and amaze your family and friends by slipping the following details about the maker of your machine into casual conversation:

1. Nolan Bushnell was the founder of Atari and wrote the first commercial video game, Pong, back in 1972. He claims that his first ever computer game was a little known effort called Computer Space.
2. The Atari logo is a representation of Japan's famous volcano, Mount Fuji.
3. The Atari ST was first unveiled at January 1985's CES show in LAS Vegas, just weeks after the Amiga's launch.
4. Atari has created over 140 coin-ops.
5. Each coin-op takes, on average, one year to produce.
6. The company's huge successes include ***Breakout*** (1976), ***Asteroids*** (1979), ***Missile Command*** (1980), ***Centipede*** (1981), ***Pole Position*** (1982), ***Star Wars*** (1983), ***Marble Madness*** (1984), ***Gauntlet*** and ***Paperboy*** (1985), and ***Hard Drivin'*** (1989).
7. Their not-so-huge successes include ***Cloak and Dagger***, ***Arabian***, ***Bomber*** and ***Smokey Joe***.
8. ***Missile Command***, which was launched by the company in June 1980, was the first game to use a tracker ball.
9. Atari paid $23 million for the rights to the ET arcade game. Unfortunately, it flopped.
10. The name "atari" is taken from the classic Japanese boardgame, ***Go***. An atari is the equivalent of 'check' in chess.

WHERE ARE THEY NOW?

Some things die a natural death, some fade into obscurity after moments of glory, and some simply never catch on. How you classify the following is up to you:

Rotoscape at its best in Operation Harrier. But where is it now?

- **ROTOSCAPE:** Creative Materials' revolutionary 3D sprite rotation system, seen in games such as ***Rotox*** and ***Operation Harrier***. The game landscape and its components rotated around you, in the manner of Namco's coin-op, ***Assault***.
- **THE ENTERPRISE:** Once heralded as a dream machine, this computer with "obsolescence built out" became obsolete before it even appeared.
- **LOCK-ON:** Activision never did release home computer versions over here of this Tatsumi arcade shoot-'em-up, with its Sega-style 3D graphics.
- **CODEMASTERS:** A budget software team that attracted loads of attention many years ago because of the extreme youth of its founders, David and Richard Darling. They're still working dizzily away, but without the limelight of former days. Does anyone care?
- **THE WATCHMEN:** Both the film and the game of this superlative comic book have yet to appear. The rights were signed by Ocean over three years ago, but nothing has been seen since.
- **EPT:** Realtime Software's age-old answer to ***Elite*** never really got off the ground. Some cynics suggested that it was because US publicity associates confused the initials with an Early Pregnancy Test.

record from Lands End to John o' Groats in the incredible time of 14 days, 12 hours and 41 minutes.

WHAT'S IN A NAME?

This section is just an excuse to link together a selection of trivia all about names. If you can find any other parallels between the subjects, you're barking mad:

- Plenty of games have changed their names halfway through development. Here are just two examples: Eldritch The Cat's ***Projectyle*** was originally going to be called ***Tribal***, and Argonaut's ***Birds of Prey*** used to be known as ***Hawk***.
- The strangest names for aliens must belong to Stargate's ***Yllabian Guppies*** and ***Phreds***.
- Sensible Software has a hand in producing some of the strangest game names around, including ***Sodov the Sorceror***, ***Twister: Mother of Harlots***, ***Galaxibirds***, and ***Insects in Space***.
- Have you ever wondered what "Psygnosis" means? Wonder no more: it's bastardised Latin for "Knowledge of the Mind".
- ***Paradroid***, one of the all-time classics of computer gaming, was originally named ***Technobots***. Andrew Braybrook, its programmer, abandoned it because it apparantly reminded him of a high-tech toilet.
- Matthew Stibbe (pronounced "Stib-buh", incidentally) owns a teddy bear called Alfraeda Beetle, and has named all his computers and printers after characters in ***Sesame Street***.

HAVEN'T I SEEN YOU SOMEWHERE BEFORE?

Plenty of games have borrowed ideas, names and designs from films, TV and books. Did you know, for example, that FTL's ***Dungeon Master*** borrowed its Vorpal Sword from Lewis Carroll's ***Jabberwocky***, and its Corbemite from ***Star Trek***? Or that the Death Blossom weapon in the ***Last Starfighter*** inspired the Ripstar smart-bomb in ***Blasteroids***? Did you notice the Giger-esque ***Alien***-style background in ***Z-Out***? Going even further back, do you remember ***Elite***'s unwanted cargo of multiplying space creatures, inspired by the Tribbles in episode 42 of ***Star Trek***? Games cannibalise each other, too: Williams' classic ***Defender*** coin-op led to scores of computer variants, such as Logotron's ***Starray*** and Firebird's 3D version, ***Virus***. And Firebird wasn't the only company to translate a "2D" coin-op into a "3D" home computer game: one of the earliest 16-bit shoot-'em-ups was Gremlin's gruesome ***3D Galax***, which was inspired by ***Galaxians***.

Sierra's King's Quest V. It all began on the kitchen table.

FIRST STEPS IN COMPUTING

Ask half a dozen programmers what their first computer was, and it's likely that you'll get as many different answers in return. Strangely enough, when we did ask, that's exactly what happened.

Paul Shirley was one of the first games programmers ever to own a computer, because he bought an Oric way back in 1974... Paul "***Damocles***" Woakes began with a 32K Atari 800.

Glyn "***Warhead***" Williams' first computing encounter was with a Wang "that was so old that its ROM was a load of diodes", but he actually wrote his first games on an early Apple computer... Kevin Bulmer of Core first dabbled with a Commodore PET and an Atari 800XL... Simon Phipps (***Switchblade***, ***Monty Python***, ***Rick Dangerous II***) began humbly with a BBC Micro and a game called ***Jetpower Jack***... Andrew Braybrook worked at Marconi on an IBM Mainframe CMS and wrote five games in ***COBOL***, before switching to the Dragon 32... Juergen "***STUN Runner***" Hingsen began with a Tandy TRS 80 and then settled with an Apple IIse.

HOW THEY USED TO LIVE

Have you ever wondered what some programmers and software houses did just at the moment they realised they wanted to play games for a living? Here are some answers... Dave Jones of DMA Design used to work for Timex, which was then producing ZX Spectrums... FTL, who produced ***Oids***, ***Dungeon Master*** and ***Chaos***, started life writing spellcheckers.

Sierra, the masters of the ***King's Quest*** series, began on Ken and Roberta Williams' kitchen table, where the "graphic adventure", ***Mystery House***, was written on a 48K Apple Mac... Kevin Bulmer of Core Design used to produce covers for the fantasy magazine, ***White Dwarf***... Domark was created in a flash of inspiration in the Karl Marx library which is situated in Clerkenwell Green, London.

AND FINALLY...

...there's Bullfrog's co-founder, Peter Molyneux. ***Populous*** fanatics may already know the following five facts, but just in case YOU don't, here goes:

1. Peter used to be a systems analyst for a company producing accountancy software.
2. He was born in Ghana.
3. He enjoys listening to Gustav Mahler.
4. His sock size is 14.
5. His favourite food is roast duck.

Populous – a small part of Peter Molyneux's trivia.

We sent our roving reporter, Tony Kaye, looking for people who do more than just play games and write letters on their ST. Here's what he found...

This sequence shows the image processing in operation.

THERE'S NONE STRANGER THAN FOLK!

This picture was created with CAD3D.

The trouble with looking for people who have strange uses for a computer is that they are, by definition, hard to find. Because they spend time using their machine for their hobby, they are not always easily accessible. However, I managed to find a couple of people who are using the ST for purposes other than those that you'll find described in the user's manual.

CANNIBAL

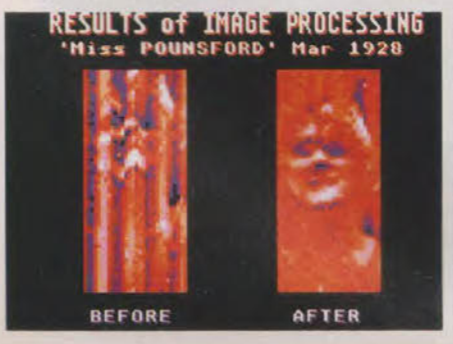
Archer Maclean, author of the now famous ***Jimmy White's Whirlwind Snooker***, has a novel use for an old 1040 STFM. He has several machines, so one of them has been cannibalised in order to keep the others running! As you can imagine, someone who is programming all day on the ST has things go wrong from time to time. It's important for him to be able to carry on working, especially when he's working on his next blockbuster.

"It's easy to lose the thread of what I am doing if I can't carry on fairly quickly. I need to keep programming, and it's not easy to contact a repair shop at two o'clock in the morning," he says, "but by taking bits out of an old machine, I have an easy source for spare parts. My trusty 1040 is looking a bit moth-eaten now, but it's given me good service."

Archer is currently working on ***3D Pool*** and, although the basic programming is being completed on an Amiga, the ST version is said to be 30 per cent faster. I'm sure that the old 1040 will get even more punishment.

HAM AND CHIPS!

The ST is a powerful tool for many other applications. Take amateur radio, for example. The computer can be found in the hands of many radio 'hams'. It is used for teaching and translating Morse code, RTTY (Radio Teletype), slow-scan television (low resolution TV pictures) and Packet Radio. Communications are received from all over the world and the ST is used to decode the signals, an example of a hobby within a hobby.



Here you can see the results of Don McLean's work and how the ST has cleaned up the image.

AN ST ON TELEVISION

Donald McLean bought a 1040 STF to replace a home-made Z80 based computer. His interest is in wax disks used by John Logie Baird to record the very first television pictures. He uses the ST to help recover the pictures, recorded in 1927/8 during Baird's Phonovision experiments. These have produced what is believed to be the first examples of video recording in existence.

"Television has fascinated me since I was small," explains Don. "I hate what's currently shown on the box, but I like the idea of building up pictures just from lines and spots. That caused me to get involved in facsimile transmissions, weather maps, slow-scan TV and various other projects."

Image processing software was not easy to find in 1986 (or even now, for that matter!), so Don had to write his own using ***Devpac 2***. He linked it to a home built Analogue to Digital Converter (ADC) and inputted the signals using a standard audio record deck.

Once sampled to the ST's memory, the image can be enhanced using various Digital Image Processing algorithms to correct, restore, filter and compare lines and frames of information.

This strange use of the ST has helped Don to offer support to the BBC, IBA, Science Museum, and the Smithsonian Institute in Washington . He has made a video of his work and has illustrated it using ***CAD3D***.

Don's other interests include using the ST for music, using the MIDI ports connected to his sample based synthesiser.

There is more to the ST than killing aliens and writing letters. These are just a few examples of off-beat uses. If you have an unusual or interesting use for the ST, write to us at our usual address. You never know, we may tell the Atari world about it.

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- *CVBS VIDEO INPUT SIGNAL*
- *DARK GLASS SCREEN*
- *GREEN SWITCH TO SIMULATE MONO DISPLAY*
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- *CABLE REQUIRED*
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If you are currently using your ST or Amiga with a domestic television set, then you are missing out on picture quality.

Unfortunately, because your TV is used to receiving inferior UHF transmissions from the airwaves, it only has a UHF socket. So, your computer has to downgrade its high quality digital RGB (Red, Green, Blue) signal to UHF to enable your TV to receive it. However, because your TV can only display using RGB, it has to convert the UHF signal back to RGB before it can put a picture on the screen. Of course, every time you convert from one signal to another, there is a loss of quality which means that the final picture on the TV is not as good as the original signal from your computer.

You can overcome this with a monitor, which has an RGB socket, not UHF. Your computer will recognise this, and send its original RGB signal to the monitor which will display the image directly to the screen with no loss of quality.

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All of the accessories below are suitable for use with the Philips 8833 Colour Monitor

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Before you decide when to buy your new monitor, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals and software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for almost 14 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Systems Service".

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ATARI ST REVIEW
BUDGET BUY

CHEAP 'N' EASY

If you're in need of good utilities at a good price, Atari may have released just the thing for you...

Atari is setting out to solve the problem of expensive software essentials with its ***Introduction To Programming Utilities***, the first in a range of cheap software compilations.

The package comes in an A5 box and comprises of two manuals and four disks. The utilities themselves range from time-saving DAs such as HiSoft's ***Saved!*** to essential disk editing programs such as ***Knife ST***. Also included is a slide show tutorial taking you through the main features of the various packages.

WERCS

WERCS, from HiSoft, is arguably the best resource construction kit available. It enables you to create resource files for your own programs as well as edit existing ones. This is the full package, and will output header files for all popular programming languages including ***BASIC***, ***PASCAL*** and ***C***.

It runs in all resolution modes so it's easy to create menus, dialogue boxes, icons and more. To create an object you simply select the desired type from the menu, select border and fill colours, resize it and set its AES attributes. A simple icon editor and a resource snapshot utility are also included. This is a must for any budding programmer.

KNIFE ST

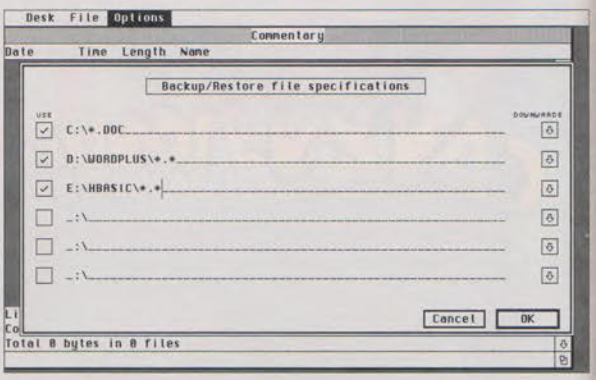
Knife, also from HiSoft, is the ultimate disk editor. You can use it to recover files from damaged disks or restore accidentally trashed files. On top of that it offers extended disk formatting facilities and can read disks from other computers. The manual is excellent and goes into great detail when explaining how to salvage corrupted disks and everything you want to know about directories, FATs and disk structure. This is a well established program and a firm favourite with many users.

ATARI ARCHIVE

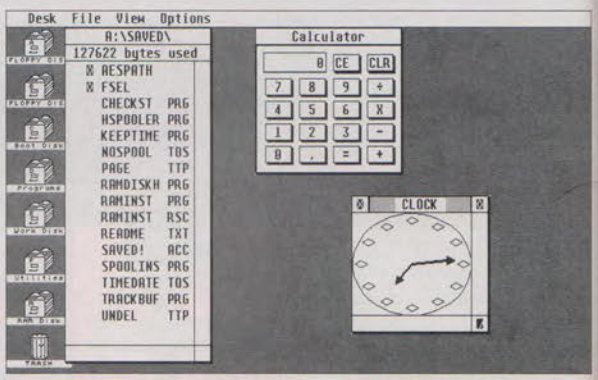
This is a simple to use and very effective, hard disk back-up utility. Before it goes to work it checks the system clock and will only back-up files which have been modified or added since the previous one. The retrieval feature is just as simple, allowing you to restore anything from individual files to the entire disk. If you are short on floppies you can ask ***Archive*** to compress the files as it goes along. This slows it down but saves loads of disk space.

SAVED!

Saved!, again from HiSoft, is a desk accessory which lets you copy, rename, delete and move files without having to return to the desktop. A unique feature is the ability to use wild cards to perform global operations. It is possible, for example, to copy all files with the extension DOC in a single operation. ***Saved!*** can also

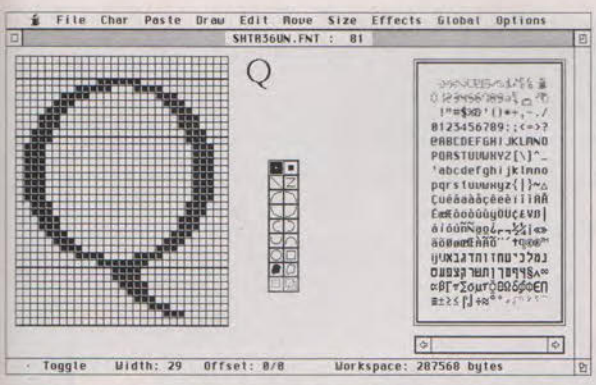


The Atari Archive back-up utility getting ready to backup all files on drive C with the extension DOC.

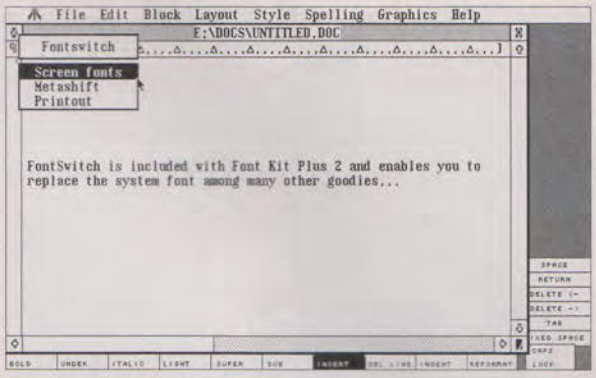


The two desk accessories supplied are a simple calculator and an analogue clock. Notice the alternative system font installed with Fontswitch.

Disks, manuals and a nice box all contain one of the best utilities packages ever put together at the price.

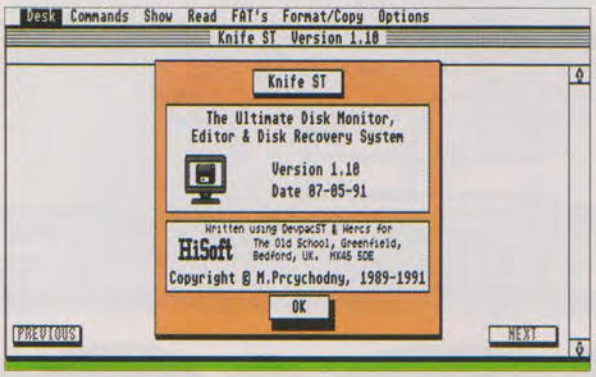


The main screen of Font Kit Plus – font editing is made easy with the help the toolbox.



Fontswitch can be used from inside word processors like First Word Plus to change both screen and printer fonts.

Damaged disks? Trashed files? Knife will save the day!



Copy files and format disks from any program with Saved!

WILD CARDS

Wild cards are a part of the DOS commands protocol which allow flexible searches of disk directories. GEMDOS supports two:

? - The question mark stands for any one character in a file name. If you have several files named LETTER1.DOC, LETTER2.DOC, LETTER3.DOC, etc, you can find all of them by specifying the search mask - LETTER?.DOC

* - The star stands for any number of characters. A mask like *.TXT will find all files with the extension TXT. The mask *JACK*.* will find all files with the name JACK at any position in the name so HIJACK.TXT and JACK2.DAT will both be found by the search mask.

You can use wild cards when backing up a hard disk or when copying files using ***Saved!***. ***STree*** uses wild cards to locate files and display them on the desktop.

format and copy disks as well as modify the environment paths. Formatting, however, is limited to the standard Atari routine and is not as fast as programs such as ***Fast Copy***. Nevertheless, ***Saved!*** is the kind of utility every ST user needs. Several small programs are featured, including a reset proof RAM disk, a printer spooler and a simple floppy disk cache.

STREE

STree is a little hard to define. It is a combination of a file search program and a replacement desktop. In principle, if you know you have a file somewhere on disk but you are not sure where, ***STree*** will come to your help. ***STree*** will also accept wild cards so you don't need to remember the exact name of the file. You can also ask ***STree*** to find files created after or before a given date. ***STree*** will also search for text although this process is very slow.

Being a desk accessory, it is always available from the desk menu, so it requires about 100k of RAM to work. When ***STree*** locates the file or files it then displays its own desktop which has all the standard Atari functions.

FONT KIT PLUS 2

This well-known program is designed to make font editing easier. ***Font Kit Plus 2*** can handle many types of fonts including screen, printer and GDOS. It's well designed and versatile boasting many special effects such as slanting, shadowing, resizing and even giving your font a 3D look.

The pre-defined shapes, fills and pixel-by-pixel editing enable you to create fonts from scratch. ***Font Kit*** can also import resource file images for further editing and is also capable of generating hex lists of images for use with mouse form calls. The manual explains in detail how GDOS fonts work and even goes on to show how several popular programs use GDOS and alternative systems. Users of ***Timeworks Publisher*** will be happy to know that ***Publisher*** fonts can also be edited by ***Font Kit***.

Fontswitch 2 is included. This desk accessory enables you to remap your keyboard, replace the system font and even reverse the writing direction for typing in Hebrew. It downloads fonts to a printer for use with programs like ***First Word Plus***.

DESK ACCESSORIES

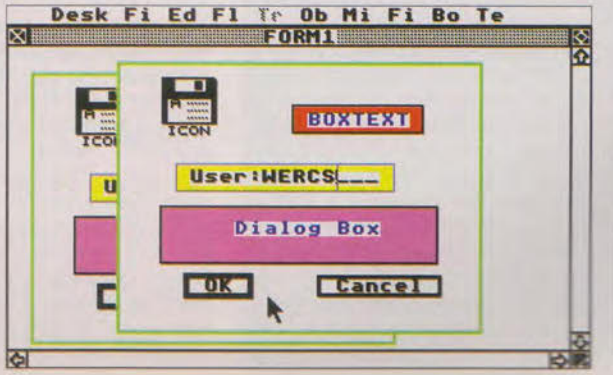
Two simple desk accessories make up this package. One is a calculator and the other is an analogue clock which can be resized.

CONCLUSION

This is an excellent package at an affordable price. Atari has compiled some of the best programs around and is offering them at a fraction of the original price. Even the manuals are interesting. ***WERCS*** gives you an insight into GEM, the ***Knife*** manual to FATs and directories and the ***Font Kit*** manual certainly helps you get around GDOS.

Of all the utilities supplied on the disk, ***Archive*** is probably the weakest; especially when compared to PD programs like ***Vault*** and ***Turtle***. The rest of the programs however are a real bargain, and will prove useful to programmers and users alike.

If you want those fancy dialogue boxes and menus in your programs, WERCS is what you need.



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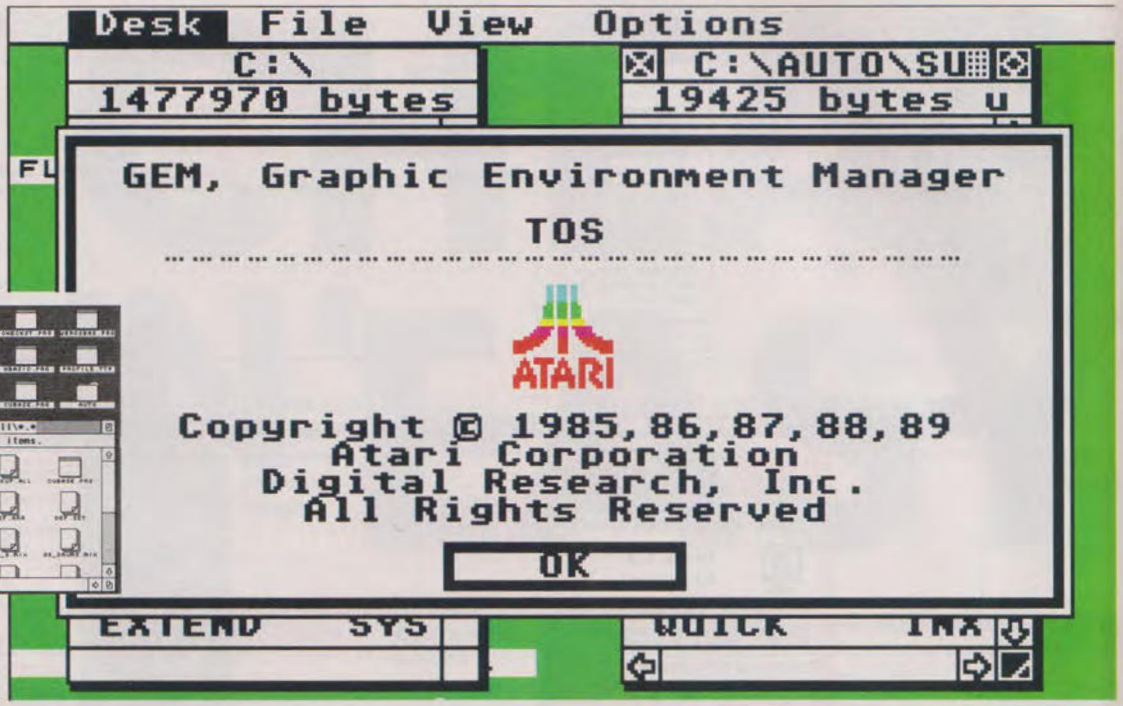
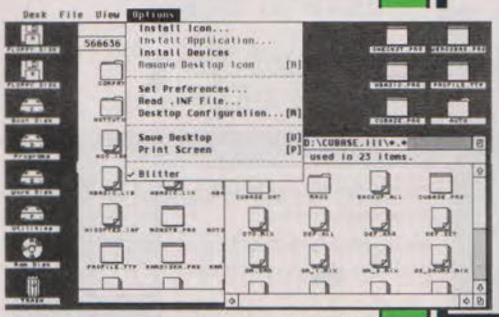


TOS 1.04 and later versions display the Atari logo scrolling through the rainbow colours, which have resulted in the nick-name Rainbow TOS.



The new desktop was introduced on TOS 2.06. It features user-defined icons which can be dragged onto the desktop, key-board shortcuts and search facilities.

A LOAD OF

Every ST's operating system makes it work but with several different versions to upgrade from, just what are the benefits in TOS upgrades? Ofir Gal answers this question and more as he unravels the mysteries of the Tramiel Operating System

Although it has remained relatively unchanged on the outside, on the inside the ST has undergone some major upheavals since its launch. At the centre of these changes is TOS, the Tramiel Operating System, which imakes your ST tick.

TOS controls the disk drive, keyboard, mouse input and output, add-ons such as modems and printers and the on-screen functions.

On top of that impressive list, it also controls the desktop and the functions that go with it. Without it the ST is completely unusable.

When Atari launched the ST, TOS came on a floppy disk which had to be inserted every time the machine was powered-up. Because TOS is such a complicated program it took ages to load, and copying disks required the TOS disk to be constantly ejected and inserted, in a similar way to Workbench on the Amiga.

TOS is now stored in ROM (Read Only Memory) chips inside the ST so it loads almost instantaneously. However, there is one disadvantage to ROMs – while a disk can easily be updated, ROMs cannot. This means that, while Mac and PC users have enjoyed the benefit of their operating system being regularly updated, many ST users are left with a TOS version which has been around since the mid-80s.

TOS VERSIONS

TOS has been updated several times since its launch in 1985. Each version introduced new features and new bugs. For unknown reasons, unlike other operating systems, it is quite difficult to find out which TOS version your ST has.

There is a program available called ***Which ST***, which will be included on next month's cover disk, and this tells you which version of TOS your ST is running.

In the mean time, here is a brief description of the various versions of TOS, what they do and, more importantly, what they don't do.

TOS 1.00

This was the original, and worst, version of TOS. It was ridden with bugs which meant that some programs would not work and the ones that did crashed more often than not. There were also problems with the memory pool: whenever you double click on a folder to open it, TOS allocates a small amount of memory to its directory which should be returned to the system so that more folders can be opened. Version 1.00, however, did not return this and opening more than 40 folders without switching the machine on and off would cause it to crash. A 40-folder limit may not sound bad, but it can creep on you just as you're about to save a few hours work. Fortunately there is a free program called ***FolderXXX*** which partially solves the problem. There too many other bugs to mention and if you do have TOS 1.00 you should seriously consider updating it.

TOS 1.02

Introduced mainly to cope with the Blitter chip, this version was first installed on the Mega ST and then later on all STs. This incarnation is also known as TOS 1.2 and

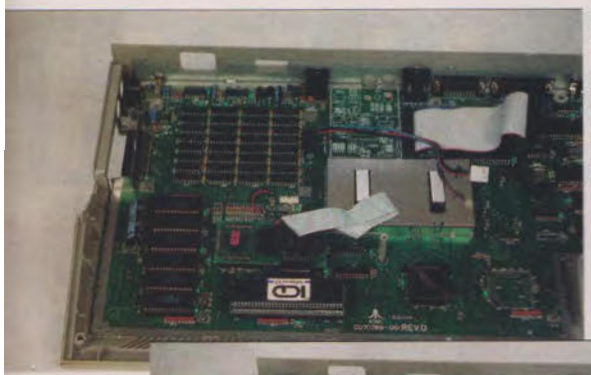
THE BLITTER CHIP

This chip was originally found only in the Mega ST although it is now standard on all ST models. The Blitter speeds up text and graphic displays considerably, resulting in improved scrolling and animation.

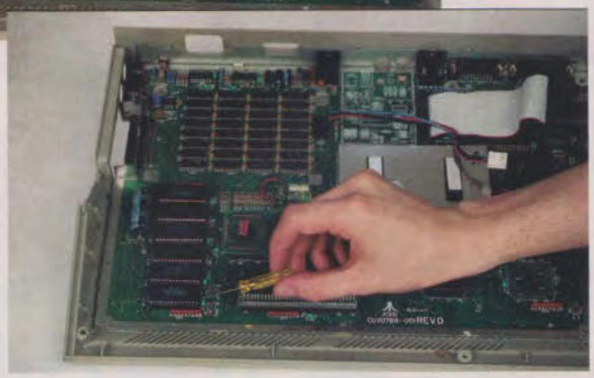
You must have TOS 1.02 or later if you intend to install a Blitter chip in your ST.

Later versions of TOS will allow you to switch the chip on or off from the desktop, as the screen update speed can make some games too fast to play.

Blitter derives its name from BLock Image Transfer, which basically explains how it works – by speeding up the graphics movement routines.

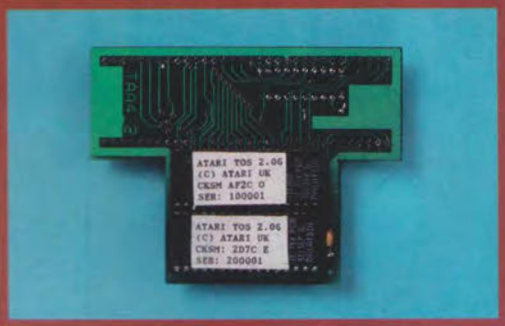


Once you have bought a new set of TOS chips, it's a relatively easy job to upgrade...



...just prise the old chips out and (carefully) replace them with the new ones, following the instructions included.

TOS 2.06 ON A STANDARD ST



This is the TOS 2.06 upgrade for the STFM from Compo.

There are several companies now offering a TOS 2.06 upgrade for standard STFM and E models. The upgrade is switchable so you can keep full compatibility with all of your existing software as well as any new programs. Fitting involves attacking your 68000 processor chip with a soldering iron, so it's not recommended for the faint hearted, but many dealers will fit it for you for a small fee. A full review of TOS 2.06 can be found on page 51 of Issue six, together with details of how to fit it.

For further information, contact Compo Software on 0480 891819, Gasteiner Technologies on 081 365 1151 or Analogic Computers on 081 546 9575.

OLD TOS

does perform slightly better than the original, although many of the bugs are still present. As with TOS 1.00, it is best to upgrade it to 1.04 or later.

TOS 1.04 OR 1.4

This version is considered by many to be the first practical upgrade of TOS. Many of the old bugs were removed and disk access was greatly improved in both speed and reliability. Other enhancements included faster screen drawing, even without a Blitter, and drive-selection buttons on the file selector.

Because this version was used as the basis for several of the later versions, any bugs can be cured with patch programs.

TOS 1.06

With the launch of the STE, this version of TOS was introduced to support its enhanced colour palette and faster screen handling. Unfortunately, a serious bug crept into this version making it impossible to boot disks at medium resolution. This was rectified with TOS 1.62.

TOS 2.05

Originally designed for the Mega STE range, TOS 2.05 offers a greatly improved desktop and some extra commands which are mainly designed for use with the Mega STE's serial ports.

TOS 2.06

This is the current operating system on the latest STEs and is the latest version of TOS currently available. It removes a few minor bugs in 2.05 and performs a memory test each time you power up the computer.

TOS 3.XX

is designed for the TT range and will not be compatible with ordinary STs.

MULTITOS

This multi-tasking TOS is currently under development and will be installed on the new Falcon 030. ST compatibility is being planned for the later versions, but there is no fixed release date. Its main feature of multi-tasking, which is dependent on memory, allows you to run several programs simultaneously.

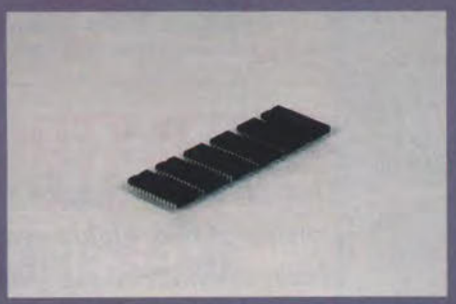
PATCH PROGRAMS

There are several bug-rectifying programs available for the various TOS versions. You'll find some on next month's coverdisks. All these programs must be placed in the Auto folder on your boot disk.

FatSpeed – This patch improves disk access time on TOS 1.00 and 1.02. It has no effect on other versions.
FOLDERxxx – Essential for all TOS versions, especially if you use a hard disk.
STE Fix – This patch solves the problems with booting the STE in medium resolution.
PoolFix92 – Solves the memory pool bug in TOS 1.04 and 1.06. Does not work on other versions of TOS.

There are many more similar programs available from PD libraries.

UPGRADING TOS



Most STs have TOS installed on a set of six ROM chips found just under the keyboard or under the power supply unit. Some STs have only two chips so make sure you know which set you require before ordering an upgrade.

Upgrading your TOS chips is relatively simple and usually requires no soldering. There are a few limitations though: for example, a 'standard' ST (non-STE) can only be upgraded to TOS 1.04 without any major modifications. Bear in mind, too, that opening your ST invalidates your warranty.

Just pull out the old chips and replace them with the new set. You will find, though, that upgrading an STFM to 2.06 requires quite a bit of soldering.

Avoid touching the connectors at the bottom of a chip when you pick them up. It's also advisable to remove any static electricity from your body by touching a water tap before you start. The old chips must be removed first. Make a note of their position. Using a flat screwdriver gently free the chip from the socket then pull it out. The new chips must be installed in the correct order and orientation, so you need to follow the instructions provided.

NEXT MONTH

MONET FOR

START COLLECTING THE MOST COMPLETE

The Cyber Series is the ultimate graphical tool for the ST. It can draw, paint, manipulate 3D objects and animate complex characters and designs. We're giving away the complete set of three programs over the next few issues – you'd have to be mad to miss them as each monthly instalment will add extra features until you've built the Cyber series into the most professional art, graphics and animation package ever seen on the ST.

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OVER THE NEXT THREE MONTHS ST REVIEW WILL BE GIVING AWAY THE CYBER SERIES – THE MOST COMPREHENSIVE GRAPHICS SYSTEM EVER

NOTHING

COMPUTER GRAPHICS SYSTEM EVER!

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The last package in the series of three, Cyber Control is the ultimate utility that allows everyone to animate. Its easy-to-use form takes commands from you and then using Cyber Studio it creates an animation sequence by sheer calculation – taking all the hard work of making frame by frame animation away from you – leaving you free to get on with creating your animated masterpiece.
It also adds some features to Cyber Studio including two new cameras, moveable, multi-layered colour and more, all ready to use...

Each program in the Cyber series complements the others, adding features and growing into the best integrated art, design and animation package available on the ST. Each program will, however, run independently of the rest, giving you a flexibility that no other program can.

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ST Review's December issue looks at high-tech gifts for Christmas. You know you deserve that little high-tech treat – but what to get? ST Review looks at all things electronic and tells you what are the best buys for the season with a round-up that covers every electronic organiser from £20 to over £200!

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- TUTORIALS GALORE! Get the most out of your ST with tutorials that you can collect into veritable bibles of hints and tips for popular programs! Next month we continue our tutorial for the amazing TIMEWORKS PUBLISHER and show you how to incorporate graphics that you can draw with the CYBER series!

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Publishing barons? Easy life! Nial Grimes joins the multimedia revolution and shows you how to set up an electronic magazine for next to nothing!..

"The printed magazine's days are numbered; multi-media publishing has arrived!" Claims similar to these were the proud boasts and hopes of the now defunct commercial disk magazines. What exactly went wrong?

Disk magazines – or collections of articles on a disk with some sort of viewing program – are as old as the hills and have always been popular amongst computer fans who write for a hard-core of active users. The magazines have over the years achieved an almost cult status and the articles you'll read are quite unlike anything you would find in printed magazines: savage opinions on the computing scene in general, computer-based fiction, humorous stories – literally anything can turn up (and usually does)!

OPEN TO ANYONE

Of course, the nature of the media means that anybody can try their hand at editing their own publication and the topic needn't be computer-related – witness Star Trek 'zines! Or you can focus on a particular aspect of the ST that interests you. A commercial magazine covering solely demos may not be viable, but with production costs of virtually zero, what's to stop a demo-based diskzine?! The low cost of production can also means that editorial standards are inclined to be low, but look out for some of the well-established diskzines and you won't go far wrong.

Until you've tried a diskzine, you don't know what you've been missing. You won't find reviews of the very latest high-priced hardware or exhaustive features, but what you are likely to find are honest opinions furnished by enthusiast ST users.

Publishers of commercial disk magazines simply failed to recognise the difference between this proverbial chalk and cheese – glossy magazines have their place, and so do diskzines. So next time you're idly browsing through a PD catalogue, why not give a diskzine a try? Who knows? You might even like it!

ST NEWS 7.2

RELEASED: AS AND WHEN • PUBLIC DOMAIN • PRICE: DISK AND 3 INTERNATIONAL REPLY COUPONS • CONTACT: RICHARD KARSMAKERS, LOOPLANTSOEN 50, NL-3523 GV UTRECHT, THE NETHERLANDS.

ATARI ST REVIEW BUDGET BUY

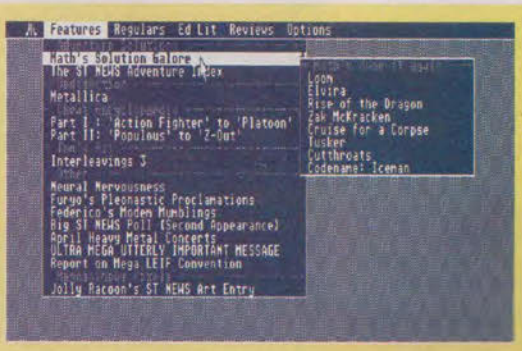
IN BRIEF: ***ST News*** is the longest running diskzine for the Atari series. The first issue was released way back in July 1985 and it has been published regularly ever since – to be quite honest, the experience shows!

ST News has the shell that all others aspire to. Text is displayed in all its glory, complete with styling and at a speed that would make a TT look twice! You also have the option to save files in ***First Word*** format for printing or viewing in your word processor. A recent addition has been a cascading menu system, allowing even more articles to be crammed onto the ST's screen.

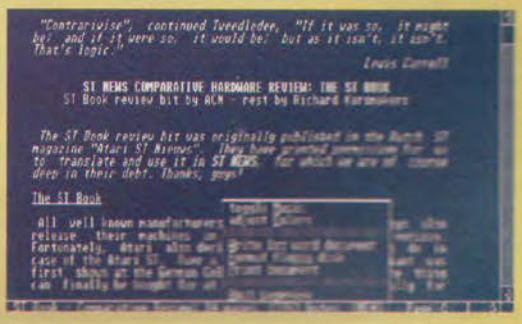
7.2 continues the usual mix of humour and serious articles including a whole host of cheats, games reviews and as usual – the quest for the hidden article (don't ask me!).

ST REVIEW COMMENT: "Utterly professional from start to finish and a joy to read. The authors' sense of humour is way out, to the point of being surreal at times. Be warned – this one's addictive!"

★★★★★



How's about that for a menu system? ST News' publishing experience is apparent from the word go!



With more bells and whistles than Santa Claus, ST News is smarter than your average 'zine (Boo-boo)!

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STEN 10

RELEASED: BI-MONTHLY • PUBLIC DOMAIN • PRICE: FREE WITH S.A.E. • CONTACT: DAVE MOONEY, 14 SCHOOL ROAD, MORNINGSIDE, NEWMAINS, LANARKSHIRE

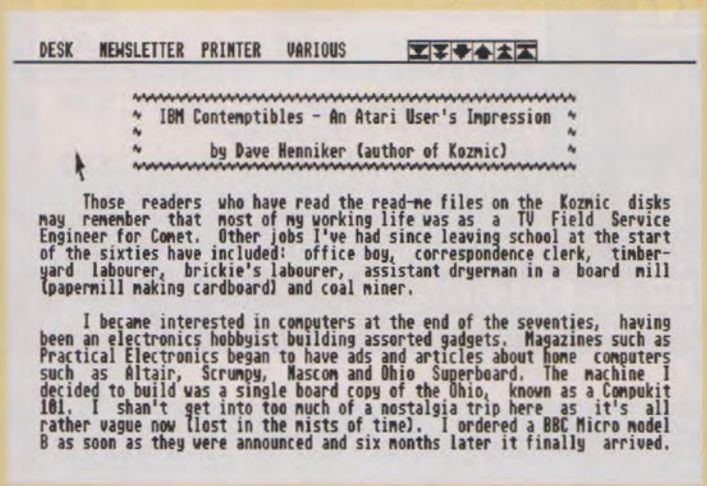
IN BRIEF: ***STEN*** (standing for ST Enthusiasts' Newsletter) is a diskzine for the more serious ST user. Games and demos are firmly pushed into the background as desktop publishing, programming, word processing and utilities take centre stage.

The articles are diverse and particularly good are personal experiences from ST users along the "I can laugh about it now" lines. Issue 10 is as good as ever and contains a round-up of PD libraries, secrets of Atari (quite a good one this!), the possibility of ST emulation on the PC, plus all of the usual news, views and reviews – there are over 40 articles in all!

All of this is housed in a custom-written, semi-GEM shell which is extremely quick and easy to use. A few-well chosen utilities are also provided with which to brighten up each issue.

Switch on to the serious side of your ST with STEN – the ST Enthusiasts' Newsletter.

The GEM shell, whilst dull, is extremely quick and easy to use.



ST REVIEW COMMENT: "***STEN*** is one of the few diskzines that puts readable content before space-filling utilities. The editorial standard is consistantly high in comparison to other diskzines and all articles are written in a readable, chatty style."

★★★★

MAGGIE

RELEASED: AS AND WHEN • PUBLIC DOMAIN • PRICE: £2.50 • FLOPPYSHOP, PO BOX 273, ABERDEEN, AB9 8SJ

IN BRIEF: ***Maggie*** grew up as part of the Budgie licenceware family, only recently going it alone in the public domain. It's produced by The Lost Boys (of countless demo fame) and, unsurprisingly, focuses on the entertainment side of the ST.

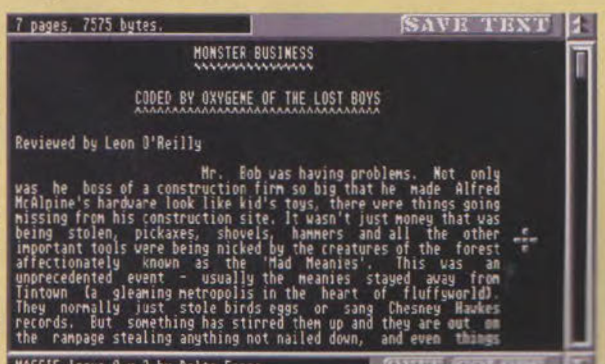
Regular interviews are conducted with demo programmers and many issues contain complete tutorials of how to achieve the impossible in assembly language. Each and every release is also cranked up with an intro coded by the The Lost Boys. This issue's round-up includes reviews of some recent game releases and a moan about the diskzine scene in general (come on, guys - you nicked the idea from ST News in the first place!).

Early issues are housed in a pretty good GEM shell, but from number eight onwards a suicidally fast, graphical version takes the helm. It's all very nice to look at and ideal for game-heads everywhere.

ST REVIEW COMMENT: "It's hard to know what to say about ***Maggie***. Some of the articles, and particularly the tutorials are excellent, but the language is beyond a joke at times and lets it down badly."

★★★

The Lost Boys' Maggie – winner of the "Most Strategically Placed Dialogue Box Award 1992".



O.K., O.K., so the colour scheme is a bit boring, but Maggie's display system gets the job done, and fast!

TOP SIX TIPS FOR THE PERFECT DISKZINE!

1. Readership – a magazine covering pig farming in the Outer Hebrides may be essential reading for you, but who else will want it? Ask the opinion of as many people as possible.

2. Spelling – magazines stand or fall on the strength of the editorial. Why mess up a great magazine when all it takes is one pass through the spell checker?

3. Readability – make sure a friend has read through your article before it's published. Very often he or she will spot mistakes that you've completely missed!

4. Content – make your magazine worth buying! Include as many articles as possible and fill the small amount of extra space with top quality public domain.

5. Looks – make your magazine as easy to read as possible. A dark blue on black colour scheme may look stylish, but how long could you put up with it?

6. Marketing – this means listening to what your readers want in the mag and then give it to them. After all, that's what ST Review did to become the best ST mag!

PUBLIC SERVICE

In addition to the mountains of articles, opinions and on-the-button news, diskzines are one of the best sources of PD known to mankind. Very often, authors are in contact with editors, and 'zines come up with titles weeks before they appear in any PD catalogues! Some diskzines take this concept even further by dropping the editorial completely and simply packing the disk with the latest PD and Shareware. The ST Club's disk magazine is an ideal example of this, each issue containing over 1.4 Megabytes of new material! Further details contact: The ST Club, 2 Broadway, Nottingham, NG1 1PS.

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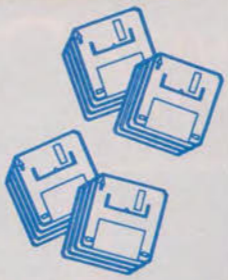

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LEDGERS 7

RELEASED: AS AND WHEN • LICENCEWARE • PRICE: £2.95 • FLOPPYSHOP, PO BOX 273, ABERDEEN, AB9 8SJ

IN BRIEF: Yet another demo crew – The Untouchables – try their hand at diskzine publishing with this competently written diskzine known as ***The Ledgers***.

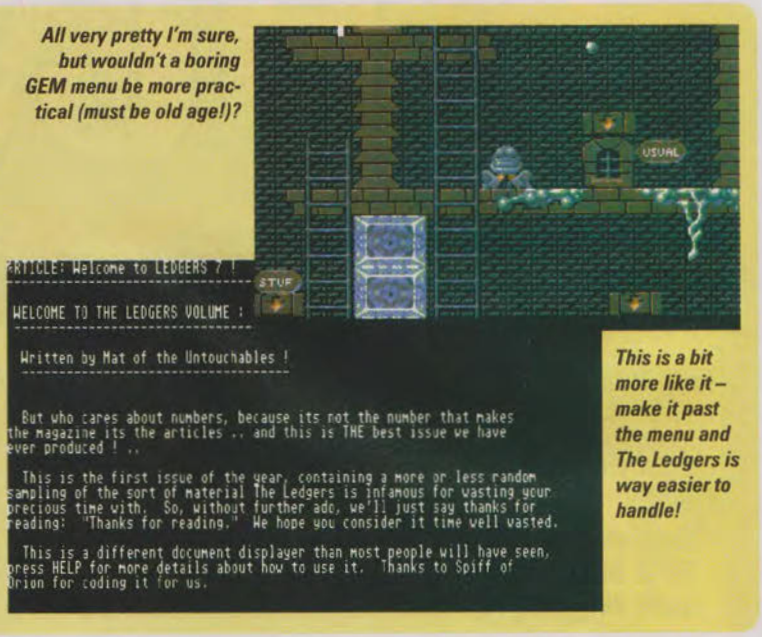
The content is very similar to ***Maggie*** in style, concerning itself mainly with entertainment on the ST, although the language is slightly less "controversial". The magazine is spread across two disks, the first being Budgie licenceware (housing the magazine itself) and the second available in the public domain with all of the source code and statutory freebies.

The GEM interface used in previous issues has been kicked out in favour of a demoesque menu, the idea being to steer a little creature around a scrolling maze in search of doors containing articles. Nice though this looks, if you're just looking for a read, it can be more of a hindrance than anything – at least it's original!

ST REVIEW COMMENT: "Despite editor Matt's strange aversion to apostrophes – there are plenty of "Ives", "havents" and "doesnts" in there – ***The Ledgers*** isn't a bad read. If your use of the ST necessitates a joystick, this could be the one for you!"

✪✪✪

All very pretty I'm sure, but wouldn't a boring GEM menu be more practical (must be old age!)?

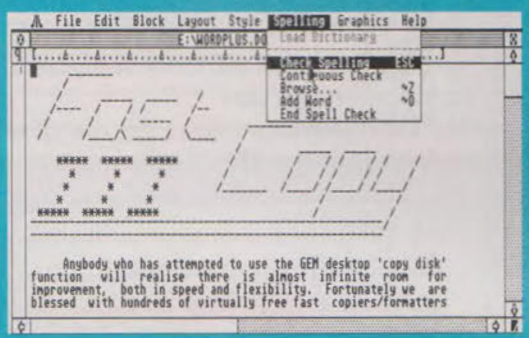


This is a bit more like it – make it past the menu and The Ledgers is way easier to handle!

STEP BY STEP

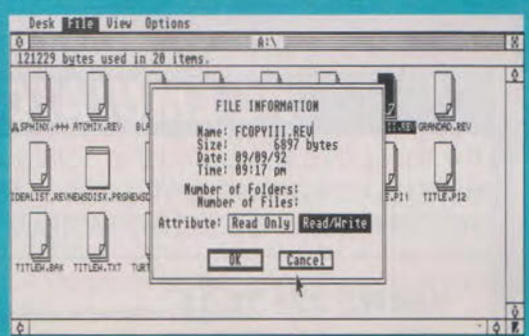
Follow these six steps to create your own publishing empire!

1 ***Prepare some articles using your favourite word processor (which should of course be First Word Plus, free with Issue 5!). Write some witty and informative copy, come up with some interesting headlines and save the text as ASCII (text with no styling) by switching "WP Mode" off.***

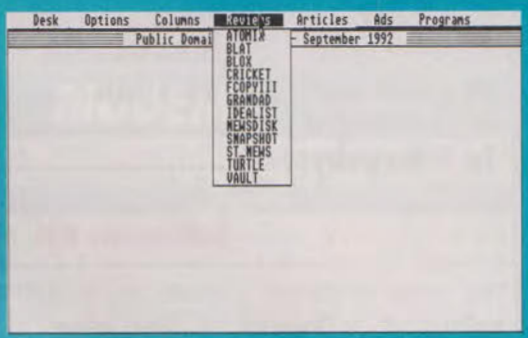


2 ***If you get any coverage in the press or in PD catalogues, people are going to see this screen, so it's worth putting some effort into your title screen design. Remember that pictures need to be in PI2 or PI3 for NewsDisk to co-operate, so convert your screens using a decent utility such as GEM View.***

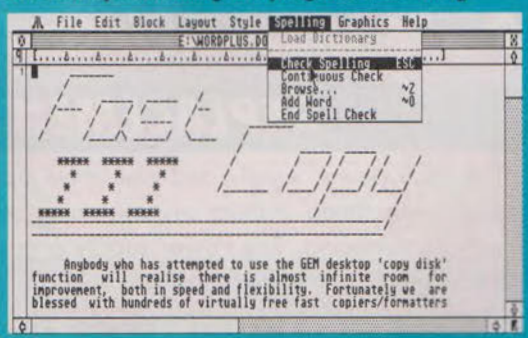
3 ***Copy the NewsDisk program, copy and title screens to disk. NewsDisk uses extensions to determine under which menu the articles appear – .REV for reviews .COL for columns .ADS for adverts and .ART for articles. Change articles extensions using "Show Info." from the desktop name titles "TITLE.PI2" and "TITLE.PI3".***



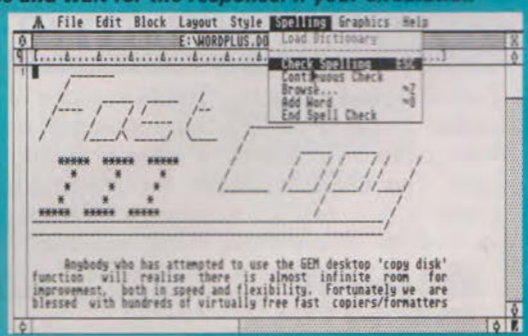
4 ***To add a title to your diskzine, create a file called "TITLEW.TXT" in First Word Plus and save it as ASCII. This will now appear as the window heading. Now give NewsDisk a spin and you will find your articles listed under their heading – make sure each article is in the correct menu.***



5 ***Now add some PD software. You'll find that you can fit far more onto the disk by crunching the program files using The Ice Packer (Floppyshop Disk 335) or similar. NewsDisk displays files with the .RUN extension under the "Program" menu. Try renaming "UTILITY.PRG",***



6 ***All that remains is to send a copy of your diskzine to all the PD libraries and wait for the response. If your circulation increases, you could offer subscriptions turning your hobby into a business. NewsDisk is available from Floppyshop, PO Box 273, Aberdeen, AB9 8SJ on Disk UTI 141. For £2.50.***



HCS Memory

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Feed Your ST

Paul Keller shows us how to create an amazing masterpiece with last month's free art package, Paintpot

PICTURE

Paintpot, as supplied on last month's cover disk, gave everyone a powerful and easy to use art utility that is packed with features. Having only just started to use ***Paintpot*** myself I was astounded with the detail that I could achieve with a cover disk giveaway program. It really is like painting with a real brush and not an Atari mouse!

Paintpot can take a little time to get into, but it's worth persevering with if you want to produce high quality pictures like the ones in this tutorial. You may think that it's too difficult for you to do but don't be afraid to try. Don't forget, you've all had one month's practice with ***Paintpot*** and I created these pictures after using ST Review's Step by Step tutorial and cramming in a couple of days' practice. This probably means that your own results could be far superior to mine – which wouldn't surprise me having seen how easy drawing is made with this program. Before we begin though, remember that a little patience with your designs will be rewarded in the long run by producing a final picture that is of a quality that you never knew you were capable of!

PASTING

The key to simple design with ***Paintpot*** is probably the Pasting function, so we'll briefly look at this aspect of the program.

Before pasting, you have to set the "default graphics mode", which is found under "Parameters" on the "settings" menu, to one of the settings below:

Set to 1 for normal (replace) mode.

Set to 2 for transparent mode.

Set to 3 for exclusive OR mode.

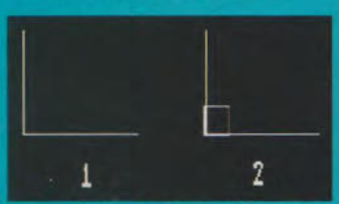
Set to 4 for reverse transparent mode.

STEP BY STEP

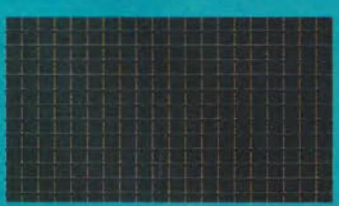
You've all had a whole month to get to grips with Paintpot. Now prepare to really take off with part two of our in-depth tutorial ...

1 *The available colours are displayed at the bottom of the screen. The larger box underneath shows the currently selected one.*

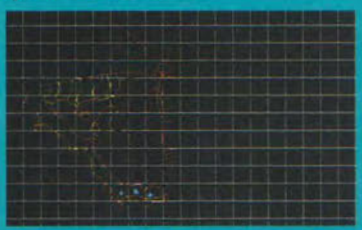
2 *Selecting the "colours" icon calls up a picture of a red, green and blue tube. Above each one is their RGB number, which is also represented as bars and as the colour in the box below.*



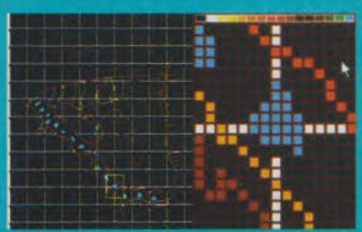
3 *Make a black background and select white as the paint colour. Select "rays" from the "extras" menu and draw an "L" shape (1). Choose "make fill" from the "tools" menu and place a box on the bottom left of the "L"*



4 *Select "clear Screen" Icon to erase the "L". Select "area fill" and place the pot on the screen.*



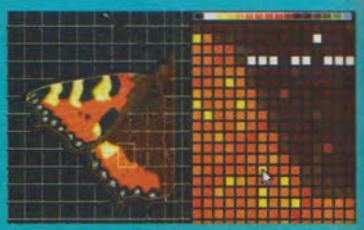
5 *Select "rubline" from the "extras" menu and draw the coloured base lines of the*



6 *Click on the "magnify" icon to help you draw any small details. You can move the magnify window position with the mouse.*

7 *Now choose a colour to work with and select the "area fill" icon. Fill all your outlines with their corresponding base colours. It's best to keep the grid at this stage.*

8 *Go to the "settings " menu and select "spray colours" Choose the colours you want by clicking on them then select the "multispray "icon .*



9 *Choose "parameters" from the "settings" menu, then change the "spray size" to "2" and "spray speed" to "10". This gives you a very accurate detailed airbrush. I used "multispray" for the brown body, and "spray" for textured highlights.*

10 *Click on the "settings" menu, select "make line" and draw an even dotted line. Select "rays" from the "extras" menu to create a texture pattern when you draw. Use this for the underside of wing.*

11 *It isn't essential to use colours of the same shade for highlights. Brown can have a dark red for shadow or even green as a highlight, as done above (see right of screen).*

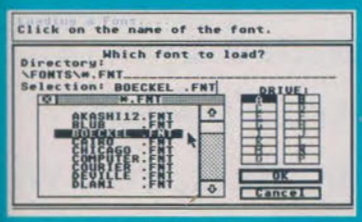
12 *The butterfly's head was to big at this stage and had too be reduced. By selecting the "copy/paste" icon I cut back half the head and re-pasted it over the old image in "replace mode". Finally I mirrored it again.*

THIS MAKE YOUR OWN MASTER-PIECES WITH THIS ADVANCED PAINTPOT TUTORIAL!

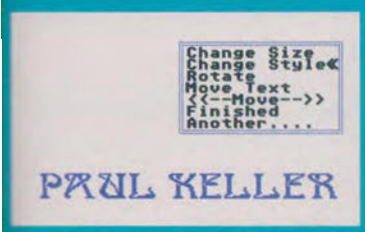
PART TWO

13 *After some final "anti-aliasing", select "Mirror", which will draw a frame around the image, and click on the right side of the screen to duplicate it.*

14 *The addition of a few blades of grass make the scene more interesting. Note the shadow which has been added to the grass which helps to give the butterfly more depth.*

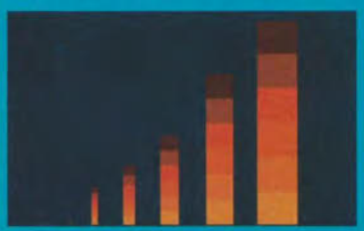


15 *Paintpot's text features are certainly better than most other raster-based art packages, with over 40 fonts to choose from. Under the "file" menu you will find "load font", select it open the "fonts" folder, then select the style of type you want to use.*



16 *Go to "screen 2" (if empty) and select the "text" icon. Type your message in the box and press enter. You are then presented with this screen. The style of the text can be altered by selecting different formats.*

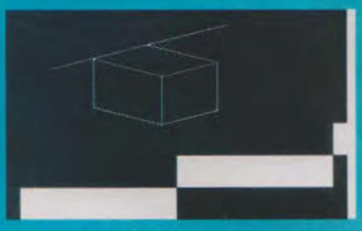
17 *I rotated my name and placed the text down on screen (2). The next step with your text is to make it into a brush and paste it onto our picture, which is on screen 1. Finally, anti-alias the text to improve its finished look.*



18 *Placing the colours in order of contrast gives a sharper resolution. Colours that range from light to dark on a dark background produce a fine point which is useful for detail.*

19 *Contrast can be used to give an impression of distance. The brighter a colour, the closer it seems to you. To make an object stand out, increase its contrast level in relation to the other colours.*

20 *One real problem for ST artists' are "jaggies". "Jaggies" become more pronounced when you increase the number of pixels in each step. Our example has four pixels in each step and is very untidy.*

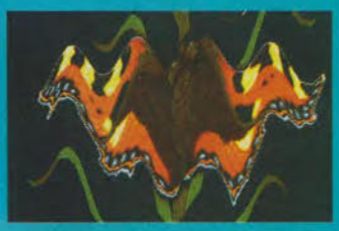


21 *"Jaggies" are reduced to a minimum by using less pixels. This example only has one pixel in each step and the "jaggies" are less pronounced. They occur with lines that run at steep angles and on circles. They are usually the biggest give away that artwork was produced on a computer, so it's worth trying to avoid them.*

22 *The above information should be remembered when using tools such as "skew (X)". An angle of about 45° is preferable.*

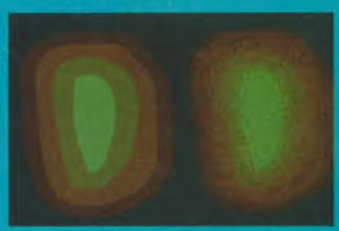
23 *The best angle for the "skew (Y)" tool is about 30°. Note that with both these skew commands some of your picture may be cut off by the border. It pays to estimate how far the skew will take each side so you can avoid this.*

24 *The "Bend (X)" tool is used to "sine wave" your picture through the x-plane. This effect is useful for creating reflections in water.*



25 *The "Bend (Y)" icon also creates a "sine wave" of your picture, but through the y-plane.*

26 *The "rotate" icon is used to rotate the angle of the selected object. The current angle is displayed as well as the direction. As with the skew tools, parts of your picture can be lost in the borders, especially if the image longer in one direction.*



27 *These two contours were created with the "brush tool". The right side has been "diffused" by airbrushing the edges.This is another good way of preventing your artwork from looking like it was produced on a computer.*

28 *Finally, select the "box" icon and draw a red frame drawn around the picture. This simple effect brings even more attention to the image within the area of the box without being too obtrusive.*

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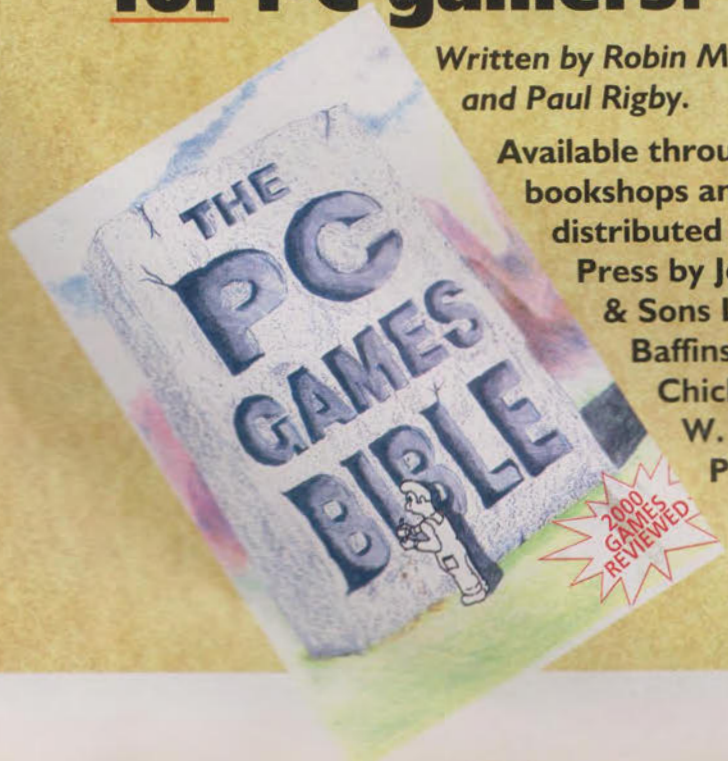

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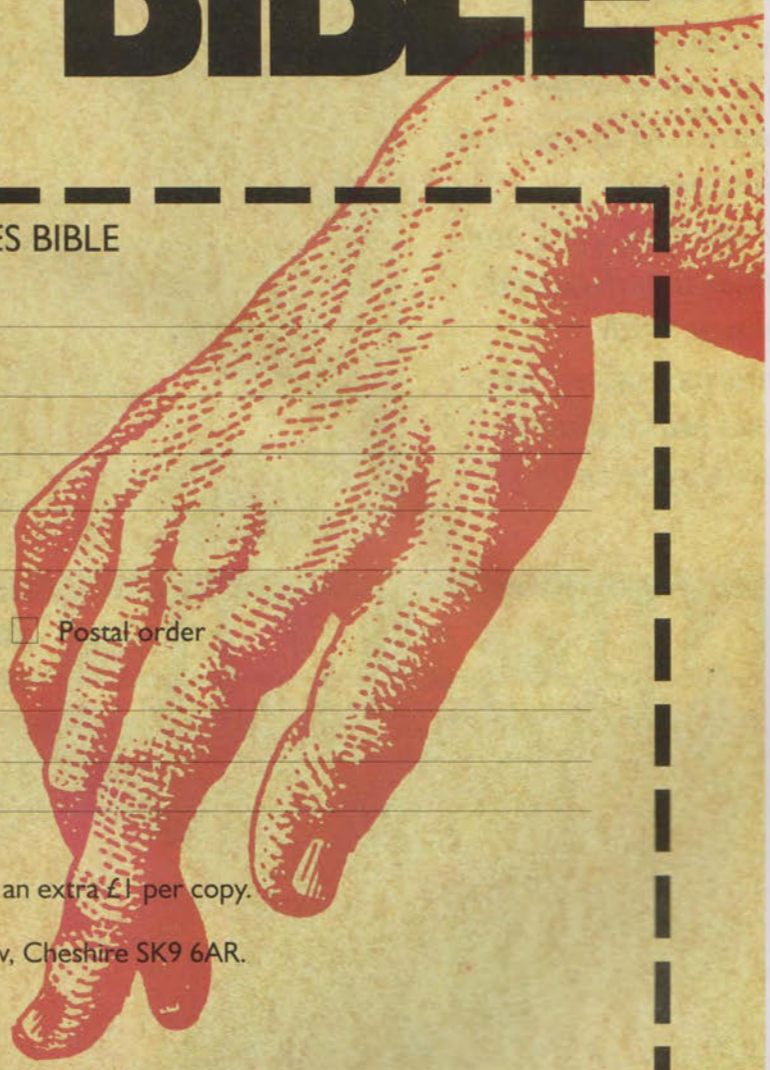

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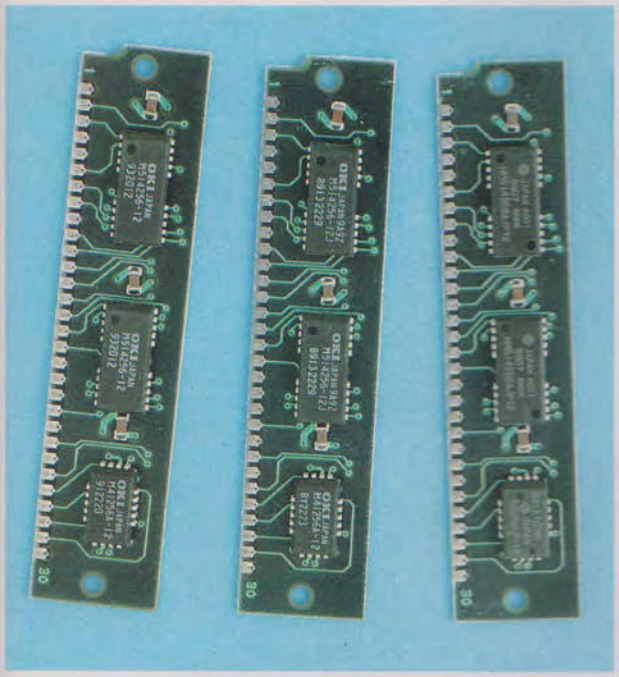

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If you're serious about using your ST for desktop publishing, you'll know the problems that PostScript can cause. André Willey looks at one solution

POST HASTE

We all know that the ST and TT are powerful machines, quite able to stand their ground against many of their higher priced competitors. However, until recently a big problem for the growing ST DTP market had been the lack of heavyweight support for PostScript, the industry-standard page description language used by all professional typesetting bureaux.

Without PostScript, obtaining professional quality output is almost impossible. Thankfully, several packages – including the new ***Didot Professional*** and ***Pagestream 2***, along with a few older packages such as ***Fleet Street Publisher*** and ***Timeworks DTP*** - can now create PostScript disk files suitable for typesetting.

PROOF OF THE PUDDING

This brings with it a whole new problem – that of proofing the document before sending it off for printing. Up until now, such proofs could only be made using the antiquated and somewhat bug-ridden ***UltraScript*** (now discontinued), or the highly complex, command-line driven, PD package ***GhostScript***. Other than purchasing several thousand pounds worth of PostScript printer, the best alternative is now Compo Software's new PostScript interpreter, ***CompoScript***. This allows even your humble 1040 ST to print or preview PostScript files directly. A large number of output devices are supported, including 9 and 24 pin dot-matrix printers and several makes of laser, not to mention the screen.

GETTING STARTED

Setting up ***CompoScript*** is fairly straightforward. Two master disks are provided, one containing the main program files and the other the complete set of 35 Bitstream PostScript Type I (hinted) fonts which come as standard. Users of this type of software will really require a hard disk, and it's a quick enough operation to copy the supplied disks onto a suitable partition. From there on, any further configuration may be accomplished from within ***CompoScript*** itself. The 35 standard fonts are pre-installed, but an editor screen allows you to add your own fonts as required – ***CompoScript*** can use PostScript Type I and III fonts, which may be spread across several different folders. These are the standard fonts used by all typesetting bureaux, and there are literally thousands more available. You can even define font aliases, which allow your fonts to be referred to by alternative names – such as Times instead of Dutch, Helvetica instead of Swiss, and so on. Your final configuration (including fonts, preferred output mode, resolutions, and so on.) can then be saved to disk for future use. You can also specify whether you want files to autoprint, and give a folder which will be checked for printable PostScript files every time you run the program. ***CompoScript*** can also be run as a .TTP program, or take batch commands from a shell or command line interpreter.

Many prospective ***CompoScript*** users won't want to print their final output on an Atari laser or dot matrix printer – so it's probably simpler to use the perfectly adequate direct printer drivers provided with most vector graphic and DTP programs. The one

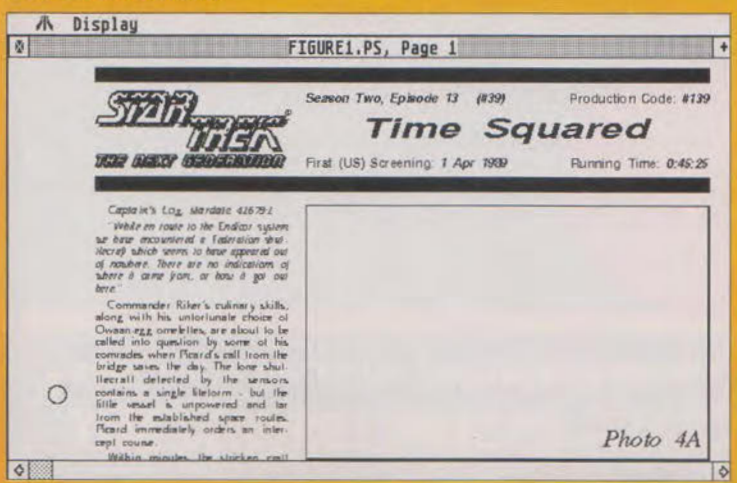
Most ST owners have printers like bubblejets, Deskjets and 9 of 24 pin printers. Composcript will allow Postscript files to be output on non-postscript printers .

High quality output
Very user-configurable
Outputs to screen, picture file, or printer

PROS AND CONS

Expensive, since it comes with 35 PostScript fonts
Can be a little slow
Sometimes reports spurious errors

CompoScript can preview a page on screen to give a quick visual check that the file is correct before printing.



Screen previews may be generated at any resolution – here, 300 dpi is used to check laser output quality.

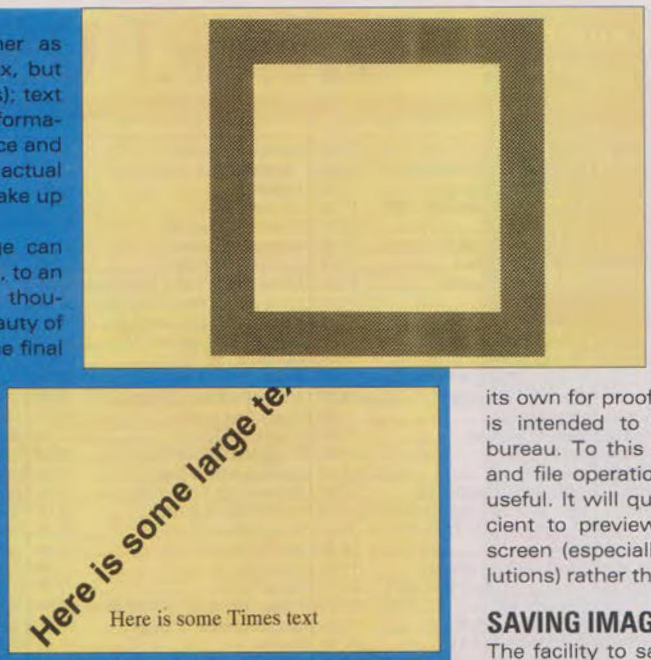
POSTSCRIPT: A GENERAL OVERVIEW

PostScript, unlikely as it may sound, is really a programming language, just like ***BASIC***, ***Cobol***, ***Fortran*** or ***C***. What makes it different from these more conventional languages is its main purpose in life. While ***Fortran*** was designed primarily for mathematical operations, and ***Cobol*** for business applications, PostScript was developed to simplify the task of "programming" complex text and graphical output for laser printers and electronic typesetters. Whatever printer you are using, from a humble dot matrix to a phototypesetter, the end result on the printed page is really a pattern of tiny dots. In the case of a dot-matrix there may be as few as 72 dots per inch (roughly the same as the ST's monochrome screen display), or as many as 360 dpi on some 24-pin printers.

Laser printers tend to run at either 300 or 600 dpi, and phototypesetters usually operate at a staggering 1,270 or 2,450 dots per inch – just think, that means the printer will require about 750K of memory for every square inch you want to print – or around 65 Megabytes for a single A4 page!

It is obviously impractical to even consider sending a typesetting bureau 90 floppy disks for every page of output, and this is where PostScript comes into the equation. Instead of storing each page as a huge matrix of individual dots, it works by defining the size and position of each individual item on that page. For example, a box can be defined as a set of four straight lines along with an appropriate fill pattern; a circle is created from a series of mathematical curves (either as plain arcs or more complex, but more flexible, bezier curves); text is created by providing information on the required typeface and point size, along with the actual string of characters that make up the words.

Gradually, an entire page can be described in exact detail, to an accuracy measured in thousandths of an inch. The beauty of this arrangement is that the final PostScript file will be completely independent of the hardware used to create it. Any printer capable of understanding PostScript will be able to print that exact same file, to the best of its own ability. This is a vital consideration when checking a final proof of your important document before sending it off for typesetting. You don't want to find that your text is wider on the final printout than it was on your proof!



Not breathtaking– but they show what can be easily done with Composcript and PostScript.

To describe PostScript fully would (and in fact does!) take several books, but it really isn't necessary for most people to consider writing their own programs in the language – after all, that's what desktop publishing packages are for. Although PostScript contains a variety of mathematical operators, plus some rudimentary file handling, the main bulk of its commands are dedicated to the task of describing and scaling the lines, curves and text which can used to make up any page layout.

A PostScript file can often look extremely complex, but like any other computer program it is made up of a series of fairly simple building blocks known as procedures. Actually, as an exercise, it is quite possible to write a PostScript program in just a few lines – see examples 1 and 2. The casual Basic programmer will find the command format a little confusing to start with, since PostScript uses a "stack-based" command structure. A PostScript program gives the parameters (numbers and/or strings) first, and only then does it describe what to do with them. In practice, this means that a BASIC command such as PLOT x,y would be shown in reverse in PostScript, e.g.: x y PLOT.

Technically, PostScript devices generate their output using what is known as a "virtual page". This is an area of the printer's internal memory into which the required image is stored until the user indicates that the page is complete and ready to be printed. Any item can be scaled, rotated or distorted before being placed into this virtual page, and multiple layers can be placed on top of one another to create any required effect.

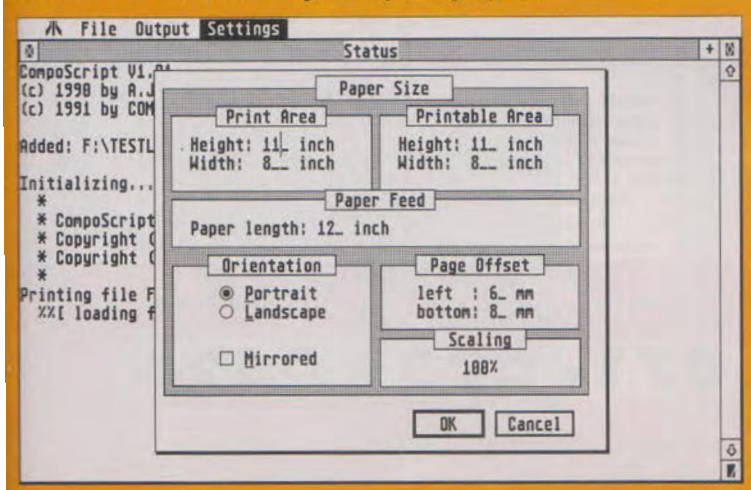
exception is for people using Mac or PC DTP software under an emulator, who need to print PostScript output files on a regular basis. However, for the general Atari market, ***CompoScript*** will come into its own for proofing output which is intended to be typeset at a bureau. To this end, the preview and file operations are extremely useful. It will quite often be sufficient to preview a document to screen (especially at higher resolutions) rather than print it out.

SAVING IMAGES

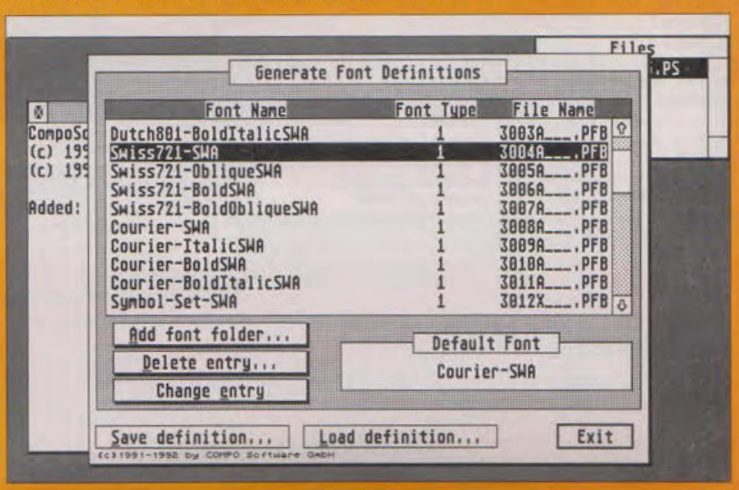
The facility to save the output as an Image or TIFF file allows you to incorporate PostScript (or more likely Encapsulated PostScript) files into other packages by creating a new file at the same resolution as the printer. For example, a 300 dpi IMG file could be imported into Calamus and printed as part of another layout. Unfortunately, the TIFF output is screened monochrome only; I'd rather hoped it might be able to create a grey-scale TIFF, but apparently the PostScript engine isn't capable of this. Neither is it capable of creating colour TIFFs, or even separations, from colour PostScript files.

While on the subject of EPS files, it's worth noting that these will often not include the vital "showpage" command at the end of the file. It is this command which causes the file to be printed out (and hence it is usually omitted from EPS files which are not normally destined for direct printing). If you encounter any such files, which seem to be working fine but suddenly return to the CompoScript menu without having

The Paper Size dialogue not only controls the size and offset of the paper to be used, but also the orientation of the image and any scaling required.



The Font Configuration Dialogue allows you to install new PostScript Type I or Type III fonts. If a font is not found, the Default entry will be used – in this case, Courier.



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printed, try editing the file via a simple text editor and adding a "showpage" to the end.

Overall print quality is excellent, although rather slow. I timed the same complex test page with both ***CompoScript*** and ***UltraScript***, and even allowing for ***UltraScript*** to internally cache all 35 fonts (as compared to ***Compo***'s three), the ***UltraScript*** page started printing after less than one minute, whereas ***Compo*** took one minute, 33 seconds. However, the quality of text output, especially at smaller point sizes, was far superior with ***CompoScript*** – probably due to the "hinting" information given in PostScript Type I fonts.

TEETHING PROBLEMS

There are still a few bugs to sort out, although new interim versions of the program seem to be appearing with reassuring regularity. Mac files used to present tremendous problems, but the latest version appears to have cured many of these incompatibilities. Recent feature additions have been welcome too, such as user-definable page offsets, scaling and rotation.

DOUBLE VISION

CompoScript will also soon include an option to print alternate pages, which will be very useful for double-sided book layouts. At present, you can only achieve this by running the program in batch mode, and specifying each required page number in turn on the command line. Also, there seem to be some oddities in the default path handling. For example, if you use a command line to supply a PostScript filename in the same directory as the program, it looks instead in the sub-folder C_SCRIPT for the file – and of course it can't find it.

This problem can only be overcome by providing the full path details of every file, which is a little cumbersome.

ERRORS

Error reporting has also been incorporated in the latest version, which is much more useful than the previous incarnation's habit of just stopping mid-flow, with no indication of what had happened. However, it does now have the annoying habit of sometimes reporting a bogus error after it has finished printing a page. The output is fine, but the error message may worry first-time users. I also noted some bugs with printing files at certain resolutions. This applied mainly to ***Fleet Street Publisher 3*** output, which otherwise was 100 per cent reliable through ***CompoScript***. Sometimes a file would print fine at 300 dpi, but fail at 80 dpi – or vice versa!

However, these niggles are very minor and are being looked into; overall, ***CompoScript*** is an excellent and much needed product. The retail price of £199.99 does not seem too excessive when you look at the lack of serious alternatives – and besides, the 35 PostScript Type I fonts alone would normally set you back at least half of that. It's just a shame that it isn't available at a slightly lower price with just the basic 13 fonts, though.

"A much needed product without a serious rival"

NAME: COMPOSCRIPT
COMPANY: COMPO SOFTWARE
CONTACT: 0480 891819

PRICE: £199.99
RELEASE DATE: OUT NOW
MIN MEMORY : 1MB

FEATURES	●●●●○
EASE OF USE	●●●●●
DOCUMENTATION	●●●●○
COMPATIBILITY	●●●○○
VALUE FOR MONEY	●●●●○

OVERALL 85%

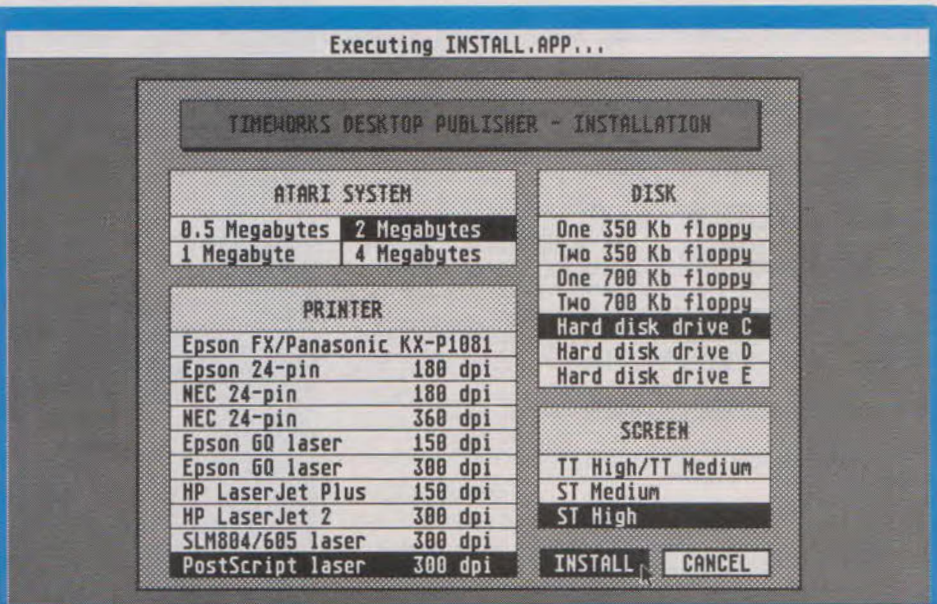
COMPOSCRIPT AND DTP

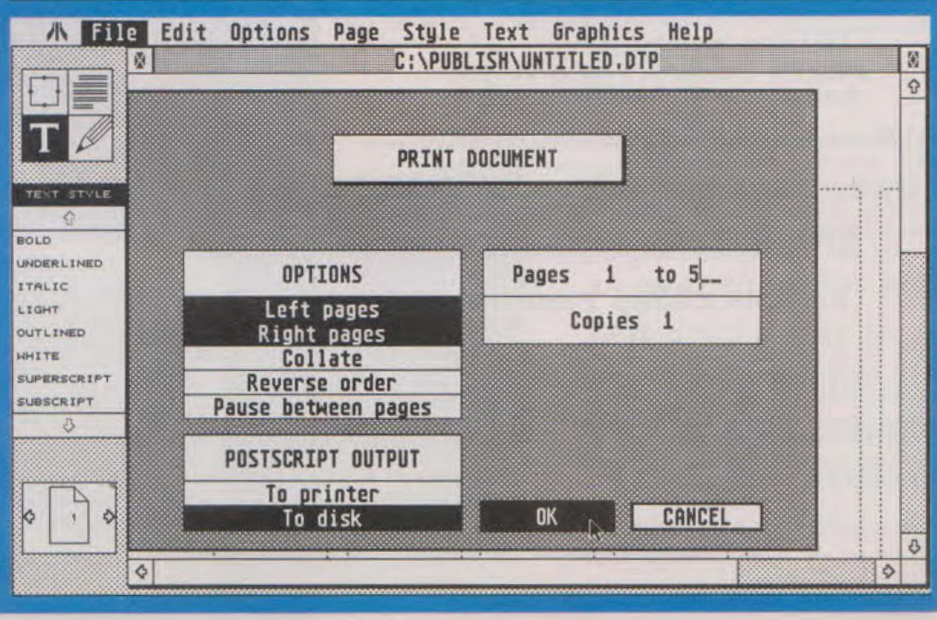
Most ST DTP programs – with the exception of the otherwise excellent ***Calamus*** – are capable of printing to PostScript laser printers. They all go about the process in different ways, but as long as they are capable of using PostScript compatible fonts and writing their output to disk, they should work fine with ***CompoScript***.

If your software only allows the use of one printer driver at a time (as is the case with ***Timeworks DTP***) you must install its PostScript option before you start creating your page. Once you have finished designing the page, select the printout option exactly as you would normally. Instead of sending the page to a printer, select the "write to disk" facility. Give a filename when asked, and the PostScript output will be written directly to the disk file. Do make sure there is plenty of space though, as PostScript files tend to be rather large!

Some software (such as ***Fleet Street Publisher 3***) provides an option to call an external printer driver program directly, returning you to continue editing your page afterwards. However, most will require you to exit from the DTP program and run ***CompoScript*** separately. Once in ***CompoScript***, simply select the file (or files) you have just created, and wait for the print out.

PostScript can be a very verbose language, so if you are sending your output files to a typesetting bureau (either on disk or via a modem) it is worth knowing that they compress very efficiently using any of the generally available file compaction programs – ARC, LHARC, ZOO, ZIP, and so on.





TOP: Installing Timeworks DTP for use with a PostScript printer.

RIGHT: When outputting a PostScript page from Timeworks, select the "PostScript Output To Disk" mode, and give a suitable filename.

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 convertors. 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 format 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 turn 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.

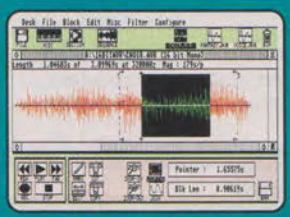
Sample Dump Feature

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.

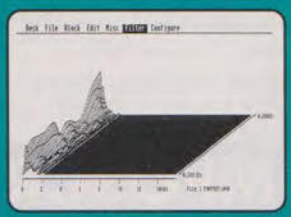
microdeal

REPLAY

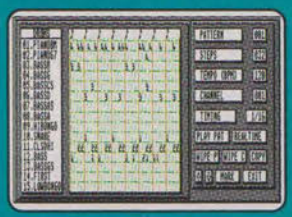
The 16 bit sampler for the Atari



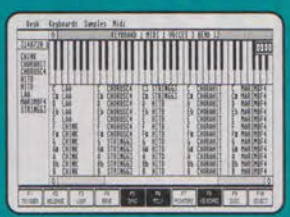
REPLAY 16 MAIN EDITOR



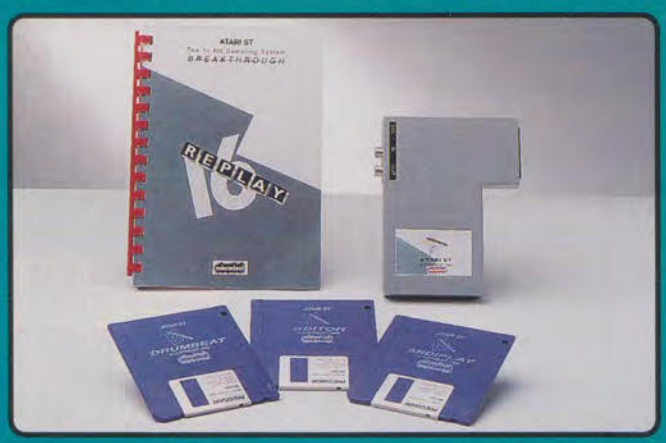
FFT 3D DISPLAY



DRUMBEAT SONG EDITOR



MIDIPLAY MAIN SCREEN



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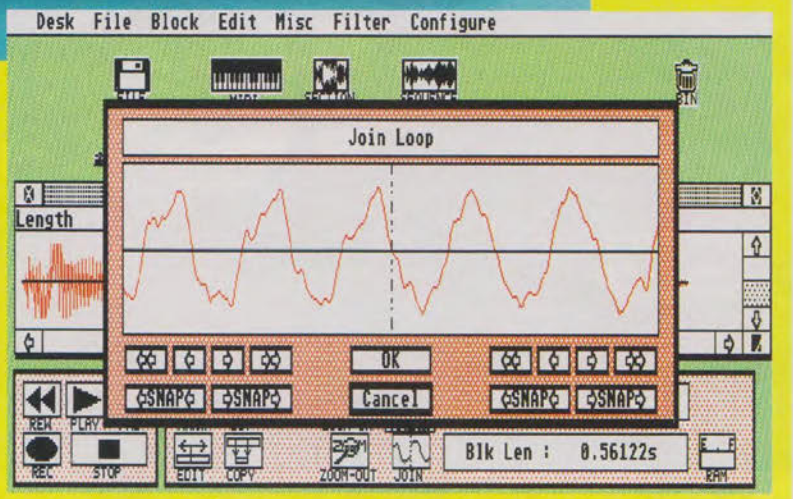
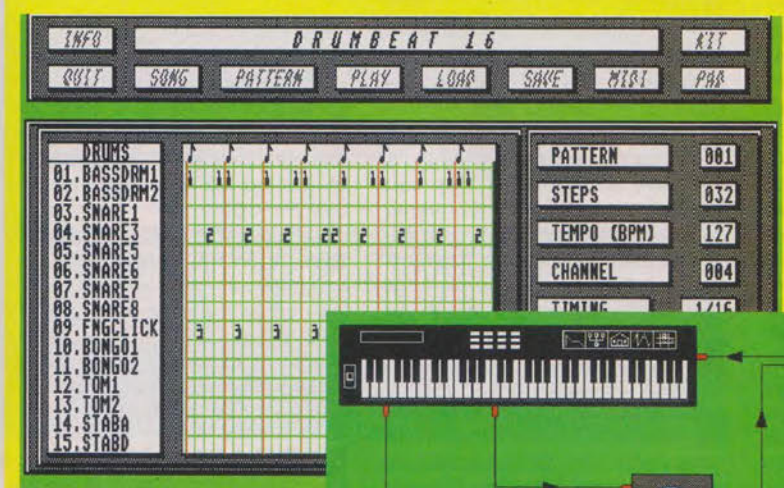
MIDI MONTHLY

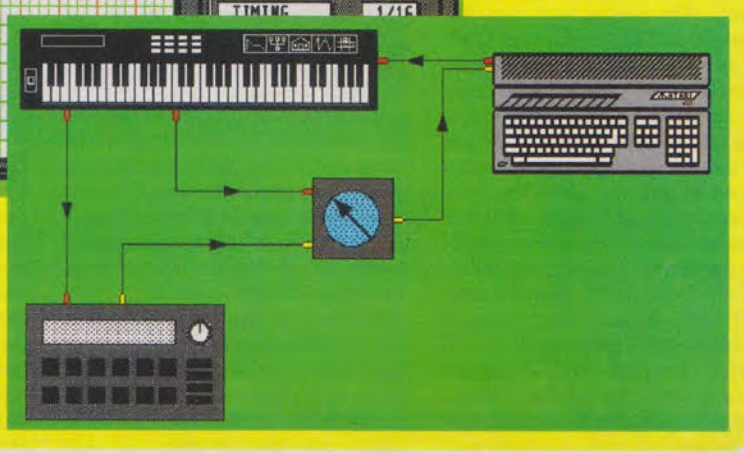
Replay 16, possibly the most powerful sampler on the ST yet.

Replay 16 – high-quality samples for a down-to-earth price. Turn to page 68.





Using Drumbeat transforms your ST into a fully-featured drum machine using Replay 16's samples.



What use could you have for a MIDI Switcher? Find out on page 75.

***Ever** wanted to use your ST for sound effects, or as a drum machine? This month we take a look at Microdeal's Replay 16, which transforms your ST into a high quality sampler for the princely sum of £129. How good is it? To find out for yourself, take a look at the review starting on page 68.*

***MIDI** Points on page 74 looks at exactly what a sequencer is. Modest MIDI, also on page 74, is the jargon-buster where all of those terms you keep hearing get explained, while Building a MIDI System continues on page 75 with a guide to using a MIDI Switcher.*

***If** you have any MIDI problems and can't find anybody to answer them for you, just drop a line to me, Vic Lennard, here at MIDI Monthly at the usual address. In the meantime, enjoy the read. . .*

High-quality sampling is not something that you usually associate with the ST. However, Microdeal's Replay 16 may change your mind...

REPLAY 16

When the ***Replay 4*** sampling cartridge was released by Microdeal, it gave ST users the opportunity to get involved in one of the most rewarding areas of working with the ST – sampling. There's something special about connecting a microphone to an ST via the cartridge, clicking on "Record" on-screen, muttering a few non-repeatable words and then having them haunt you by pressing the "Play" button.

The sound quality was reasonable and the three programs that were included with the package – an Editor, a drum machine and a MIDI playback keyboard – gave a great deal of scope.

Microdeal's Replay 16 turns your ST into a drum machine.

IMPROVEMENTS

It is difficult to listen to many pop songs nowadays without hearing samples, especially where dance music is concerned. While the failing of ***Replay 4***, renamed to ***Replay 8***, was in the relatively poor sound quality, this is not the case with the brand new ***Replay 16*** as it can offer up to CD audio quality. So with the sound effect of a chilling scream ringing in our ears, let's get started!

MAKING A RECORDING

The ***Replay 16*** hardware is a substantial box which plugs into the cartridge port and hugs the left side of the ST. It has a couple of sockets for audio In and Out, and a small rotary control to set the record level.

Replay 16 comes complete with four disks, the most important of which is the Editor. On loading this, you might be forgiven for thinking that you have also loaded a replacement desktop as there are various icons on-screen. Five of these are along the top of the screen: File brings up the file selector, MIDI is used to test samples on an on-screen keyboard, Sequencer lets you put various sections of samples together in a timed list, while Section allows you to set up the parts of samples for the sequencer.

There's also a bin for getting rid of loaded samples, a small transport section for record, playback and so on, and a RAM meter which tells you how much memory is left for new samples.

Replay 16 has to be set-up according to your system. While System Configuration includes options on the type of zoom and time display, the most important selection is that of Output; the choice is Monitor or HIFI, the latter then sending the sound out from the Out on the cartridge. If you have an STE or TT, you can use the DMA chip and the stereo outputs directly.

Recording a sample is straightforward. Select New Sample from the File menu, set the length (in seconds), name the intended sample and set a path for saving to – useful if you're using a hard drive. A click on Record brings up the Record Control box from which you set the input volume using the visual waveform window as a guide and the Level rotary on the ***Replay 16*** cartridge if needs be. A final click on Sample sets ***Replay 16*** into motion.

Once the recording microphone cursor disappears, the audio waveform appears on-screen. Clicking on Play leads to instant gratification. Using the Fast Forward and Rewind buttons, you can move the current position pointer to start the playback from a place other than the start. The audio quality is good even with a relatively low sampling frequency of around 22 kHz (half of that used for CD).

An icon for this new sample appears on the desktop, and you can have as many samples showing here as the memory of your ST allows. You can even have lots of sample windows showing on-screen as long as you resize the windows to fit them all in.

BLOCKS AND LOOPING

Once the waveform appears on-screen, various other icons emerge at the same time, all in the Block Control box at the bottom of the screen. Zoom-In and Zoom-Out do what you would expect; they allow you to take a closer look at the waveform by expanding it horizontally. ***Replay 16*** incorporates the rather clever idea of using the sample window

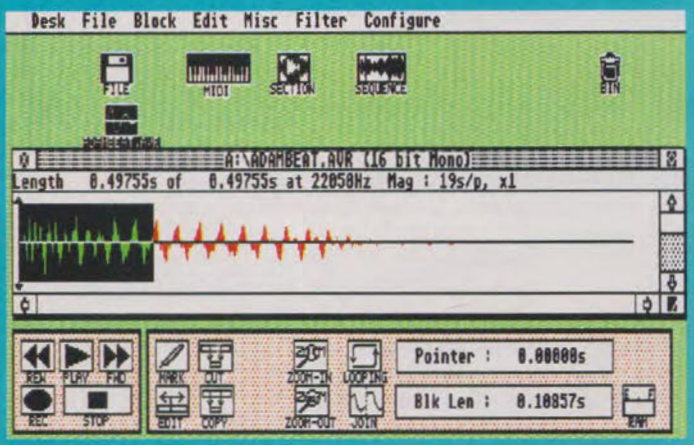
Very good sound quality
Runs in high or medium resolution
Easy to use
Can turn your ST into a sampling drum machine or keyboard

PROS AND CONS

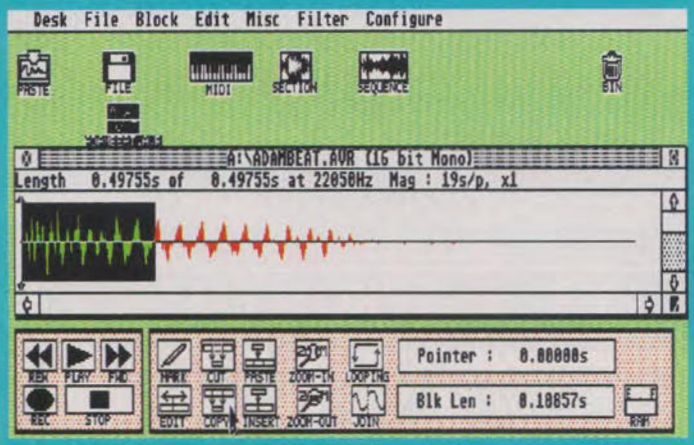
Not at a price that will make you immediately go out and buy

STEP BY STEP

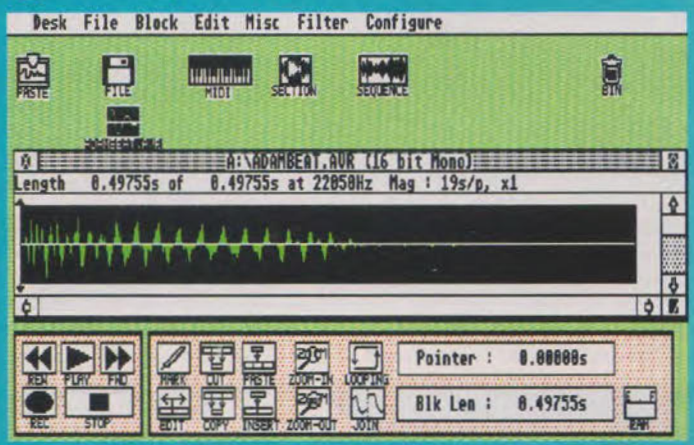
Here's how to create a backbeat. . .



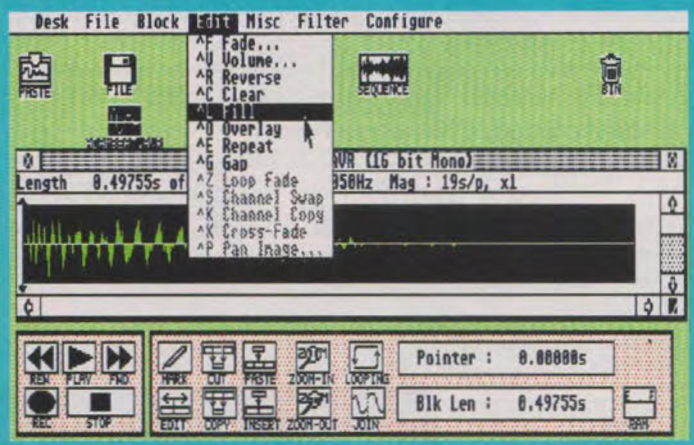
1 *To create a backbeat, use the Fill function. Block out the part of the sample that you want to use...*



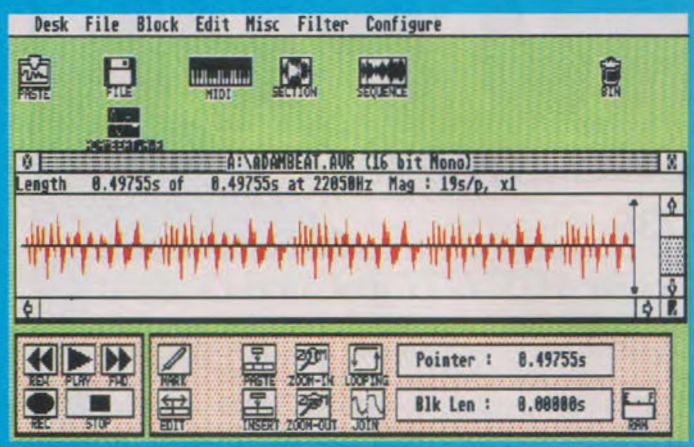
2 *... and Copy it to the Paste buffer. An icon appears for this appears on the desktop.*



3 *Now select the sample space that you want to be overwritten by repeats of the Paste buffer. In this case, we're selecting the entire available space.*



4 *Select Fill from the Edit menu...*



5 *...and that's it – instant backbeat!*

scroll bars for vertical zooming.

Most of Replay 16's functions depend on being able to mark out a Block, which is an area of the sample waveform. Creating a block is also easy; position the cursor in the sample window and drag out an area which then inverts in colour. A block can be cut or copied to a clipboard and then pasted back or inserted at a different place, or even in a different sample, and when the clipboard is in use, an icon for it appears on the desktop. For instance, you might want to create a sound which has a piano sound to start with but then changes to a violin. With the piano sample loaded, block out the part of the beginning that you want and click on the Copy icon which appears in the Block Control Box. Now load the violin sound, set the pointer at the start and click on the Insert icon which will put the piano sound at the start and place the violin sound directly afterwards.

By using the block facility to Cut the start of the violin sound, you can end up with a sound integrating the parts of the piano and violin that you want. Easy to do? Not too tough, but it's worth frequently saving your work as mistakes cannot be rectified.

Let's say that you want to use a two-bar drum beat and loop it, which will make it play continuously. Sample the drum beat, use the pointer to find the start of the part you want to loop and click on the Mark icon. Now play the sample, use the right mouse button to stop playback at the point you want the loop to end and click on Mark again.

Clicking on the Looping icon then lets you set the two markers as the start and end points of a loop and turn looping on. When you exit, the Looping icon is inverted and the markers on-screen now have a pair of arrows to show you the loop points. Hit play and voilà – instant backbeat! If you haven't set the markers correctly, click on the Edit icon and select the marker you want to change; a window appears from which you can move the marker by small amounts.

Two other functions help when looping. Join shows you the end of the loop butted up to the start of the loop and lets you move the markers to set a "clean" loop – one which will not glitch. If, no matter how hard you try, this doesn't lead to a good result, Loop Fade will overlap the loop join point in such a way as to hide any slight glitch.

EDITING SAMPLES

Replay 16 includes many professional editing options. It is very difficult to record a sample and to ensure that the level is as high as possible without running the very real risk of ending up with a distorted sample, but if the level is too low, the amount of hiss is likely to be quite high. The answer is to use the Volume function which can scan an entire sample, find the highest point, increase it to

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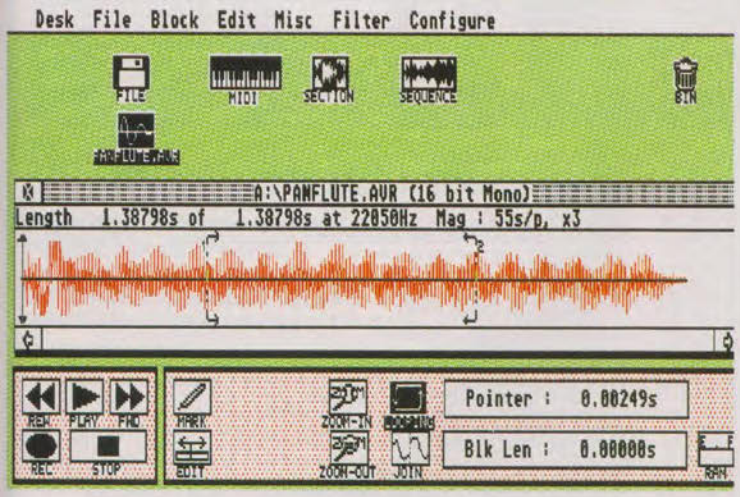
HOW LONG CAN I SAMPLE FOR?

Recording 16-bit sound at a sampling rate of 22 kHz requires 44 Kilobytes of memory per second of sample. Allowing for the free RAM in an ST and the memory required to run the actual Editor program, you get the following approximate times:

Memory	Seconds
0.5 MB	2.5
1 MB	14.0
2 MB	36.0
2.5 MB	48.0
4 MB	84.0

If, however, you are prepared to have an inferior sound quality, you could record using 8-bit resolution and in so doing double all of these times.

Alternatively, you could use a lower sampling frequency which would increase recording times proportionately.



The Main screen of the Editor with the desktop-style icons, transport and Block Control box. The active sample has a loop set as shown by the arrows pointing towards the two marks in the sample.

the maximum possible and increase all other parts of the sample proportionately. Usually referred to as "normalising", you will probably use this function every time you make a recording.

FADE AND REVERSE

Fade lets you fade a sample in or out by setting the percentage decrease in volume at the start and end. This is useful if you are splicing together two samples and want to fade out the second part. Reverse turns the sample around while Clear removes the part of the sample that lies in the current block.

If you've created a good loop, you can copy it to the clipboard and use the Fill function to repeatedly paste it into the current sample window. You might use this in tandem with the Overlay facility which lets you combine two samples by superimposing one on top of the other.

Also, while ***Replay 16*** can't sample in stereo, it is capable of editing stereo samples and so has various edit facilities specifically for these.

SETS, MIDI AND SEQUENCING

A typical use for ***Replay 16*** will be to use the ST as a super drum machine. For this, you would record various different percussion sounds such as bass drum, snare drum, hihat, toms, crashes and so on. Let's say that you then want to load all of these into ***Replay 16*** to check their levels; you would have to individually load the samples, which is a rather tedious job. Define Set lets you group together a number of samples and then tell ***Replay 16*** to load them all – a much better idea. The process takes up very little disk space because the samples themselves are not saved, but only serve as pointers as to where they are. This also means that moving the samples around on a hard disk or using a different floppy generates an error.

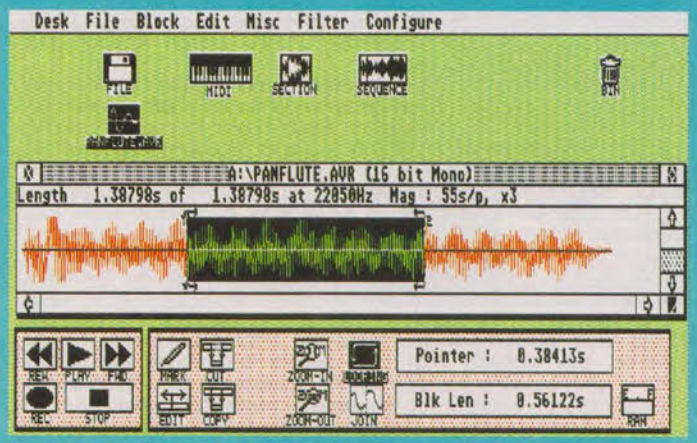
Up to 10 samples can also be defined for playback via a MIDI keyboard, with a different MIDI Note for each. This is useful for checking loops, but the separate MIDIPlay program is far more powerful – more about this later.

Replay 16 has an on-board one-track sequencer, but one which you control by setting the trigger time of each sample. Using the Section facility, information on blocks or entire samples can be saved and then used in the Sequencer by setting the time you want them to play and how many loops for each. You will be guaranteed quite interesting results, especially if you are working with percussion samples.

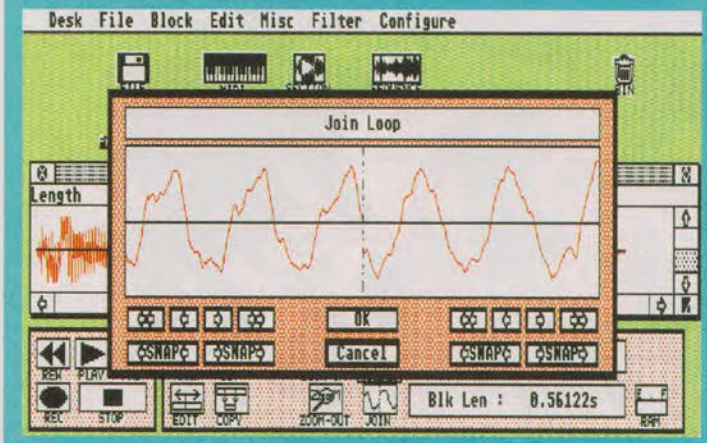
EFFECTS AND FILTERS

Special effects are an absolute must to make a sample sound that little bit individual. ***Replay 16*** has six of these in-built which you can apply to any sample in memory. These range from reverbs through to single delay, multi delay and flange. Flange used with bass guitar, vocal or crash cymbals is a great effect. The other serious facility in ***Replay 16*** are the filters. These allow you to remove or boost frequencies in many different ways and while

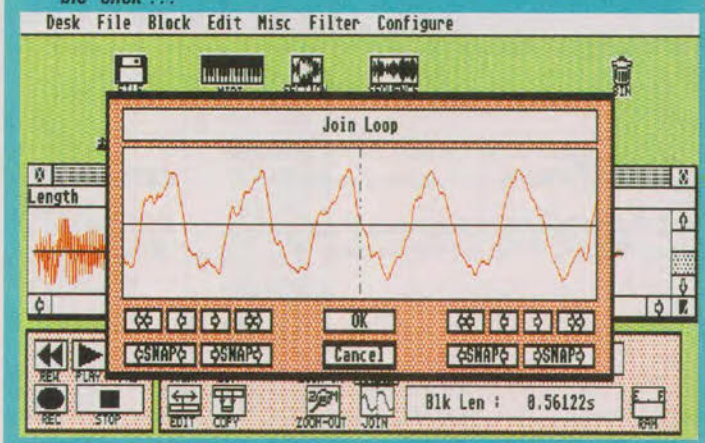
STEP BY STEP



1 ***Selecting a block lets you set a loop to make a sound appear to play continuously. When the second mark is reached, the sample immediately continues from the first mark.***



2 ***Using the Join function, you can look at the precise point that the sample loops. Here, the loop is far from smooth and will actually cause an audible "click"...***



3 ***...while here, the loop point has been moved to ensure that the sample plays back without any glitches.***

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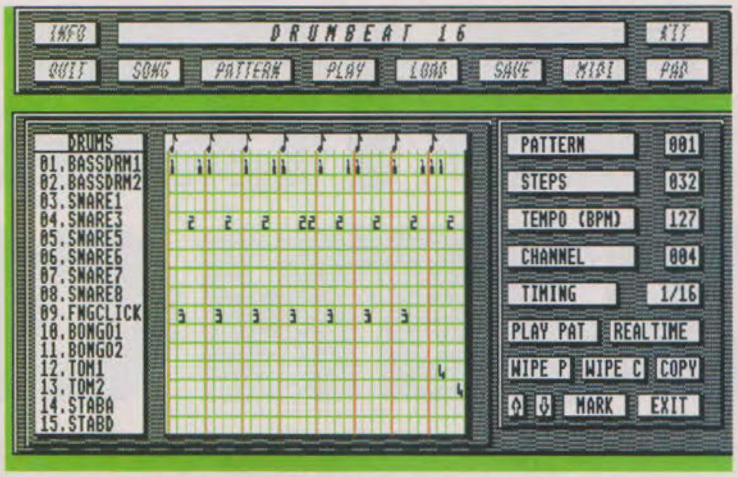
INSIDE INFO

Designed by AVR (Audio Visual Research), the original *Replay 3* cartridge included a very basic editor and was soon upgraded to *Replay 4* with a slightly better offering. When *Replay 8* appeared it included the three programs that were to be included with mono Replay programs thereafter; Editor, Drumbeat and MIDIPlay.

The current range is made up of the 8-bit samplers *Replay 8* (£59.95) and *Stereo Replay* (£89.95), and *Stereo Master* (£39.95) which can be used with Microdeal's Quartet sample sequencer. Available directly from AVR is *Pro Series 16* which has the same software as *Replay 16*, but can produce better sound quality through the use of superior components.



Drumbeat allows you to use your ST as a drum machine by taking samples from Replay 16 to create drum patterns and songs.

they will be mainly used by experts, or those who like messing around and seeing the results, there are times when you will want to use them. For instance, if you take a sample from a cassette, the chances are that it will be rather hissy. You could use a Low Pass Filter with a frequency of around 5000 Hz to get rid of this. Perhaps there's a lot of hum in a sound, or a bass drum is very boomy; the High Pass Filter set at 60 Hz will deal with that nicely.

Other filters let you enhance certain frequencies, and there are even straight-forward treble and bass boosters. If you need to see where a problem frequency occurs, you can always use the FFT (Fast Fourier Transform) display which shows the frequency make-up of a sound.

DRUMBEAT & MIDIPLAY

In the package are two other dedicated programs which allow you to use your samples as a drum machine or play the samples from an attached MIDI keyboard.

Drumbeat is a four-voice drum machine which means that it can simultaneously play four samples. Up to 30 samples can be loaded into memory at any one time and the layout of Drumbeat is in keeping with a standard drum machine; up to 50 patterns with each pattern being up to 32 beats in length.

The pattern mode has a grid where drums beats are entered. It works quite well; each drum can be given a MIDI channel, note number and velocity for loudness and drums can be played from an external MIDI keyboard. You can even synchronise a real drum machine to Drumbeat.

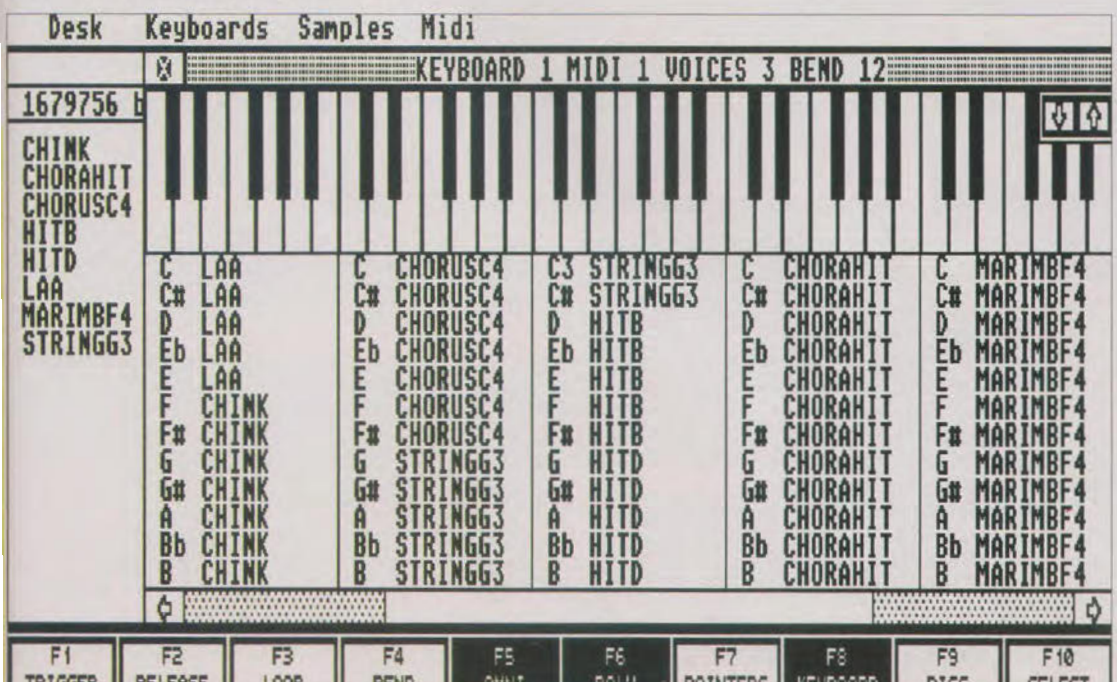
MIDIPlay converts your ST into a four-voice sampler. It can accommodate up to 128 samples which are assigned to the various keys on your MIDI keyboard. MIDIPlay uses any loops that you may have set up in ***Replay 16*** so sounds appear to continue indefinitely when you play them.

VERDICT

At a price of £129.95, ***Replay 16*** isn't a cheap little something that you will rush out and buy. However, it does convert your ST into a quality sampler which, depending on how much memory you have fitted, can be used for anything from creating and playing back sound effects to a four-voice drum machine.

With the prices of the Atari STE being cut, a 520 STE upgraded to four Megabytes could cost you as little as £300. With ***Replay 16***, your ST is as powerful as many standalone samplers costing twice as much.

With an external MIDI keyboard connected, MIDIPlay makes your ST into a four-voice sampling keyboard by allowing you to position up to 128 samples along the keyboard length.



"The advent of Replay 16 finally turns the ST into a professional sampler"

NAME: REPLAY 16
COMPANY: MICRODEAL
CONTACT: 0726 68020

PRICE: £129.95
RELEASE DATE: OUT NOW
MIN MEMORY : N/A

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

OVERALL 84%

HOW DOES A COMPUTER RECORD SOUND?

If you looked at a sine wave, you'd see a perfectly smooth curve moving smoothly through its cycle. The distance between its highest and lowest points is the amplitude. Sound made from such curves can't be precisely recorded by a computer as it can't handle continuous information. It has to record the changes in movement as steps by digitising the sound using an Analogue to Digital Converter and the more steps it uses, the more accurately it can reproduce the original sound.

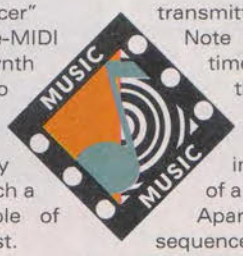
The number of bits used (resolution) refers to the number of steps which the amplitude is divided into. Eight bits means that 28 steps are available, a total of 256. However, 16 bits means that 216 steps are used, a total of 65,536! 16-bit samplers are more expensive than 8-bit ones because they can reproduce the recorded sound more accurately.

The other important factor is the sampling rate. The higher this value, the more accurate the recording, but the more memory used. CD-quality means that a computer records the amplitude of the waveform 44,100 times per second, the reason why CDs have very good audio quality!

WHAT IS A SEQUENCER

The idea of a sequencer is taken for granted, but what does this mainstay of a MIDI system actually do?

The word "sequencer" dates back to pre-MIDI times when a synth could be programmed to playback a number of notes in even-spaced time steps. Complexity did not enter into it – such a sequencer was capable of perhaps 32 steps at most.



Today's sequencers are really MIDI data recorders in that they record any MIDI information which appears at their MIDI In. Take the example of pressing a key on a synth. The action of pushing the key down makes the synth transmit a MIDI Note On from its MIDI Out. A Note On incorporates the MIDI channel (from 1 to 16), the note number (between 0 and 127) and the velocity, which is a measure of how fast you have pressed the note down. This information takes a little less than one millisecond to travel down the MIDI cable and is received at the MIDI In of the sequencer which records this information. An internal clock is continuously running, so any information received at the MIDI In is "time stamped". When you remove your finger from the key, a MIDI Note Off is transmitted and again received at the MIDI In of the sequencer and time stamped. By looking at the reception times of the Note On and Note Off, the sequencer can keep a record of how long that particular note has to be. On playback, the Note On is transmitted followed by the Note Off after the required time has elapsed. While this is a very simplified explanation, it gives you a necessary insight into the working of a sequencer.

Apart from notes, a MIDI sequencer will record many other facets of MIDI including MIDI Controllers, such as MIDI Volume, Modulation and Sustain Pedal, Aftertouch and Pitch Bend. There are usually Input Filters so that you can make the sequencer ignore any extraneous data. For instance, when playing drum sounds from a keyboard with Aftertouch, you need to ensure that the Aftertouch being accidentally created is not recorded. A sequencer usually has some facility for editing – we all make mistakes and it's a shame to have to record an entire part again due to one wrong note. There are various types of editor including piano-roll style, where notes are shown as horizontal rectangles on a grid with a vertical keyboard, event lists, which show all MIDI events as numbers and words, and score editing for those true musicians amongst you.

One of the most important aspects of a sequencer is how you make it play in time with a drum machine and how you synchronise it with a tape recorder. These will be looked at in the next few issues of ST Review.

MODEST MIDI

Having problems with the language of MIDI? Our glossary should help you ...

AFTERTOUCH:
Extra pressure brought to bear on the key of a keyboard after it has been initially played. Used to control certain MIDI effects such as modulation or pitchbend. Often referred to simply as "pressure".

CONTROLLERS:
MIDI Controllers can alter the performance of a MIDI synth. For example, Modulation (Controller #1) can add a "warble" to sounds, Volume (#7) will affect the level of the sound and Sustain Pedal (#64) acts like the damper pedal on a piano. Each different Controller has its own unique number.

MIDI:
Acronym for the Musical Instrument Digital Interface. Created by American and Japanese manufacturers in 1982.

MULTI-TIMBRAL:
Literally meaning "many sounds", a multi-timbral synth plays more than one sound by responding to information on more than one MIDI channel. For example, piano might be on MIDI channel 1, bass on MIDI channel 2 and drums on MIDI channel 10.

NOTES:
In MIDI, all notes are numbered between 0 and 127 which gives a total range of over ten and a half octaves. When you press a key down on a synth, a MIDI Note On is transmitted; when you release your finger, a Note Off is sent.

POLYPHONY:
The total number of notes which a MIDI synth is capable of playing is usually referred to as the polyphony.

PROGRAM CHANGES:
These are usually transmitted from a computer to a synth to select a specific sound. You could call this "sound change"; the ST sends a message to a sound module telling it to go to a certain sound.

SOUND MODULE:
The sound generating part of a synth is often separated from the keyboard and placed in a box. This is then known as a sound module, or an "expander" as it provides sound expansion for a MIDI system.

VELOCITY:
A MIDI Note has a velocity which is a measure of how fast your finger has pressed the key on a keyboard – the faster you press, the higher the velocity value. It's often used by synths to change a sound's volume, but may also be used to change the tone; for instance, a high velocity could be used to make a piano sound brighter.

VOICES:
The number of voices usually matches up with the number of sound generators in a synth, but more than one voice may be used to create a sound. For instance, a sound called "piano-strings" will probably use two voices, one for piano and the other for strings. If such a synth had 24 voices, and two of these were being used for each sound, this would give a polyphony of only 12 notes.

BUILDING A MIDI SYSTEM

A MIDI Switcher can be very useful, especially if you use a drum machine purely for its sounds...

Last month, we considered the use of a MIDI Thru box and saw that such a box generally leads to the putting together of a better MIDI system. However, unless you're using a lot of MIDI devices, a MIDI Thru box may not be essential. In fact, there are various different types of utility available for a MIDI system and many of them simply save you from having to re-cable your system each time you want to carry out a different procedure.

A MIDI Switcher is such a device. This usually has a number of MIDI Ins and a single MIDI Thru with a rotary switch to select which MIDI In is currently in use. No circuitry is required – it's simply a matter of making the required connections – so a MIDI Switcher is quite cheap. Philip Rees makes a 5S which provides five inputs.

Let's say that you have two MIDI keyboards and only want to use one at a time. It may be that your main synth (connected to Input 1) has a five-octave keyboard without pitch bend or modulation wheels but that you also have a four octave Master keyboard (connected to Input 2) with such wheels. You may wish to record the notes via the synth keyboard but then add any pitch bend or modulation afterwards, which can easily be done if you're using a sequencer on your ST.

When the switch connects Input 1 to the Thru, the notes from the synth can be accessed (figure 1). When you turn the switch around, Input 2 is connected to the Thru for the addition of pitch bend and modulation (figure 2). Although you could, of course, simply plug and unplug MIDI cables according to the required connections, using a MIDI Switcher is a lot more convenient.

DRUM MACHINES

There is one particular situation where a MIDI Switcher is most useful. Many of you probably have a drum machine but use it solely for its sounds. If this is the case, the sounds on the drum machine can be played either from its pads or from the keys of a synth keyboard. If you want to use the latter method, the drum machine has to be set to recognise MIDI notes on the MIDI channel that the current sequencer track has assigned.

Figure 3 shows you a typical arrangement for playing both the synth and the drum machine from the synth keys. The MIDI channel set on the drum machine for receiving MIDI information must be different from any being used on the synth – otherwise sounds on the synth will appear as well as drum sounds.

If you want to play the drum sounds from the drum machine pads, turning the switch provides for this (as shown in figure 4). MIDI note information is transmitted from the drum machine and recorded on the ST sequencer. On playback, the drum machine receives the notes via the MIDI Thru on the synth.

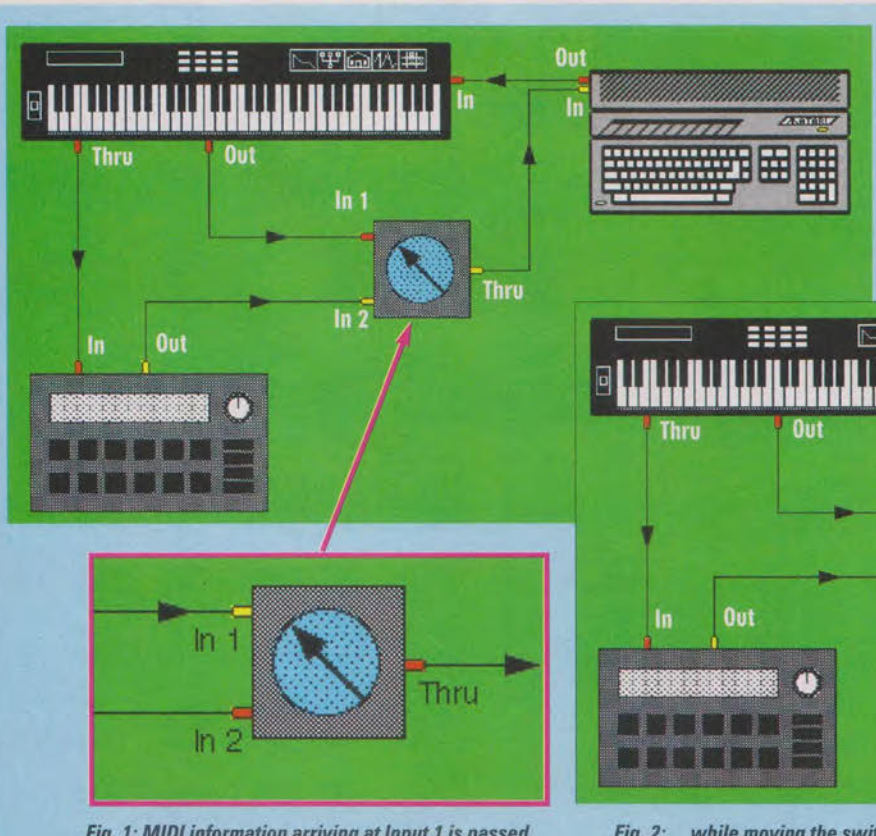


Fig. 1: MIDI information arriving at Input 1 is passed to the Thru ...

Fig. 3: Note information from the synth is transmitted to the ST via the Switcher. The notes emerge from the ST on the MIDI channel of the current track and are then received by both the synth and the drum machine via the synth's MIDI Thru.

Fig 4: By turning the Switcher to Input 2, you can play the drum machine via its pads and record this on the ST sequencer.

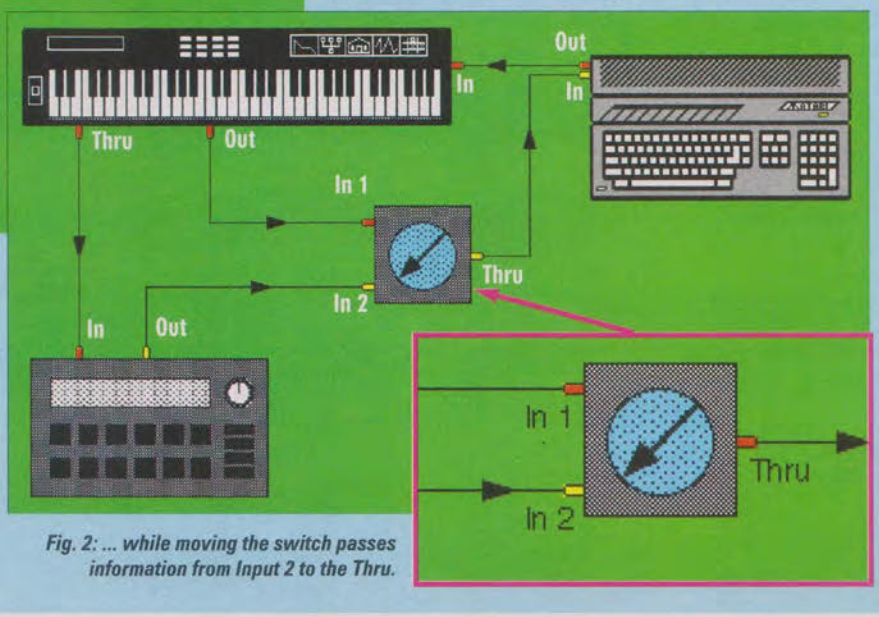


Fig. 2: ... while moving the switch passes information from Input 2 to the Thru.

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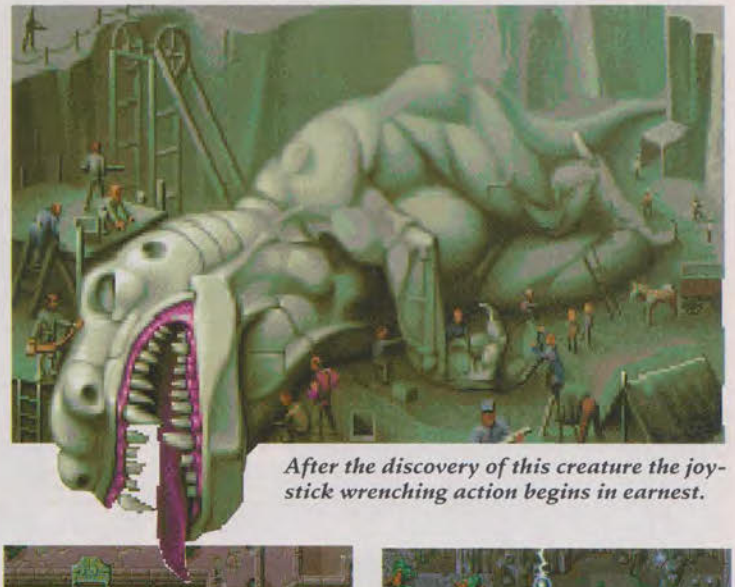
THE CHAOS ENGINE

Stand by for some a-maze-ing blasting from the Bitmaps...



After the discovery of this creature the joystick wrenching action begins in earnest.

With all the various kinds of scrolling shoot-'em-ups there are, the eight-way scrolling sort seem to have been more than a little neglected of late. How many platform titles have we seen in the past few months? Dozens.

All is not lost for those old favourites, however, as Renegade looks set to kick multi-scrollers back into fashion with its latest release, ***The Chaos Engine***, and hopefully we will now see a little more variety injected into the games industry.

SOURCES OF INSPIRATION

Set in the Victorian period, this game is heavily inspired by the works of contemporary authors such as H.G. Wells. ***The Chaos Engine*** is a machine that is causing havoc in society, creating all sorts of unnecessary unpleasantness and bother, and generally being a pain for all and sundry. You and a friend have to fight your way through four different scenarios to reach the engine, before destroying it so that peace can once again descend on the world.

The game is played ***Gauntlet*** style, with all action being viewed from above. As you race around activating nodes and searching for the exit to the next level, meanies come at you in all shapes and sizes. All of these can be destroyed with a quick burst from your currently held weapon, or you can use your character's special ability (eight-way simultaneous fire, smart bomb and such like) to clear screens effortlessly. Collecting keys opens up doors to secret areas or even changes part of the map to allow you to progress further into the game.

TWO INTO ONE

The pure attraction of a game like this is the two-player mode. Who can deny that ***Kick Off*** or ***Gauntlet*** with a friend is far more satisfying than playing solo? The Bitmaps are well aware of this, which is why they have spent the best part of the last two years developing the program's artificial intelligence. It is due to this sapient programing however, that when you play solo, the computer acts the part of your partner and manages to do so convincingly.

Full screen scrolling and decent sound effects on the STE are among the strong points that this game promises to have. STFM owners will still have a good game, but nowhere near as capable as the enhanced STE version. Obviously it'll be fast, have constant blasting action and look great, but then that is expected from the Bitmaps.

On the character screen you can increase your skills or buy weapons with earn cash.

Kill the aliens and then try to destroy the deadly Robo-droids

Surrounding yourself with a force-field makes things easier

Using one of the many special weapons aliens are decimated

Activating the pawn-shaped pylon revelas the exit.

IN THE BEGINNING

The Chaos Engine began life two years ago starting as a train of thought along the lines of "No-one has ever done a really good ***Gauntlet*** style game. Why don't we?". Eric Matthews openly admits that the action part of the game was easy, but he defines the computer's artificial intelligence as one of the Bitmaps' greatest challenges to date. "We spent a long time getting it right. When we had finished, we sat a guy down in a room playing it one player, and then asked people to guess which was the computer player. Most people couldn't tell, so we knew we'd done it right."

FIRST IMPRESSIONS

At the time of writing, only the Amiga version is playable, and that plays brilliantly. Renegade seems to have captured the ***Gauntlet*** feel perfectly, making the game as enjoyable in two-player mode as any other title. It's a tough, hard-edged blaster, with fast-paced action to damage your joystick and mazes that are complex enough to damage your brain.

The Chaos Engine isn't overly original, but it could be a huge hit due to its playability. Judging by the crowds gathered around the Renegade stand at the recent Autumn ECTS, it seems everybody else thinks so too.

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Left; A typical character screen shows a typical macho character. Do you really want to get close enough to examine this guy?

Disembarking from the ship, the adventure begins – on the right is the menu showing your weapons and spells

DAEMONSGATE 1

DONOVAN'S KEY

Wayne Legg ventures forth in search of the latest RPG and finds himself down a dungeon with Gremlin's Daemons

Role-playing games (RPGs) have taken the computer market by storm, with software houses eagerly snapping up the rights to various established tabletop products and converting them into computer games within months.

Initially, software houses didn't seem to know what a role-playing game actually was, but now they have got to grips with the concept and are busy creating their own computer RPG systems. Daemonsgate 1 is Gremlin's latest in-house computer RPG, and the company claims that "It will be the largest and most in-depth game of its genre yet." This is an awfully large claim to make, but it's certainly not an idle boast.

TRADITIONALLY SPEAKING

The story-line is traditional fantasy fare: Demonic armies of unknown origins have started moving across the ancient Kingdom of Elsopea, destroying all in their path. Armed forces have been sent out to stop them, but they have been totally decimated and now the Captain of the guard has asked you to collect a band of willing mercenaries, leave your besieged city and seek out the elderly Elsopean.

Elsopean is a wise man who will know how to deal with the demonic forces, and you must act appropriately on his information. Thus begins your first adventure, which leads to much murder, magic and mayhem...

In Daemonsgate you gather together eight adventurers from all over the world – called Hestor – and use the various skills and abilities of each team member to overcome the varied tasks and problems that lie in your way.

Some computer RPGs are nothing more than graphic adventures combined with large quantities of combat, but Gremlin has deliberately steered away from this option with Daemonsgate and has designed a detailed, rational world with a social structure, realistic ecology and a wide range of individual characters, who go about their own business when they're not interacting directly with the player.

SIZE MATTERS

The world of Hestor is a massive place – in fact, it's the largest I have ever seen in a computer RPG. The detailed continental map is over 3,000 screens in size and contains over 100,000 screens of towns and more than 5,000 screens of town inhabitants. This does not take into account the screens for the other special locations, such as villages, fortresses and dungeons which are also spread about the maps.

The maps themselves are made up of over 100 eight by eight pixel blocks so that they take up a minimal amount of memory without becoming repetitive. Added to this are several animated blocks – with such features as torches, fireplaces and running water – which are used to enhance the overall visual quality of the maps. There is also a "bridging facility" so that characters can pass realistically beneath objects.

VIEW TO A KILL

The quality of the graphics is first-class. Clear, well designed and artistically excellent, they improve the games atmosphere and give the game a unique feel. Daemonsgate uses a similar formula to the Ultima games, with the overhead viewpoint and a box at the bottom of the screen displaying any dialogue or information. That said, Daemonsgate is very different from Ultima in many ways.

One of the main areas of difference is combat. In Daemonsgate, you take on the mantle of commander and issue orders to your group, with the computer dealing with how each of your characters interprets them.

In this game a character's personality affects his combat performance, so a cowardly or berserk character may completely ignore any commands, and choose to do something entirely different! Also each combatant varies in intelligence, so some may try to employ very basic tactics against you, while others will perform complex wedge formations or feints.

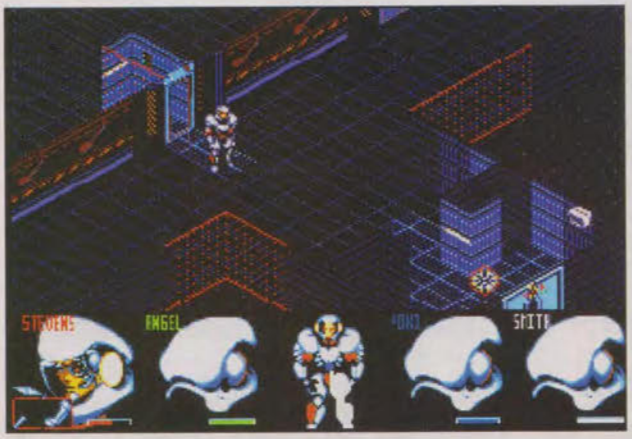
All this, along with a complex and involved game plot, epic battles, intricate puzzles, intelligent non-player characters and many animated plot-based sequences make Daemonsgate a role-playing game to be reckoned with – and one of the best I've seen to date.

We'll be reviewing the game in detail in a later issue so expect to hear more soon...

Daemonsgate is traversed easily once you kill a few enemies

Combat is fast ,furiou and above all else, deadly.

SHADOWORLDS



D & D meets high-tech murder with Krisalis' latest, that sports a choice of 18 different types of commando.

KRISALIS

Shadoworlds, the long-awaited follow-up to Virgin's highly acclaimed ***Shadowlands***, is a departure from the original game in several ways. Firstly there's a change of publisher, with Krisalis now in charge and secondly, whereas the first game had a real olde worlde ***Dungeons and Dragons*** feel, ***Shadowlands*** is its high-tech antithesis, being set firmly in the high-tech future.

The game scenario opens in a Galaxy where peace reigns – mainly because weapons have been outlawed. Predictably, that hasn't stopped one Earth colony establishing a secret weapons base and when contact with them is lost, your team of four techno-commandos is sent out to investigate the situation.

There are 18 varied characters to choose from. Not all of them are human, and some have bizarre personality traits, such as the woman who has a hatred of people with ginger hair. This means that you have to choose your party carefully, as you won't get very far with a party more interested in shooting each other than vicious aliens.

One drawback is that they begin their mission unarmed, and in the seven months that it takes to reach the base, a hostile force has taken over and made use of the weapons there. It's not all bad news though. Flamethrowers, energy swords and several kinds of laser guns can be found just lying around.

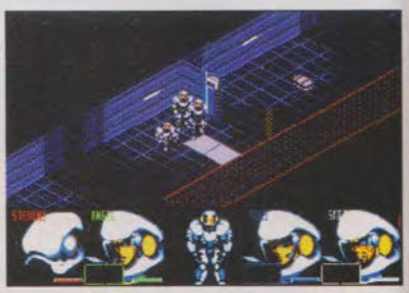
The barrels on most of the guns can be swapped to create mega-weapons that will dispatch most creatures in no time at all.

Despite being set in the future, no one has discovered a good alternative to the battery. So the lights built into your teams' suits and most of the weapons they find require a couple of Duracells to work.

Fortunately the base is full of enemy androids and when they're destroyed they leave behind a useable power-pack.

Because ***Shadoworlds*** is based around the ***Shadowlands*** engine, it has only taken half the time to develop. That said, ***Shadoworlds*** is still bigger than its predecessor, with plenty of complexes to explore and three different types of terrain to traverse. The game is nearing completion and is due out in November.

Photoscaping is used once again to give the effect of realistic lighting.



Here are your party's stats. They are always displayed in their marching order.

SABRE TEAM

KRISALIS

A Sabre Team, in case you didn't know, is a squad of four SAS men who are usually sent out to deal with terrorists and other insurgent activities with the maximum amount of violence. The game, from Krisalis, puts you in command of one such squad as you equip and guide them through five dangerous missions. You pick your four men from a squad of eight, each of whom have specialist knowledge or skill in areas such as explosives and electronics.

When you've assembled your quartet of killers the next step is to equip them from the sizeable SAS armoury. There's a dazzling array of weapons and other gadgets including machine guns, pistols, concussion grenades, body armour and explosives. Each man can only carry a limited weight, preventing you from outfitting them with a ludicrous amount of hardware.

Each member of the team is assigned a number of action points. These are used up when they perform an action such as moving or loading a weapon. When they've all been used or you decide that particular person has done enough, control switches to the next trooper in the chain of command. The number of points they have at any time depends on their physical conditions and the amount of equipment they're carrying.

Weapons can be fired either by accurately aiming them, which takes plenty of action points, or by just opening up with everything, which is less accurate but takes fewer action points. Ending a soldier's turn while he's still got over half his action points puts him in alert mode, which means he gets a free shot at any enemy troops he spots during their turn.

The missions include rescuing a UN team from a prison in a jungle, dealing with terrorists on board a cruise liner and there are two Gulf war scenarios. Your troops can't see around corners or through walls. Much of the strategy involves using actions points sensibly so your men aren't left facing the enemy with no moves left and working out strategies for dealing with terrorists in the same room as innocent hostages.

Sabre Team is currently being converted from the Amiga version, so you can safely expect to see it on the ST this side of Christmas.

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REACH FOR

We buckle in and strap on our tin legs as we Reach For The Skies with Virgin's first ever flight simulation

With such titles as ***Flight Of The Intruder*** and ***Falcon*** under its belt, Runcorn-based Rowan Software is taking a step back in time for its next flight sim.

It's August 1940 and what will later be known as the Battle of Britain is just getting underway. You play either a trainee pilot, who is mysteriously indestructible in this game, a full pilot whose mission is just to get airborne and shoot things down, or a commander who is in control of assigning planes to bases, ordering supplies from factories and joining his men in the sky.

SCRAMBLE, SCRAMBLE

You're not dropped straight in at the deep end in this game. The Battle of Britain is broken down into four manageable segments – depending on which colours you're flying you're either attacking or defending navy convoys in the first mission, radar stations in the second, airbases in the third and London in the last one. The RAF's objectives are the same throughout each one, which is to shoot down every German aircraft they encounter. The Luftwaffe, on the other hand, have specific roles such as escorting bombers or dive-bombing ships.

There are six different types of aircraft in the game. The RAF have Spitfires and Hurricanes while the Luftwaffe have Ju87 Dive-bombers, He111 medium bombers and Me109 and Me 110 fighters. The Ju87 and He111s have gunnery positions, which you can occupy and take pot-shots at careless RAF pilots. While doing so, the plane reverts to computer control, so you don't have to worry about flying off-course.

ESCORT AGENTS

Teamwork is required in many situations. If you're playing as a Luftwaffe pilot you'll often be called on to escort bombers on missions. This requires a lot of tactical flying as you have to try to keep RAF fighters from getting in close while trying not to hit your lumbering bombers. One handy feature allows you to switch aircraft at any time. So if you want to be where the action is, or if your plane is about to go down, you can trade places with one of your wingmen and let them die instead!

Piloting a plane has been made as simple as possible. The game will accept inputs from keyboard, mouse, analogue and digital joysticks. There are also options that make the game easier, such as unlimited ammunition and super-powerful engines which prevent your plane from stalling. Several of these 'easy-life' options are already active when you start the game, but turn off as you successfully complete missions. So by the time you're halfway through the game, you'll find yourself ultra-tough enemies with a plane that's as vulnerable as the ones you are shooting at.

INSIDE INFO

Unlike sims of modern war-planes where enemies are dispatched at distances in excess of five miles, *Reach For The Skies* requires you to mix it up a close range and this requires tactics. When you moving in for a kill on a bomber, you've got to remember that there are guns on the front, back and sides, so going straight in is risky. The best way to attack is to gain plenty of height and attack from above, this way the gunners can't even spot you, let alone get you in their sights.

Dealing with fighters is a different matter. It is important to gain as much height as possible, because as a fighter climbs it loses speed, so whoever has the height has the advantage.

ACES HIGH

One of the disadvantages of World War two fighters was their lack of radar. The naked eye was the only way to spot and track enemy planes, but translating that to a computer game where there's only a small amount of screen is almost impossible. Rowan have got around this by including an external 'combat' view. In this mode the nearest enemy plane is shown at the centre of the screen (until you're closer than two miles there's not much to see) with your plane's position shown relative to it. This allows you to line yourself up with an enemy aircraft and even keep track of them if they fly past.

TORA TORA TORA

There are several ways to navigate to your target. The first is to call up the map screen, see where your target lies and guide yourself there with the plane's compass. A slightly easier way is to follow the rest of the aircraft in your squadron. Alternatively, there's a handy (albeit unrealistic), autopilot which puts you on the right heading. To

STEP BY STEP

1 ***The first thing to do is identify your target. Although the autopilot will take you there, it's worthwhile finding out exactly what you're up against.***

2 ***You know they're out there, but just where are they? The combat view will show exactly where they are. The next step is to line your plane up with them.***

THE SKIES

cut out the dull bits, like flying 20 miles to intercept a squadron, there's an accelerated time feature. This speeds the game up ten-fold, and cuts out automatically when you are within six miles of any enemy.

Because external views play such an important part in this game, great care has been taken over the graphics. As with many flight sims, the graphics are made up from polygons. Normally programmers aim to have a small amount of surfaces as the more calculations the ST has to make, the slower the graphics will run. That's not the case with this game though. To make the aircraft even more realistic, extra faces have been included to give a sense of thickness to the wings and curved fuselages. This has been achieved by only allowing soon-to-expire pilots to see the ground close up, thereby negating the need to include fiddly little buildings and other details which would slow the game down.

All the engine sound effects in the finished version will be sampled, including the whine the Stuka dive-bomber's engine as it goes in for an attack. To free up as much processor time as possible, the sound effects work by interrupting the graphic calculations several thousand times a second.

The version we saw wasn't far off complete, so keep an eye out for a full review in the next issue.

ROWAN YOUR BOAT

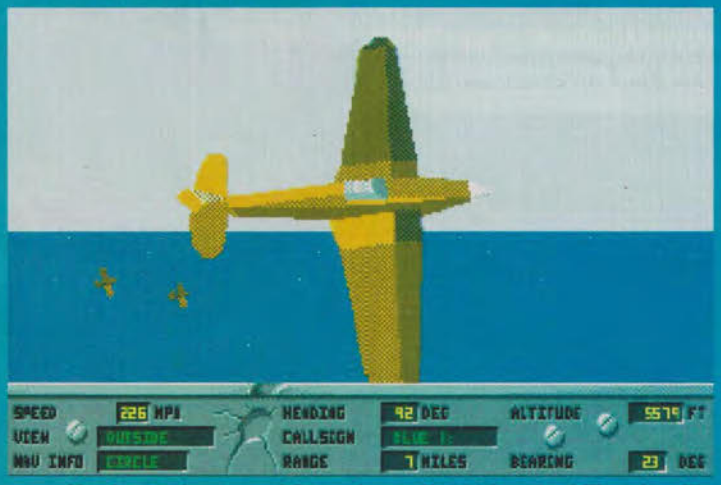
Rowan Software started life in 1987, producing, as it happens, flight sims. Their first was ***Strike Force Harrier***, which was released by the now defunct Mirrorsoft. Since then they've been responsible for the Amiga and ST versions of ***Falcon***, and the mission disks which were reviewed last month, as well as ***Flight Of The Intruder***, which was set in the skies over Vietnam. ***Reach For The Skies*** has so far taken the talents of seven programmers, including its designer Rod Hyde, two sound men and one person whose job it was to make sure the aircraft handled in a realistic manner..

Although the game plays rather well already, it's still not finished. Here's an action sequence to give you a feel for it...

3 ***The bombers may be slow, but they're well protected. The best tactic is to get above them and shoot down so that you avoid their guns.***

5 ***Watch for incoming fire from the bomber or its fighter escorts, otherwise open up with everything you've got. The speed you pick up on the dive will allow you to pull up for another attack.***

4 ***You've pulled up nice and high, now point your nose down and line your sights up over the target and hold your fire until you're in close.***



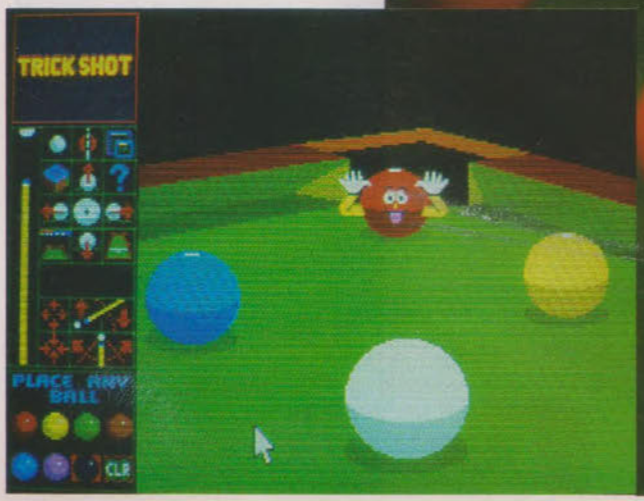
6 ***He shoots, he scores! Scratch one He111 bomber! There's still another one left though, plus those pesky escort fighters.***

CUE: ARCHER MACLEAN

With a host of awards already behind him, Archer Maclean is about to release 3D Pool. Gordon Houghton interrupted his cueing practice

At the age of 12, Archer Maclean was heavily into electronics. He started with radios in matchboxes, line-following robots, wristwatch calculators, and "all sorts of miniature gadgets", before building his own computers. In 1978 he saw a magazine which had a listing for a version of ***Mastermind*** in 150 lines of code; dissatisfied with it, he wrote his own in just 11 (very heavily compressed) lines.

However, computer games didn't really bite until he went to a trade show in 1979, as he explains: "I was working for an electronics company and the Ingersol stand was right next to ours. They had this funny little machine, a plastic thing with plastic keys, and it was the Atari 400. It had this game on it called ***Star Raiders***, which was just absolutely awesome – all in 8K. That was enough for me to go out and buy £800 worth of Atari, and a cartridge for £32. I remember breaking quite a few joysticks



Unusual in-game features are Archer Maclean's trademark.

and a chair playing it."

After taking a degree course entitled Computer and Control Systems, Instrumentation and Electronics at the beginning of the 1980s, he went to the PCW show in 1982, armed with a demo disk of his own ***Defender*** clone for the Atari 400, running at 50Hz. Within minutes of this game being displayed on the Atari stand he was fielding job offers.

However, it took another three years before his first commercial release – the shoot-'em-up classic, ***Dropzone*** – appeared. From that moment his career has gone from one award to another, with ***International Karate***, ***IK+***, and ***Jimmy White's Whirlwind Snooker*** all winning acclaim.

GAMES AND HOBBIES

These days he plays more coin-ops than home computer games, and still favours the Eugene Jarvis/Williams classics from a dozen years ago: "***Stargate***, ***Defender*** and ***Robotron*** – they were all great inspirations in terms of the quality and snazzy graphic effects." On the home front, he's recently played a lot of Lucasfilm's ***Monkey Island 2*** on the PC: "It's so deep. I don't know how I'm supposed to compete against a program like that written by 60 people."

However, he's quick to dispel the myth that all he does is sit at home all day writing games and not answering the phone. In 1987, for example, he spent most of his time trading options and futures (whatever they are), "and made a hell of a lot of money", whilst managing to get ***IK+*** out on the Commodore 64.

More recently, a couple of years ago when the classic car market was booming, he bought and sold a few "pretty exotic" motor cars. His interests don't end with cars and cash, though: "I used to like playing squash, and I've done some more unusual things, such as hang-gliding and flying. I'm a big fan of ***Tom and Jerry*** cartoons too, especially the ones that were produced by Fred Quimby."

One of his current hobbies involves fiddling around with gadgets. "I've got a house stuffed with them: four TVs ranging from 30 inches to three inches, a tape recorder that records on sub-miniature cassettes and is just a little bit bigger than the actual tape, a laser disc player – I love playing around with lasers. I even have a pocket-sized pen laser which is seriously useful for wearing out cats in my living room."

3D POOL

Balls, however, are his current obsession. "The first thing to say about ***Pool***," explains Archer, "is that it obviously shares a very similar user/graphic interface with ***Jimmy White's Snooker***. That was always the intention. However, it does have a lot more in it than ***Snooker***."

Such as? "For a start, instead of three opponents you've now got 20. Instead of having one set of rules you've got 8-ball, 9-ball, UK and US rules. You've got Match mode as well as Game, Practice, and Trick Shot modes, and you've also got an eight-player tournament." He's added a few improvements to the controls too, such as an automatic aiming feature in Game mode and three-ball cannon shots on the ultimate player levels.

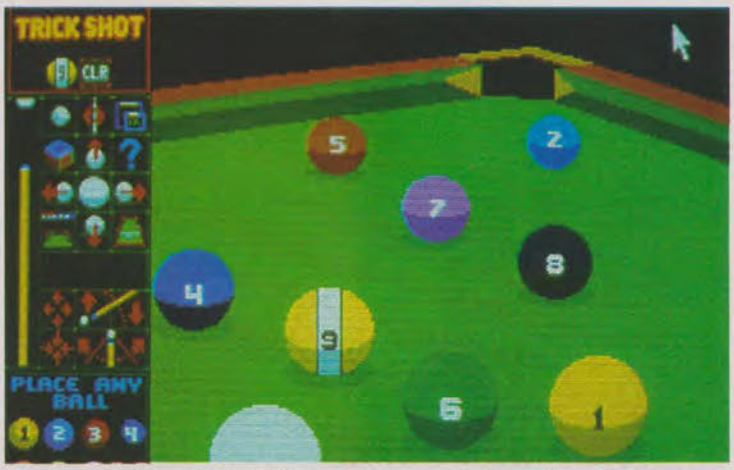
Archer hasn't spared on his trademark, either – those special features such as a player's trousers falling down (***IK+***) or funny faces on the balls (***Jimmy White***).

The faces make another appearance in ***Pool***, "but I've also got eyes blinking in the background when you're not doing anything – evil ones, nice ones, smiling, frowning." He explains his motivation: "I like watching films with things going on in the background that you shouldn't really be seeing. For example, in the background at an inventors' show in ***Gremlins*** there's the time machine from the HG Wells film; and later on it's gone."

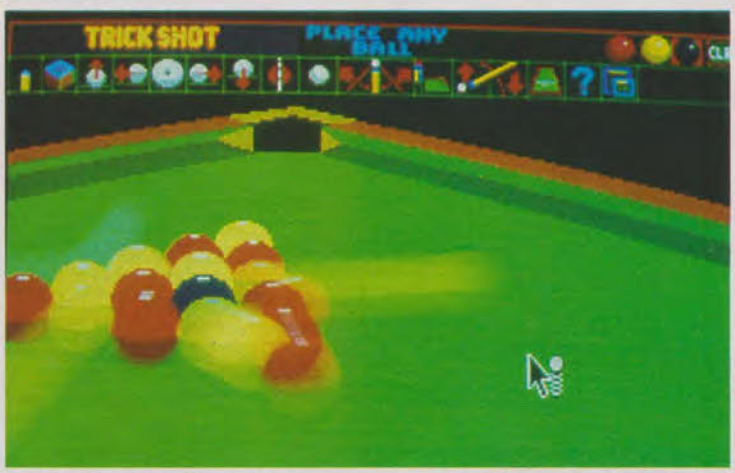
In appearance, the graphics really do look like a pub pool table, though not every detail has been included – the flat sides, for example, are missing. "That would be a waste

IN THE BEGINNING...

All of Archer's four games to date have been number one somewhere in the world. There have been 12 different versions on eight different machines, and all have won some sort of award, beginning with ***Dropzone*** in 1984. This was his first published game, on C64 and Atari 8-bit, and it was all down to "a flash of inspiration." It is an impressive two-way horizontal scroller, featuring a jetman patrolling a Defender-style environment in search of lost scientists, and is still one of the most playable shoot-'em-ups made for the Commodore 64. It has just been produced on the NES and Gameboy, but is unlikely to be seen on the ST, as Archer comments: "I'd like to do it, but I would really want to do the version myself, to ensure that it reaches the quality and standards I expect."



Putting numbers on the balls was just one of the problems in Archer Maclean's 3D Pool.



3D Pool breaks off, and the program faces a nightmare calculation of angles and collisions.

Classic cars are just one of Maclean's non-programming interests.

KARATE CHIP

International Karate was Archer's follow-up to ***Dropzone*** and was the big hit of 1986, reaching number one in the US. It was published by System 3 and featured a smoothly-animated one-on-one competition set against a variety of international backgrounds. Maclean wrote the Commodore and Atari 8-bit versions, but was not responsible for the ST. "That was done by a bunch of Hungarian programmers and bears no relation to the one I did." ***IK+*** (1987) was another flash of inspiration which came about while he was waiting for one of his cars to be serviced. It was published by System 3 again, but this time they had no involvement in the game: Archer had already written the C64 version and bought himself an ST and Amiga to code the 16-bit versions. The result was one of the best beat-'em-ups yet seen, featuring three players (two human) on screen at once, adjustable speed and difficulty, pixel-perfect collision detection, bonus stages and 17 different moves – and yet another number one.

of polygons." Speed is usually more important than ultimate visual reality, though "I always wanted to have a scratch on the woodwork that, when you zoomed in, said Made In England." He also considered having a polygon piece of chalk on the side too, "but I'm running up against the speed of the machine now."

3D OR NOT 3D?

Many of the complications which might have arisen in ***Pool*** were already ironed out when Maclean developed his 3D system for ***Jimmy White's Snooker***. The biggest of these problems was a technical hitch which, he recalls, took him six weeks to solve: "The positional resolution of the ball positions wasn't good enough, and they have to be totally accurate to simulate the real world.

"Originally I was doing everything with 32-bit resolution maps for the timing and positional accuracy, but every now and again I'd have two balls overlapping. Eventually I had to do the whole thing in full 64-bit resolution, so now I've got the angular accuracy down to 1/64th of a degree, which gives 23,040 different angles on any one shot. Coupled with 81 different hit points for spin and 88 levels of power, this gave about 164 million different shots per position on the table in ***Snooker***."

You won't get quite as many potential shots in ***Pool***, but only because the cue power has been reduced to compensate for the smaller table.

The technical achievements of the 3D system are impressive indeed, most of all because of the work involved in calculating the multiple ball movements and collisions for every shot. The timing, for example, is precise to 0.00000061 of a second. It's taken over 50,000 lines – well over one Megabyte – of code, but the accuracy has made it all worthwhile: "I wanted to produce a near-as-dammit kinetically perfect version of the physical thing."

POOL VS SNOOKER

There have been some incompatibility problems between ***Pool*** and ***Snooker***, as Archer points out: "All my games are always deeply intertwined, and to get ***Snooker*** out of the graphics engine and then put ***Pool*** back in was a nightmare." This fact was aggravated because the game specification kept changing – it originally included 15-ball pool but omitted US pool, a situation which has now been reversed. The result however, is a game which some commentators have claimed is already faster than Snooker, more so on the ST. There are fewer balls, of course, but they now have numbers which have to be plotted on, creating more complications.

The project has been in progress since June 1991, but Archer set to work in earnest just before Christmas last year. Right now, the effort is bearing results. "The last month or so of a game is totally hectic, but I wouldn't release anything I considered to be not up to my standard." However, he does have worries that ***Pool*** won't be as well received as ***Snooker***. "***Snooker*** was the step forward, the one that was impressive. I have a horrible feeling that people are just going to say, 'Oh yeah, that's nice, but it's similar to ***Snooker***', and that's as far as it will go. It probably won't have the same impact."

THE CRYSTAL BALL

Archer's current schedule will take him right up to Christmas 1994. "I've got to finish off ST and Amiga ***Pool***, then get Snooker done on PC. Then there's Megadrive ***Snooker*** and Megadrive ***Pool***, then maybe CD and multimedia versions; and then possibly ***Snooker 2***." In addition, there's one very secret project which he refuses to discuss beyond this statement: "I do have one big game at the back of my head which I'd seriously like to get into, but it requires a lot of work. It'll be ideally suited to big consoles, and the Amiga, and maybe the Falcon."

For now though, it's so far, so good.

THE MACLEAN COLLECTION

Dropzone (1984-85)
International Karate (1986)
IK+ (1987-88)
Jimmy White's Whirlwind Snooker (1991)

WHITE MAGIC

Jimmy White's Whirlwind Snooker is the latest game to bring Archer a collection of awards, including ones for Best Computer Simulation, Best Programmer of the Year, Best Technical Merit and an award for lifetime achievement and contributions to the computer games industry. It began in July 1988, when Maclean bought himself a video digitiser – he was playing with it when he had an urge to grab a frame from a snooker match on the TV. It reminded him that he'd always wanted to do a snooker game, but other commitments meant that he couldn't start it for at least a year. What eventually emerged was a simulation of the sport unparalleled in the history of computer games, with 164 million different shots every time you bent down with the cue, skilled opponents, super-smooth rotation and a previously unattainable realism in ball movement.

Jimmy White's Whirlwind Snooker – more balls than most!

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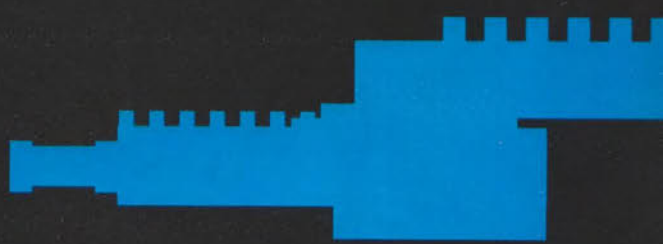

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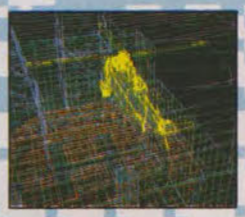

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Old really is gold this month as we take our regular look at the best in cut-price entertainment for your ST

VFM

CAPTAIN DYNAMO

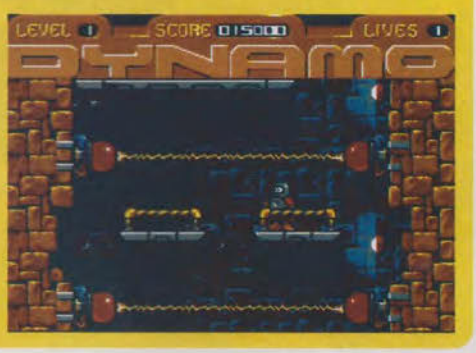
CODEMASTERS • £7.99 • 0926 814 132

IN BRIEF: To be a platform game star nowadays you need to have a gimmick, like being able to run fast or having extraordinary athletic abilities. Codemasters are changing all this, though, with the geriatric star of ***Captain Dynamo***, who's an ex-superhero armed with nothing more than his cunning, a standard issue superhero red cape and an excellent pair of bouncy boots.

The hero, Ernest P Dynamo, has broken out of the old folks' home to embark on a quest to recover the stolen fortune of Lady Phyllis Uppenhofen. It's not as easy as battering a few bad guys though: Phyllis' jewels have been shipped to the moon by Dynamo's ex-arch rival and failed world dominator, Austen Von Flyswotter. At the moonbase, Dynamo is faced with vertically scrolling platform mayhem where the true meaning of lunacy becomes clear.

ST REVIEW COMMENT: "***Captain Dynamo*** is an amusing title which is easy to get into and fun to play. There are loads of tricks, surprises and (hint, hint) a few hidden bonus rooms. Well worth the asking price."

✪✪✪✪



CARRIER COMMAND

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IN BRIEF: Although ***Carrier Command*** is getting on a bit now, it hardly shows its age. Based on a futuristic, self-contained aircraft carrier, you job, as its commander, is to destroy the enemy wherever they turn up in the world's oceans. The ship has a wide variety of offensive and defensive weapons and it's really only after a few hours of play that you actually remember what you have at your disposal and the best way to use it. Basic weapons include amphibious assault vehicles, aircraft and missiles. Each time the game's loaded it creates a new world and battle scenario so there's no chance of getting bored with the same old thing.

ST REVIEW COMMENT: "***Carrier Command*** is a big game which combines strategy with simulation. It looks good, plays fast and has plenty of options to keep you going. Be warned, it is difficult to get to grips with at first. Despite a comprehensive instruction manual, you really do have to spend some time getting used to it."

✪✪✪✪

DIZZY PRINCE OF THE YOLKFOLK

CODE MASTERS • £7.99 • 0926 814 132

IN BRIEF: What more can be said about ***Dizzy***? Anyone involved with computer games since the Oliver brothers originally brought out their cheerful egg adventurer will have heard of him. He's been part of a flow of consistently good games from the Leamington Spa-based budget specialists. ***Prince Of The Yolkfolk*** has a typically simple storyline with Dizzy and Daisy getting trapped by their old adversary Rockwart the troll while trying to find their pet fluffle, Pogie. It's interactive fun from there on as Diz tries to escape from the castle.

ST REVIEW COMMENT: "Most people will find this a fun game. All the familiar characters are there, and there are plenty of problems to solve as you guide the hero around castles and woods, collecting cherries and chatting with some of the creatures he meets. Adventure fans will find hours of enjoyment with this instalment of the Dizzy saga.

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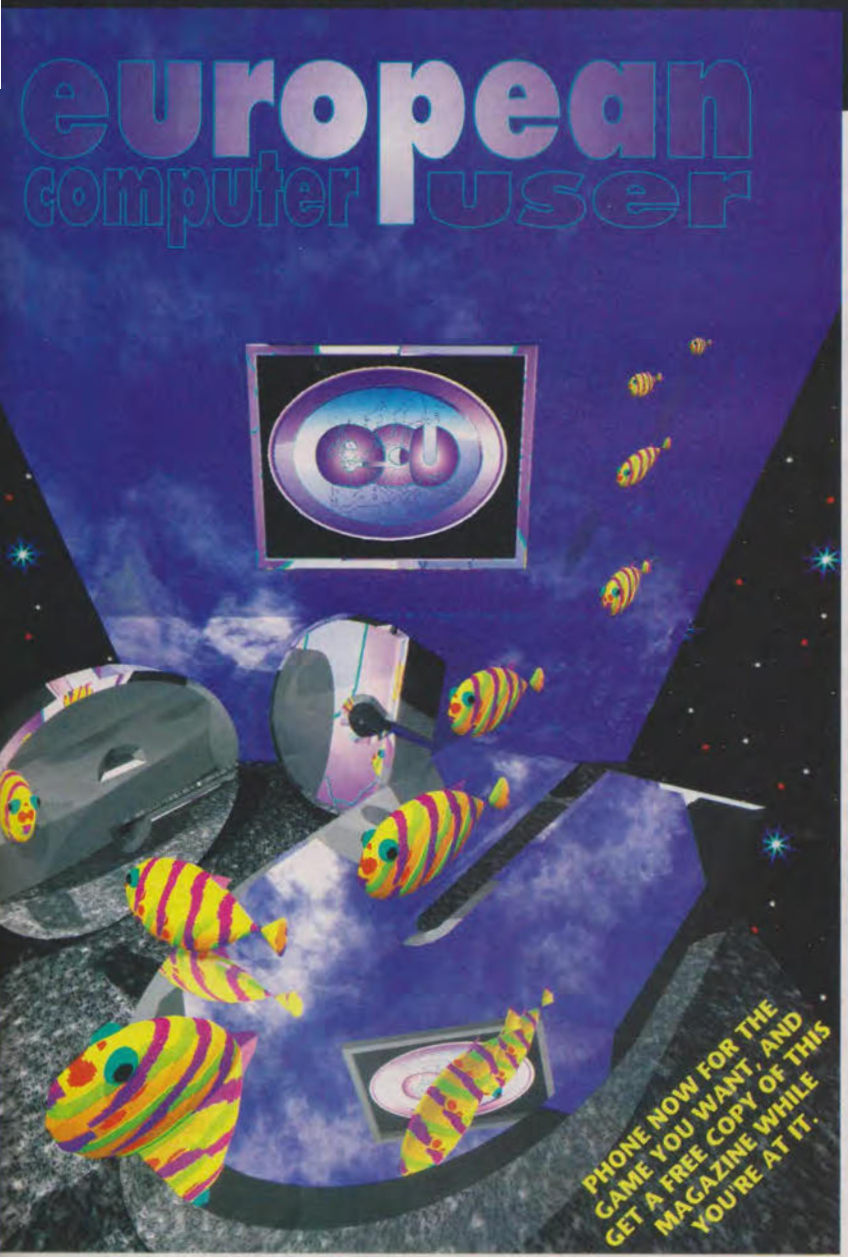

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RRP £499
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ACCESSORIES

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PRA 1226 124D/224/Swift 9/24 ..... £42.00

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PRA 1209 Swift 9/9x/124D/224 ..... £32.25
PRA 1709 Swift 24/24x/24e £26.38

32K MEMORY EXPN

PRA 1753 124D/224/Swift 24 ..... £13.10

PRINTER STAND

PRA 1242 124D/224/Swift 9/24 ..... £24.03
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RIB 3348 PN48 Single Strike £3.61
RIB 3348 PN48 Multi Strike £3.61

COLOUR KITS

PRA 1236 224/Swift 9/24c/200/240 ..... £35.25
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DESK ACCESSORIES & UTILITIES

U001 Dir printer, RAMdisks, Snapshot screen save. Desk Acc. loader.
U003 Desk. ACCs formatter, calendar, Disk Manager, calculator
U008 68000 Assembler, Address/Mailing List, Autodial Utility
U009 PICSWITCH 7 changes pics graphics res. Mono/colour emulators. SWITCHER, 2 progs in memory FSEL 5.5
U010 STE BOOT UP, boot medium res
U014 ARC file compiler. BI CLOCK set time/date. MONOEMUlator v5.0.
U016 IBM compatible disk formatter. ARC SHELL v1.91, MEGA formetter
U019 DRFLOPPY, disk editor, SCODE make ASCII for data transfer
U023 Packed with various progs for printing all kinds of labels *M*
U024 CHK 2.3, All you'd need to know about a disk. IBM MODIFIER, alter DS Atari disks for use on IBMs.
U027 ANTIDOTE, detect & kill most bootsector viruses.
U028 DISKMECH disk analyser/archiver/editor, edit/format sectors etc. full docs. CPANEL
U030 AMC GDOS
U032 MOUSE TRICKS, extensive control over mouse, movement etc.
U033 MX-2 v2.3 a multi-tasking environment, up to 7 concurrent tasks. *D*
U034 DOUBLE CLICK format v3. 03 9/10 sectors, 80/82 tracks.
U035 DEC edit clone. Disk engineer v3.01 do alsorts to a disk via GEM.
U040 AUTOGEM autoboots Gem programs. VC Spreadsheet non-GEM.
U041 ADDRESS LOG, Address book & label printer, disk cataloguer.
U046 SUPERVKILLER detects 5 viruses, 7 anti-viruses.
U050 GEMINI Desktop replacement. English version *DXS*
U052 GEM PLUS. Neodesk variant.
U057 GEMDOS USER GUIDE, full of info about GEM-DOS
U058 ATARI TOS 1.4 bug fixes (STFMs with Rainbow TOS)
U059 XCONTROL ATARI'S latest TT control panel accessory for all STs.
U063 MEMFILE 2.0. Memory and disk editor with powerful features.
U065 STDCAT v4.0, disk catalogue.
U067 ARCSHELL v3.0, Arc V6.0
U068 HITCHHIKERS PD shareware disk 2.0
U069 ST Zine shell, Disk mag development tool.
U070 SUPERB Intro creator, sprite, pics, text & music
U073 SUPERBOOT V7.0
U075 ST TOOLS, many features
U077 GOODIES, multiple featured desk accessory
U080 JAMES, the desktop butler.

GRAPHIC, FONT AND ART/DRAWING DISKS

A005 PALART, excellent art program with full doc files. *C*
A009 COLUMBIA, Drawing prog, some 3D elements. Studio (*X*), Drawing package. Both German
A012 DOODLE, mono & colour versions. Also some Mandelzoom pics.
A013 ST GRAPH. Comprehensive graph prog, handles bar, horizontal/stacked bar, line & dot charts.
A015 FONTS2, 7 screen/desktop fonts, inc. Columbia, Devoll, Hudson
A018 CANVAS, great art package
A020 PALETTE MASTER, art package, up to 512 colours. *C*
A024 FRACKTAL drawing program from Germany. Mono/Col.
A025 FONTKIT 3.31 *D*
A027 ANI-ST, ex-commercial package, quality animation system
A029 MASTERPAINT drawing package, excellent, Mono & Col.
A030 PICWORKS, enlarge/reformat pics up to 3 times normal size. *M*
A034 PUBLIC PAINTER. *M*
A036 SNOOPY cartoon pics. *C*
A042 ST CAD v2.1, a med/high res CAD package. Full docs. CALC-PLOT, scientific calculator
A043 THE ARTIST, Great drawing package with many options. *M*
A048 JIL CAD, Shareware. *XD*
A053 MOVIE CONSTRUCTOR, FACE ANIMATOR. *M*
A054 SIMPLE DRAW v3.4, art package. Docs foreign. Med/Hi-res
A059 MASTER DOODLE, shareware art package for the younger user.

CLIP ART

C002 Human figures, cartoons, titles.
C003 Sports figures, July 4th logos.
C010 Occasional Clips, Characters etc.
C011 Loads more fruit, vegetables.
C012 Herbs & Kitchen parts.
C013 Humorous clips, Letters A-Z.
C015 Babies, boys and girls
C016 Girls, Scrolls and Occasional Clips
C017 Artdeco, Baby boy & girl
C018 Varied Humorous Clips.

WORDPROCESSING & DESKTOP PUBLISHING

W001-006 TEX, 6 Disk Pack, document processor. *M*
W008 1st WORD wordprocessor. Professional fully GEM based
W009 Easy Text v1.2 fully working DTP demo (w010 for DS users)
W013 STPAGE, super fast editor
W015 HYPERTEXT. Shareware prog. Produce professional docs. *MD*
W017 ST Writer Elite V4.1 top quality wordprocessor
W018 WORD 400, Desk Accessory WPR. Fully featured

PROGRAMMING/LANGUAGE DISKS

P001 68000 Assembler
P002 STOS SOUND FX creator.
P008-P10C LANGUAGE DISKS 1, 2 & 3 of Elementary C, a set of 3 disks.
P012 CPM EMULATOR, CPM-8 v 2.0.
P013 CPM UTILITIES for P012.
P017 PROGRAMMING EDITORS: CONTEXT v2, PRO-ED & P-EDIT, full docs.
P019 Nigel Smith's ST 6800 pop-up ref. guide.
P020 SOZOBON C, Great C compiler *D*
P022 SPRITE EDITOR. Create and save sprites.
P023 C TUTORIAL, disk manual
P026 MKRSC a simple GEM resource construction utility.
P027 MODPAS, Pascal Compiler. *D*
P029 GFA EXPERT, all you need to know about GFA v3 basic.

GAMES DISKS (colour unless stated)

G001 Warzone, Daleks, etc.
G014 SUPERBREAKOUT, 40+ brick types with special features. *M*
G016 NAPOLEON, wargame sim. *M*
G017 EMPIRE BUILDER property developer. LOST TREASURE & JUMPSTER
G018 RUSH, move bricks to create a way out for the ball.
G020 YAHTZEE, popular game.
G021 UPSTARTshoot cherries. *S*
G022 COMPANION shoot 'em up in outer space
G025 ENGLAND Team Manager
G027 DIE ALIEN BLOB, a great shoot 'em up, excellent graphics.
G028 TREASURE SEARCH, find the hidden treasure. *SD*
G033 ADVENTURE WRITING SYSTEM
G037 TUNNEL VISION, maze game
G038 BERMUDA RACE 2
G039 INVASION, adventure
G041 Hack! is a D&D adv.
G045 AYATOLLA, terrorists attack. *S*
G046 ROBOTZ, 40 levels, great
G047 FRUIT MACHINE simulator
G056 SLIDE, 3 levs, puzzle. *S*
G063 SOLITAIR 3D graphics. Macpan. Galaxy & Sprengmeister. *M*
G064 ATOMS mentally challenging, KILLERCHESS fast & furious, AMMOTRACK'S a superb race & blast 'em.
G068 SKIDPAN, motor racing. *S*
G069 STOCKMARKET, Wheel & Deal, Galactice Warriors, shoot 'em-up.
G084 FLOYD THE DROYD, ultra fast shoot 'em-up. Sampled sound.
G085 AIR WARRIOR, Flight sim
G086 COMPUTER PINBALL, DEVASTATOR, 3D strategy game.
G090 TALESPIN, Wolf and 7 kids
G092 FUZZBALL platform game
G093 SHIPWRECK, educational maths with graphics. *S*
G094 ZOG a great blasting game. SUPER SENSORI.
G095 A DUDLEY DILEMMA, adv.
G097 WIZZARD'S LAIR adv.
G098 UNDER BERKWOOD Massive graphic adventure
G100 NAVAL BATTLE, Battleships
G102 CENTAURI, shoot 'em up.
G106 VIRUS, great graphics & sound. *S*
G108 FLYOVER, bombing raid
G109 GLOB, you collect cherry cakes while avoiding pursuers.
G111 TRACKER, you drive your tracker through enemy territory.
G112 OVERLANDER, shoot 'em up.
G113 CHANCE, battle the Archons.
G114 ESCAPE FROM THE TOMB OF RA.
G115 MUTANT, reactor out of control, workers mutate.
G116 KEY TO ATLANTIS, underwater scrolling shoot 'em up.
G118 MARS MAZE, platform game.
G119 STEEL, blast everything.
G122 HEDGEHOG, Frogger clone. *S*
G123 THE NAME GAME. +editor.
G128 TARK, great text adventure
G129 BATTLE FOR THE THRONE.
G130 LLAMATRON, a great Shareware game by Geoff Minter. *D*
G131 VIDEO POKER: Las Vegas poker playing machine.
G132 DERRICK THE DROID: platform, shoot 'em up & puzzle game in one.
G136 PORK II: ZORK send up.
G137 MORIA: Fantasy RPG. *D*
G138 SHOOT 'EM UP BUILDER KIT. *D*
G141 DUNGEON!: Multi choice fantasy adventure with some humour.
G144 HACKMAN, 50 levels, Pacman clone. *S*
G145 ELVEN CRYSTALS II: Adv
G149 STARMAZE: Various levels, blast alien craft on your way.
G150 A NIGHT ON THE TOWN adv.
G151 TILE GAME, rearrange the letters. *S*
G152 SOKO, 90 levs maze/puzzle
G153 MEGAROIDS, RIPCORD, SPACEWAR, BUGS
G154 BATTLE SCAPE 2 player fantasy war-gaming.
G155 FRUSTRATION, CRISSCROSS.
G156 BACKGAMMON, POKER SQ'D
G158 FLY ROBIN, SANTAS WORKSHOP
G159 PENGUIN, excellent shareware
G160 CROCODILES PASTIMES.
G162 REVENGE OF THE MUTANT CAMELS 1 or 2 players.
G164 SPACE INVADERS, a classic
G165 BLOCKADE, Qix clone
G167 TENNIS great graphics/gameplay.
G169 ROCKFALL, boulderdash type.
G172 ENTOMBED, platform 5 levels.
G176 ARMOURLYTE, horizontal scrolling shoot 'em-up.
G177 GRAV, rotate & thrust.
G178 MAZE, split screen, 2 players + editor, great.
G181 OZONE, platform/puzzle, many enemies, shareware game.
G182 PDBOLD, excellent Arkanoid clone, colour & mono. *DX*
G183 INFILTRATION, defeat the aliens, shareware.

APPLICATIONS – Spreadsheets, Databases etc.

S001 DATABASE 1, GEM driven database.
S002 ST SHEET, quality spreadsheet *C*
S005 B/STAT v2.01, sophisticated graphing & stat analysis. *DX*
S007 OPUS v2.2, GEM based spreadsheet & charting program. *DX*
S009 WG DATA, high quality DTB. Full docs.
S011 DOUBLE SENTRY, fully working accounts package (no VAT)
S012 PERSONNEL DTB, Names & addresses DTB.
S013 INVENTORY PRO V2.0 stock control system.
S014 TCOS, tree structured DTB.
S015 ZAPCARD easy to use card type DTB.
S016 SHEET V2, spreadsheet. Similar to Lotus 123. docs.
S017 DATAPLOT, sophisticated data plotting package.
S019 FASTBASE, absolutely brilliant, sophisticated shareware database. Excellent features.

GULF TORNADO £1.99 (not PD)
Great scrolling shoot 'em up. Blast those Migs and Missile launchers with your fighter/bomber. 1 or 2 players

COMMUNICATIONS DISKS

CD001 PACK-ET-TERM v3.3a, radio package with docs.
CD005 UNITERM v2.0a with auto-dialler & phone book.
CD006 VANTERM 3.71 & 3.8 great communications package.
CD009 HAGTERM ELITE v3.3 powerful shareware comms package

MUSIC

M001 COMPOSER, music creation.
M008 KEYBOARD program, various songs & samples.
M012 SINGING CALIFORNIAN RAISONS. *X*
M013 MUSIC WRITER, create music.
M016 CASIO CZ SOUNDS & EDITOR
M020 XBIOS Music Const. Kit
M021 PERCUSSAMAN, 4 track, 16 instrument, synthesised sequencer.
M022 SOUNDTRACKER PLAYER & MODULES. D_DREAD 1, D_DREAD 2, PAT_MIX, RVB_DEMO, SPREAD.
M025 MFP, Music design package. *DXM*
M026 CHORDEX tool for learning major/minor chord shapes.
M029 MIDI v2.0 monitor, Med/High res. Shareware EX800 v2.0.
M031 DBRK4802, daybreak step time sequencer v.3.
M035 ACCOMPANIST 2.4, 16 voice shareware sequencer.
M040 EDSYNTH 1.2 music synthesiser.

EDUCATIONAL

E002 WORLD MAP GAME
E004 Spelling Made easy
E005 REBUS WRITER, design & print rebuses. Samples included.
E006 BARNYARD, pair the animals from memory. *C*
E007 WELCOME TO CHEMISTRY V2. *S*
E008 CHUNNEL, A French to English & vice-versa tutorial game. *C*
E010 PERFECT MATCH , PENTOMINOES
E011 TYPING TUTOR (2) with full documentation.
E013 MATHS MADE EASY
E014 KIDGRAPH, KIDMUSIC, KIDPIANO, KIDPOTATO *C*
E015 KIDPUBLISHER, KIDSONG
E016 DOT 2 DOT, includes creator.
E019 SOLAR SYSTEM GEOGRAPHY
E020 GEOGRAPHY TUTOR
E021 ZOO MAKER, you're asked questions, the computer tries to guess the animal.
E022 ME FIRST, BUTTERFLY IN THE PARK.
E023 COLOURING BOOK.

GENERAL

F003 SKY MAP, display over 1500 stars.
F005 CONSTELLATIONS, A comprehensive astronomers disk *M*
F006 PLANETARIUM, get stats on almost any planet or moon.
F009 THE PLANETS. *D*
F012 AUTOROUTE, working demo covering the south of England.
F013 POOLWISE V3.5, pools predictor, MED RES.
F016 ST TOUR, guided tour.
F017 YOUR SECOND ATARI MANUAL.
F018 NEWGEN V4, shareware, 10 record limit.
F020 ST TECHNICAL MANUALS.
F021 BUSINESS LETTERS, 100 business style letters in ASCII code.
F022 ASSISTANT CHEF, 142 recipes + add your own.
F023 ASTRO 22, Astrology
F026-28 A ROMAN MYSTERY, graphic art images, Roman magazine, Graphic database with a murder investigation, plus more. *3 disks*
F029 COMPACT OFFICE MANAGEMENT, excellent accounting program for small business and sole traders. Comprehensive. *D*

DEMO'S

D005 THE DEFINITIVE DEMO. *D*
D006 SLATATANIC CULT, Music Demo I & II. *D*
D007 ASTERIX DEMO.
D008 BOMB THE BASS.
D009 TRANSYLVANIA DEMO. *D*
D010 SOUND CONNEXIONS. *D*
D011 THE NEW YEAR DEMO. *D*
D012 STINGRAY DEMO.
D017 COUNTERPOINT DEMO.
D018 CUDDLY DEMOS. *S*
D019 MASTERSOUNDS DEMO.
D020 ROBOMIX DEMO.
D021 STAR WARS DEMO.

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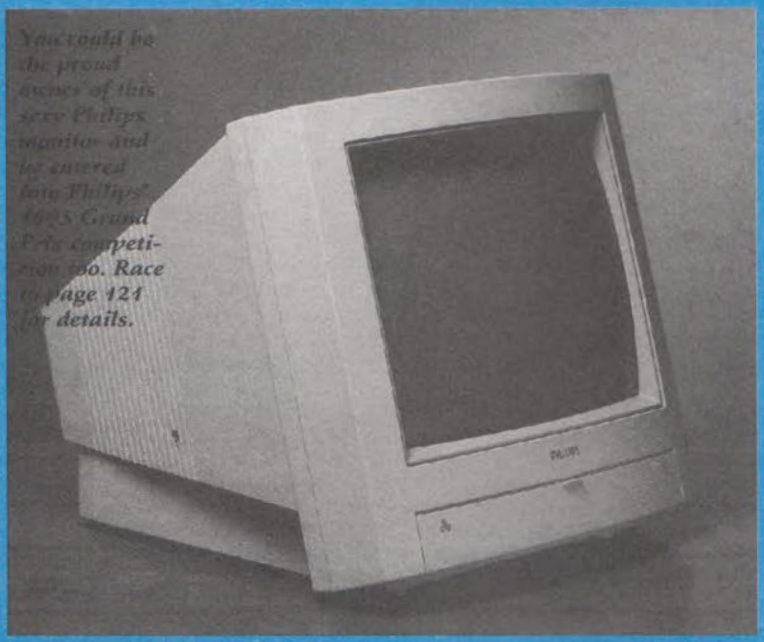
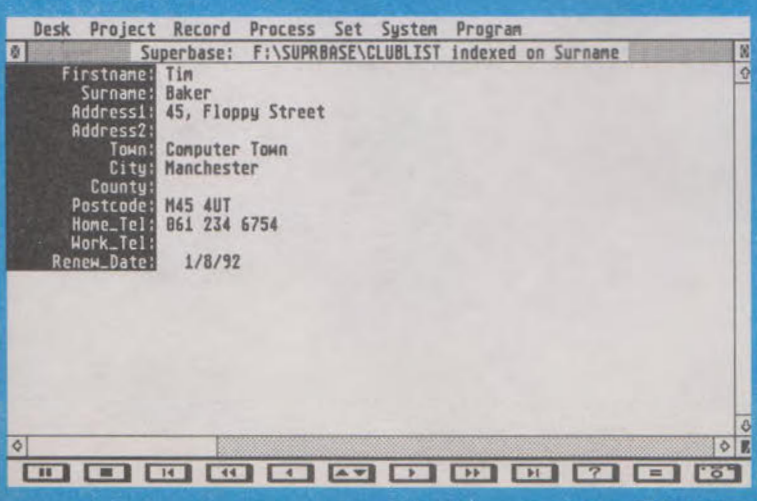


You could be the proud owner of this new Philips monitor and be catered into Philips' 1992 Grand Prix competition too. Race to page 121 for details.

DTP accessories and help are all available in the Public Domain. Go to page 104.



Learn how to merge a data file. One of the features of First Word Plus on page 114.

It's time to get the blues again. More useful information for you to use with your ST. In fact, 32 pages packed full of ideas to help you get that little bit more out of your favourite computer.

Powering Up Your ST (part five) looks at hardware accelerators – what they do, how they are fitted and which one to buy.

This issue's DTP theme meets the PD Zone on page 110, with a look at several inexpensive PD programs that will help you get the most out of Timeworks. There's also a look at all the latest games and utilities...

Superlative tutorials continue in ST Buyer this month with the forth part of the HiSoft BASIC course. Part three of the First Word Plus tutorial lends a helping hand too! Get the best out of our cover disks with the Blues!

On page 121 there's a Philips CM8833 Mk II monitor up for grabs and still there's more! Ask The Experts, Letters, Charts, Learn The Lingo and a list of prizewinners from our previous issues. Whatever you want, you'll find it within ST Buyer!

Remember, don't get down, get the Blues!

FAST FORWARD

Andrew Wright puts foot to the floor with the latest addition to the line-up of software-compatible accelerators which can speed up even the humblest ST by over 300%

SYSTEM UPGRADES

ATARI ST REVIEW ESSENTIAL BUY

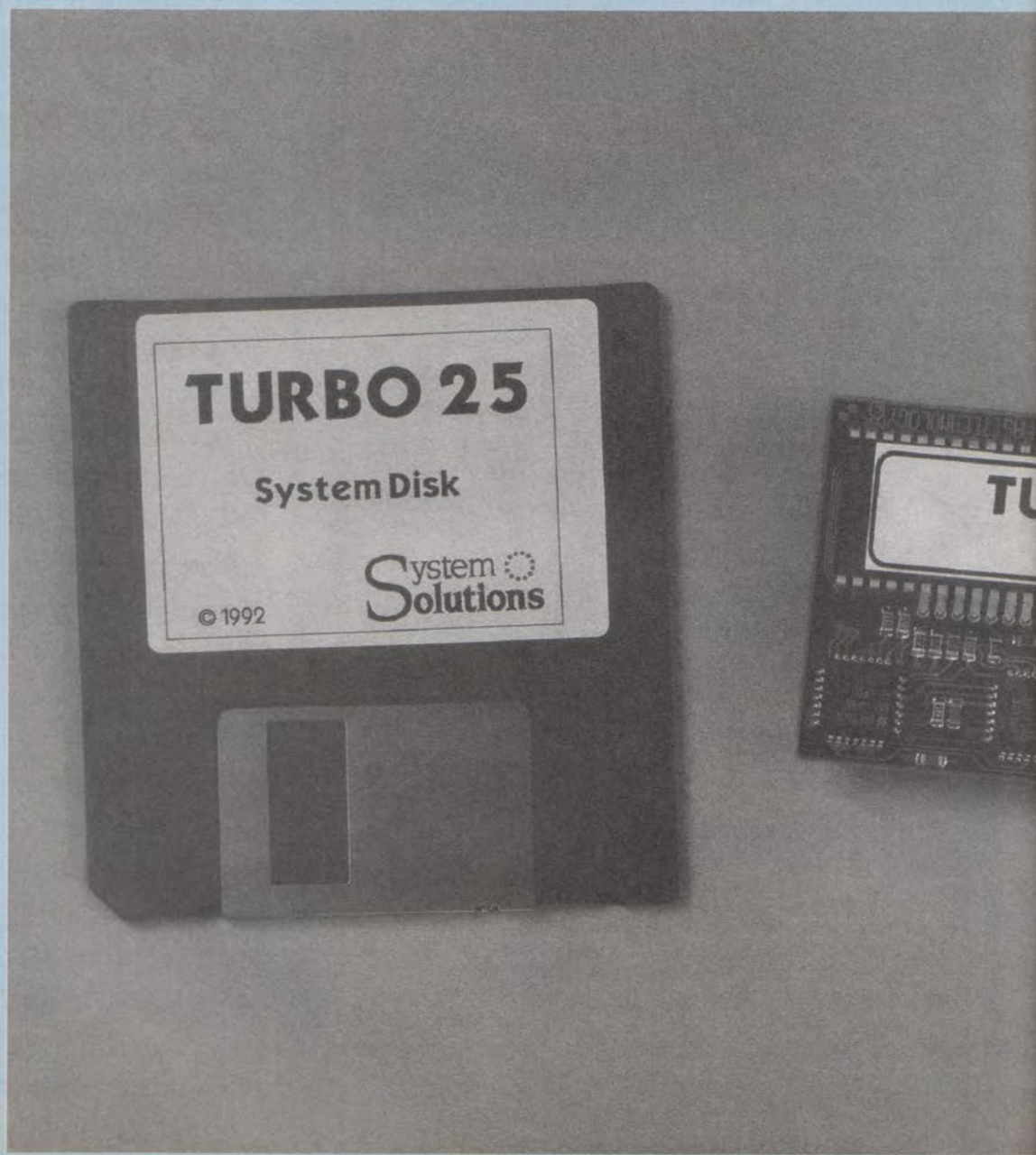
You know the feeling. Your ST is working perfectly, but some of today's more powerful applications are starting to run just a tiny bit slower than some of your other packages. Let's face it, ***Calamus*** wasn't designed to win any races and the new version, ***Calamus SL***, is slower still. Even ***Pagestream*** gives you the opportunity of a coffee break in between screen redraws and graphics imports.

As applications become more powerful with complicated outline fonts and on-screen graphics, developers bump into a brick wall. They can't design bigger applications without utilising more processing power so their programs literally come to a standstill. There is a strong demand for applications that perform such things as image processing for greyscale and colour pictures, optical character recognition and even computer aided design. Unfortunately the ST just isn't up to the job.

The ST's reliable 8MHz 68000 processor was certainly state-of-the-art when it was introduced 10 years ago, chosen to be the heart of the first Apple Macintosh computers which left the early model IBM PCs standing. Now the Mac uses 68020 and 68030 chips, with even a 68040 version recently available, all of which are fast and powerful. Even the dinosaurs of modern computing, the PCs, now use fast 80386 and 80486 chips which are capable of 55Mhz and more.

THE TT STORY

But where does this leave the ST? Well, time doesn't stand still and Atari has made some attempt to beef up the performance of ST-based machines with the TT and the Mega STE. Unfortunately, the TT has been little short of a disaster, despite its powerful 68030 processor. Expensive, with poor distribution levels, the TT has lost out to the new generation of cheap PCs and even some of the lower-end Macintoshes. When you can



Stunning speed in most applications
Easy to switch back to 8 MHz
Completely compatible with virtually all ST software
Cost-effective alternative to a TT

PROS AND CONS

I can't think of any!

buy a 486 PC for under £1000, complete with VGA colour monitor and hard drive, who needs a TT?

The problem with upgrading to a faster machine is that if you've spent over £500 for ***Didot Professional*** plus several hundred pounds on word processors, utilities and peripherals, you need to shell out even more cash to buy their equivalant software for your new machine.

This is the situation; there are thousands of STs hard at work at home and in business, struggling to run powerful software. Users have invested a lot of hard-earned cash in software and peripherals and, equally importantly, time in learning the programs and techniques. They need speed – we all need speed. But how do they get their programs to run faster?

The answer is to fit a hardware accelerator. Prices range from just over £100 to several thousand pounds; but there is one to suit every pocket and every need. They can transform a standard off-the-shelf ST into a powerful workstation without sacrificing software compatibility.

OPERATION	STANDARD ST	TURBO 20/25	%AGE IMPROVEMENT
Load 500K text file (Redacteur)	11.12	5.40	106
Load Pagestream 2.1	37.89	31.76	12
Load Reprostudio	9.50	5.79	64
Load greyscale TIFF file (Reprostudio)	11.42	9.09	26
Scan full page of text using Migraph OCR	97.34	42.02	132
Flip a large monochrome image in Touch-Up	7.62	2.92	161
Clean up large monochrome image in Touch-Up	41.91	14.12	197
Vectorise a bitmap using Didot Professional	112	37	203
Archive 1 MB of files using LZH	436	173	152

Right: ***Powerful applications like Didot Professional go like the clappers with Turbo 20/25.***

As with most accelerators, Turbo requires special software to get it up and running.

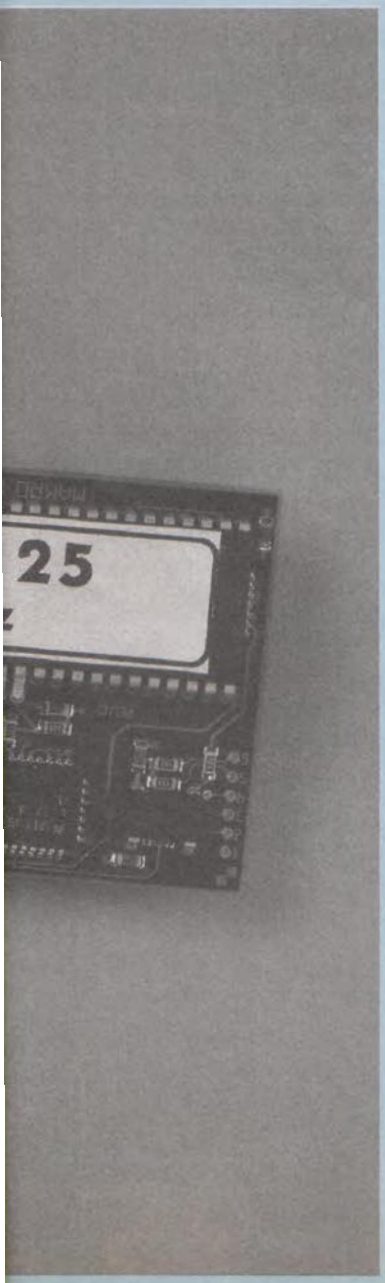
INCOMPATIBILITY?

The TT and Mega STE don't use the 68000 chip, of course, and this is the root of the widespread incompatibility problems that both machines suffer from. Although TT versions of most software now exist, it underlines a basic problem. Fitting a 68030 based board such as the Gadgets By Small SST will lead to incompatibility problems, even though Atari currently claim that 80 per cent of existing software should work perfectly well.

There are other factors involved, too. The SST board provides space for additional RAM so that you can have up to 12 Megabytes and a 68030 processor for DTP, image processing or whatever. On the other hand, the costs are far from negligible. The base model 50 MHz 68030 board costs £550 and then there's the cost of the RAM chips, but the power you'll be buying for the price will be phenomenal. It has only just become widely available (and even now only for the Mega ST) but more versions are reportedly waiting in the wings.

The greatest worry, of course, is compatibility. As a journalist, I need to review software safe in the knowledge that my ST is compatible with yours. Obviously, as a user, I also need it to be compatible so that I can run my favourite programs. What I need is a replacement 68000 processor that will run any existing ST program, without question, and run faster than 8 MHz to give me the power I need.

So is there a Santa Claus? Well, probably not, I'm sad to say. But happily there is a 68000 replacement. It uses brand new wafer technology that allows the 68000 processor to run at much higher clock speeds, providing better CPU performance. When System



System Solutions' Turbo 20/25 Accelerator Board – pays for itself in no time.

ALTERNATIVES

Blitter chips are another acceleration option for owners of STFMs. They are fitted as standard in the old Mega STs and all STEs and provide hardware replacement for the operating system's line-A routines, the part of TOS which moves blocks of memory around. This includes screen operations, with the result that text and graphics are redrawn faster. Text scrolling can be improved by up to 50 per cent in some cases and dialogue boxes open and close significantly faster.

The ICD Adspeed is a 16 MHz accelerator with an onboard 32K cache. It is switchable between eight and 16 MHz and can be configured either by hardware or software. Performance figures derived from Quick Index's CPU tests are around 200 per cent. It costs £148 from HCS in Croydon on 081 777 0751.

Other models in the Fast Technologies' Turbo range include the Turbo 16 v2.0 16 MHz, again with a cache and performance improvement up to twice as fast, the Turbo 20/20, a 20 MHz version of the 20/25. It isn't quite as fast as the Turbo 20/25, clocking Quick Index CPU figures at around 250 per cent, although it costs a little less at £269 from System Solutions on 0753 832212.

Solutions fitted one in my ST, it showed me a speed of processing that I found difficult to believe.

TURBO POWER

Just as a turbo-charged car will leave you standing on the road, an ST fitted with a turbo board will leave you literally gasping with delight.

Take the Turbo 20/25 now nestling comfortably inside my Mega 4 ST. It looks innocuous enough – just another chip much the same size and shape as the existing Motorola 68000. It has a mundane sticky label on top that belies the phenomenal processing power that lies underneath. It is actually a 68000 clone that runs at a whopping 25 MHz – over three times faster than a standard ST.

System Solutions will even fit the board for £30 extra – it isn't a DIY modification and, having seen it done, I'd strongly recommend taking advantage of the cost fitting service. Essentially the old 68000 is removed and the new one fitted. A few minor modifications are also made at the same time to ensure that some of the ST's lower quality components can handle the increased operating speed.

A hardware switch is provided at the rear of the case to enable 8 MHz mode if needed for certain arcade games and some badly behaved software. The only time I've found it necessary to switch back is when using some hand scanners which display odd results when running in turbo mode. I've had no such problems with the Epson GT6000 flatbed scanner so it must be something to do with the cartridge port.

SOFTWARE SUPPORT

A disk full of software is also provided. This contains a number of useful utilities including a means of switching from eight to 25 MHz mode and back without using the hardware switch. There are also several benchmarking utilities, such as Quick Index, plus the latest version of TurboST, to improve screen display speeds still further.

The results of some of the benchmark programs are shown here alongside some of the "real-life" improvements that are possible. In general most operations are carried out two to three times faster than a normal ST.

The biggest bottleneck in the system, of course, is the disk drive. No matter how fast some operations can be processed by the ST's CPU, the retrieval of information from a floppy disk will negate much of the improvement. The figures shown illustrate the problem nicely – the tests on Migraph OCR and loading of text and image files is dependent on disk access. In this case the hard disk is a very slow Atari Megafile so the figures will be fairly conservative. The improvements would probably be greater with a hard disk such as Ladbroke's Datapulse.

The other bottleneck is the ST's RAM. It can't work any faster than 8 MHz so any operations to do with swapping data around will not show the full improvement. For example, flipping or rotating an image involves considerable calculation, but it also entails moving large chunks of data around the ST's memory.

The result of this is that the accelerator gives a real-life improvement that's somewhat less than the maximum theoretical improvement. If disk or video access is involved, speed of operation will be doubled whereas programs that use large mathematical operations such as autotracing, font conversion and spreadsheets, can be up to three times faster.

The Turbo 20/25 is a 68000 CPU and, as a result, there are no compatibility problems. Now tedious operations such as archiving folders full of files or spell checking long articles, are completed in a fraction of the time. Looking at it quite coldly, assuming an outlay of £300, it only needs to save a few minutes a day to pay for itself in no time, especially with DTP or graphic design.

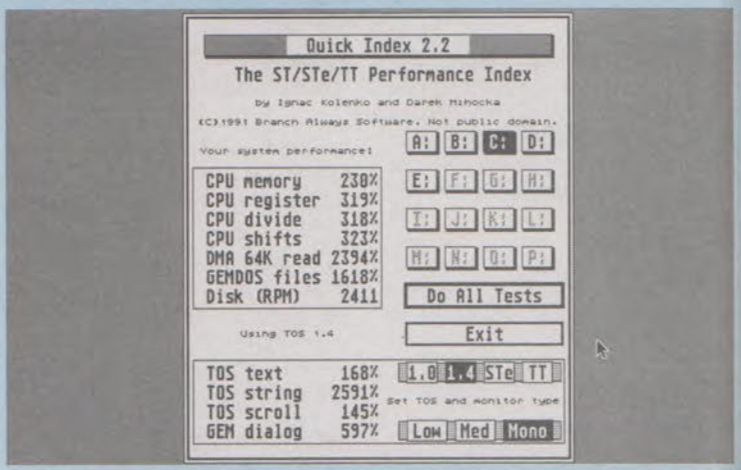
Another bonus is that when installing lots of desk accessories (especially large ones such as ***Harlekin***) and AUTO folder programs, the drop in performance is far less noticeable. Alternative desktops also become far easier to use as they load far faster.

NOTE: All the figures for the Mega 4 ST are with the blitter chip switched on. Although the CPU figures are still around a third of those for a TT, the TOS text, TOS string and GEM dialogue box figures are several times better!

QUICKER INDEXING

The benchmarks give a slightly different picture as they're concerned entirely with the ST's processor and take little or no account of the disk drives and video display.

A glance at Quick Index gives some pretty impressive figures, although in these cases 200 per cent is twice as fast and 300 per cent three times as fast. Quick Index isn't quite mathematically correct, in my opinion, but I've left the figures as they are so that those of you with different setups can compare them!



Quick Index, which comes with Turbo, gives you a complete breakdown of your ST's performance.

THE NEED FOR SPEED

Here are some examples of improved speed in carrying out real-life operations on an accelerated ST. Some of the operations are slowed down by the disk drive which needs to access data and does so at its own speed regardless of the CPU.

Most of the time you save can be fruitfully spent doing something else (like making the tea) because you can spend ages staring at the screen while some operations are carried out. If the accelerator can do it faster, that's more time for you to get on with whatever you need to do, and mistakes aren't as irritating..

The figures don't tell the whole story, of course. Many operations have to be repeated several times – autotracing is a good example. With so many parameters to set, autotracing can be a very repetitive business if you want to get a perfect trace. Fitting an accelerator helps to prevent you going mad with frustration and boredom when you trace an image for the fourth or fifth time.

Note that in the figures below, a percentage improvement of 100 per cent is twice as fast, 200 per cent is three times as fast.

Operation	Mega ST	Mega ST with Turbo 20/25	Mega ST with Turbo 20/25, NVDI and EOS
CPU memory fetch test	100	231	233
CPU register	100	321	323
CPU divide	100	319	322
CPU shifts	100	324	327
TOS text	106	196	698
TOS string	103	181	2731
TOS scroll	132	141	148
GEM dialogue	133	267	1159

"Simply stunning speed with total compatibility"

NAME: TURBO 20/25 ACCELERATOR BOARD
COMPANY: SYSTEM SOLUTIONS
CONTACT: 0753 832212

PRICE: £299 (£30 FITTING)
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5MB

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

OVERALL **95%**

Get the best from
Timeworks Publisher

User Guide

At last: a users' manual written from a user's perspective. The author, David Smith, a dedicated user of this versatile package, has learned through experience, and trial and error, how to produce remarkably professional results. The book aims to pass this knowledge on by introducing the basics in such a way that each new feature builds on what has gone before, to form a kind of "learning curve".

The book is full of innovative ideas to produce newsletters, C.V.'s, posters, reports, theses, or indeed a professional book (as the guide itself demonstrates). Each feature is explained in easy-to-follow, step-by-step instructions that every novice will appreciate.

Topics covered include: the installation process, setting up a document, importing text and graphics files, special effects, and an extensive section on installing and designing fonts - to make your work really stand out from the crowd. There are numerous worked and visual examples throughout the text.

A Users' Guide to Timeworks Desktop Publisher (260 pages) is available from good bookshops (ISBN 1-872824-00-5) or direct from The ST Club at £9.95 inclusive. Price includes same-day despatch by first class mail.

Utili* e

We also publish a range of utilities of interest to users of Timeworks Publisher:

Fontkit Plus 4 (£24.95). The ultimate font editor for Timeworks Publisher fonts.

Trimfont (£9.95). Compresses fonts to allow more to be installed.

C-Font (£9.95). Converts Calamus outline fonts into Timeworks Publisher fonts.

Printer Drivers (from £2.95). We are licensed by Atari to supply GDOS and FontGDOS drivers to make GDOS packages like Timeworks Publisher compatible with most popular printers.

Fonts and Clip Art (from 85p per disk). We have a vast range of PD and commercial fonts and clip art that are suitable for use with Timeworks Desktop Publisher. Full details in our printed catalogue - write or phone for a free copy.

We publish a range of high quality utilities for the ST and have a library containing over 2000 disks of PD and Shareware software. Write or phone for a copy of our latest 64-page A4 catalogue and for details of our monthly magazine ST Applications.

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		GRAND TOTAL	

If you have a cheque guarantee card or credit card please write its number on the reverse of your cheque, doing so will ensure dispatch within 48 hours of receipt.

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ESP Software (SR), 32a Southchurch Road, Southend-on-Sea, Essex SS1 2ND, UK.

PD ZONE

Now that you've tried the Timeworks package on this month's coverdisks, you probably want to know what else is out there to satisfy your creative instincts. The public domain should supply you with more than enough answers. . .

PUBLIC PAINTER

FLOPPYSHOP ● DISK NO. ART 11M ● £2.50 ● MEMORY: 0.5 MB ● MONO ONLY (OK WITH EMULATOR) ● PUBLIC DOMAIN

ATARI ST BUDGET BUY

IN BRIEF: Graphical effects play a huge part in design these days - if it's not twisted, distorted or reversed, the modern readership just doesn't want to know! The trouble is, packages that can produce these effects are notoriously expensive - or at least they used to be...

Public Painter is a PD program that specialises in graphical wizardry. What's more, you don't even have to worry about complex formulas, because the majority of operations simply involve clicking and dragging in the right direction. It's not just effects that ***Public Painter*** has up its sleeve either - the font handling is pretty impressive too, allowing rotation in addition to the usual styles.

Just a few of the many effects that can be achieved in no time with Public Painter. About three minutes' work in all!

Several graphics formats are supported, including the statutory ***Degas***, ***IMG*** and ***Doodle***, plus ***Painter*** s own A4 variation. Export is a little bit limited, but any decent snapshot utility will take you a long way...

ST REVIEW COMMENT: "To buy a commercial package that will better the effects produced with ***Public Painter***, you would need to spend at least £140 on ***Outline Art*** - it's that good! Pity about the lack of vector support, though."

✪✪✪✪✪

ATARI IMAGE MANAGER

COMPUTER CONNECTIONS ● DISK NO: 809 ● £1.60 ● MEMORY: 1 MB ● PUBLIC DOMAIN

ATARI ST BUDGET BUY

IN BRIEF: Touching up scanned art is a real pain in the neck at the best of times. Particularly annoying is the fact that your ST could probably make a better job of it, given the right software!

Atari Image Manager is billed as "digital image enhancement software", which basically means that it applies a set of predefined formulas to an image to change its appearance. Some of the effects that can be achieved with this method are simply stunning. Included are operations to produce a bass relief effect, outlines, removal of "noise" and much, much more!

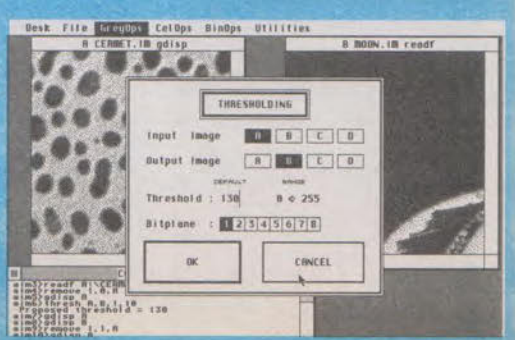
The system is built around a command line interface (CLI), but don't let it worry you - a GEM menu bar also takes care of most of the operations. The CLI actually comes in very handy because complete "scripts" of AIM commands can be typed into a text file and applied to an image without retyping!

ST REVIEW COMMENT: "Incredible! ***Atari Image Manager*** makes the production of stunning clip art a piece of cake and the documentation, which is also available in the PD, is superb."

✪✪✪✪✪

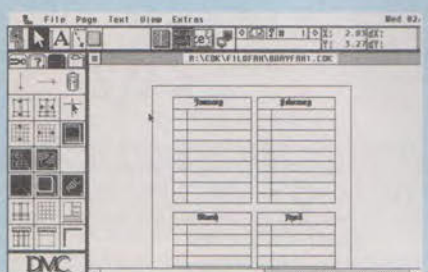
Convert any image to stone at the touch of a button with AIM.

Don't let AIM's CLI bother you – every operation also has a GEM-based equivalent.



CALAMUS UTILITIES

FLOPPYSHOP ● DISK NO: UTL.3022 ● £2.50 ● MEMORY: 1 MB ● PUBLIC DOMAIN



Transform some of those juicy public domain Calamus fonts into a demo-

IN BRIEF: The ST world would be a sad place without ***Calamus DTP***, but let's face it, it's not the easiest package in the world to use. But help is at hand with the ***Calamus Utilities*** disk from Floppyshop.

Amongst the goodies are some juicy documents to show you how the professionals do their job, a variety of "Outline" clip art, layouts for Filofax stationery and some Christmassy designs.

For those who haven't taken the ***Calamus*** plunge yet, there's a little utility to convert commercial fonts into a format usable with the demo version - very handy indeed! And to top it all you can give DMC's text editor "PKS Write" a test drive with a fully usable demo.

ST REVIEW COMMENT: "This disk is a really handy addition to any publisher's collection. The clip art alone is worth the asking price - look on everything else as a bonus!"

✪✪✪✪

PD ZONE TOP 10

1) ATARI IMAGE MANAGER • COMPUTER CONNECTIONS • DISK NO: 809 • £1.60 • MEMORY: 1 MB • PUBLIC DOMAIN

An extremely powerful digital darkroom which works with both colour and mono pictures. If you own a scanner or a frame grabber, this one is an essential purchase!

2) PUBLIC PAINTER • FLOPPYSHOP • DISK NO: ART 11M • £2.50 • MEMORY: 0.5 MB • MONO ONLY • PUBLIC DOMAIN

Effects galore in this public domain DTP package of sorts. It's easy to use and supports a wide range of fonts, lots of which are included in the package.

3) VIEW GIF • WIZARD PD • DISK NO:ART.04 • £2.25 • MEMORY: 0.5 MB • SHAREWARE

No DTP rundown would be complete without a graphics conversion utility and ***View GIF*** is about as good as they come. Screen images can be handled to virtually any size and the range of supported formats is huge.

4) FONTMASTER DELUXE • THE ST CLUB • DISK NO: WPR.16 & WPR.17 • £2.90 • MEMORY: 0.5 MB • MONO ONLY • SHAREWARE

Document processing arrives in the public domain. Type your text with the built-in word processor, switch to page preview and when you're happy with the results, commit it to paper.

5) PRINT OR SAVE • FLOPPYSHOP • DISK NO: UTL.405 • £2.50 • MEMORY: 0.5 MB • PUBLIC DOMAIN

Unlike most of the ALT-HELP screen savers available, ***Print or Save*** doesn't lose the ability to print the screen.

6) CALAMUS UTILITIES • FLOPPYSHOP • DISK NO: UTL.3022 • £2.50 • MEMORY: 1 MB • PUBLIC DOMAIN

Welcome to ***Calamus*** heaven, a place where the DeskJet has no border problems, designing filofax stationery no longer takes hours and the ***Calamus*** demo loads all fonts.

7) TEX • PDSSC • DISK NO: W001-W006 • £7.50 • MEMORY: 1 MB • MONO ONLY • PUBLIC DOMAIN

This is a mammoth typesetting system which is used pretty extensively in scientific circles, thanks to the fact that it supports formula construction.

8) STICKER 3E • FLOPPYSHOP • DISK NO: UTL.134M • £2.50 • MEMORY: 0.5 MB • MONO ONLY • SHAREWARE

Give your entire disk collection a face-lift the easy way with ***Sticker***! Not only is the program easy to use, the printed results are also excellent and you can save labels for reuse.

9) PRINTING PRESS • FLOPPYSHOP • DISK NO: UTL.321M • £2.50 • MEMORY: 0.5 MB • SHAREWARE

Whether it's letter heads, posters, calendars or invitations, this German ***Printmaster*** clone will more than likely be able to help you out. Both 9 and 24 pin printers are supported and the results are pretty good. A print preview mode also makes it easy to wheedle out any last-minute mistakes.

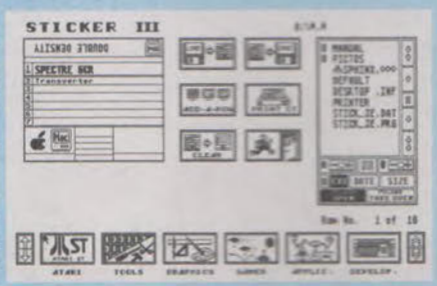
10) PAGESTREAM FONT EDITOR • THE ST CLUB • DISK NO: FON.41 • £1.60 • MEMORY 0.5 MB • PUBLIC DOMAIN

Can't quite find the right font for the occasion? Then why not design your own, or better still, modify an existing font? All this will be within your reach with the ***PageStream*** font editor.

STICKER 3

FLOPPYSHOP ● DISK NO: UTL.134M ● £2.50 ● MEMORY: 0.5 MB ● MONO ONLY ● SHAREWARE

IN BRIEF: OK, I know you enjoy searching through seas of cryptically labelled disks to find a single utility, but wouldn't a snazzy printed label and maybe a little picture make things easier?



Well-drawn, custom icons line Sticker from start to finish.

Looks like you're in luck, because ***Sticker*** can make this seemingly impossible task a whole lot easier. Boot-up and you are presented with a picture of a disk and all that remains is for you to click where you want some text and type away. A large selection of pictures are also provided for addition. It's all frighteningly easy to use and some beautifully crafted icons make the program nice to look at.

A fully DTP'ed manual can be found on disk and adds to the professional feel of the package – providing you happen to own ***Timeworks***, that is!

ST REVIEW COMMENT: "If you yearn to own the tidiest disk collection on the block and have a dot matrix printer, then ***Sticker*** is ideal. Unfortunately it won't work with the mono emulator, so a "real" mono monitor is essential."

✪✪✪✪

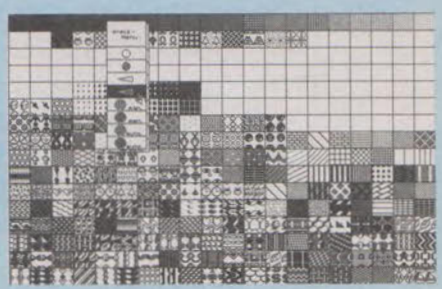
BUTTERFLY ARTIST

THE ST CLUB ● DISK NO: DRG.42 ● £1.45 ● MEMORY: 0.5 MB ● MONO ONLY ● SHAREWARE

IN BRIEF: Do you ever feel that your ST's screen just isn't big enough for what you want to draw? There are plenty of commercial offerings that can get round this limitation, but if you're on a tight budget ***Butterfly Artist*** is about your best bet – the design area is simply huge!

Fans of ***Degas*** will feel pretty much at home, because in use the packages are quite similar, with one page containing the tools, while the other houses the drawing screen itself. Rather than plump for a GEM window to move around the work area, you simply have to hold the right button and move the mouse, which works very well. Some of the drawing tools are a little off-beat, but most of the essentials are there somewhere and, all things considered, the package is nice to use.

Although originating from Germany, Butterfly Artist is mercifully, largely icon controlled.



ST REVIEW COMMENT: "Thinking big no longer costs an arm and a leg. ***Butterfly Artist*** isn't the best graphics package in the world, but its large drawing area, good import facilities and a few unusual tools could sway your decision."

✪✪✪✪

IDL SHOW

NEW AGE PDL ● DISK NO: CLIP.15 ● £1.50 ● MEMORY: 0.5 MB ● PUBLIC DOMAIN

IN BRIEF: Pubic domain clip art disks are ten a penny, but actually finding something that's worth using can be quite difficult. The ***IDL*** series is put together by one of Germany's largest PD libraries and mainly consists of high-quality scanned images. All of the disks come complete with their own trendy slideshow which is also capable of conversion to most popular graphic formats. Not only is it pretty, it's also about the fastest display program you are ever likely to come across!

This disk in particular contains some excellent caricatures, borders, bonsai trees, icons, music and a good selection of logos, together with several mixed screens containing upwards of 20 images each! In fact, it contains over 70 screens!

ST REVIEW COMMENT: "From what we've seen, all of the ***IDL*** series are excellent quality and the slideshow program is second to none, both in speed and in the amount it crams onto a disk."

✪✪✪✪

This incredibly quick slideshow is a part of every IDL Show (don't worry, this is the only German you'll come across).

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ART 07 Superb art package, idea for simple DTP. 23 built in fonts. A4 size paper works in mono crome for best quality of print. Ideal for leaflets, snapshot & Img compresser inc.

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ARC50 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 discription.

BRD04 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.

ARC14 HOME, and L'ORB 2 super pinball games. GALTIC RANGER, unusual shoot em up. MONKIES & BALLONS, bounce the clown and burst the ballons. FIRESTORM, another good arcade game rescue the humans. LAZERBAL,super game and intresting version on the pinball theme. Also on this disk LOST TREASURE, WIDOW MAKER, SLALOM & BREAK OUT.

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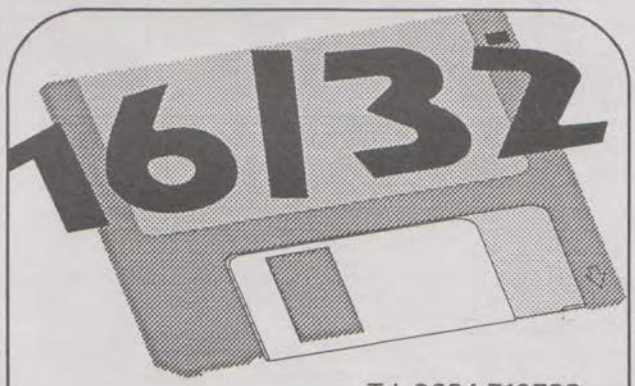

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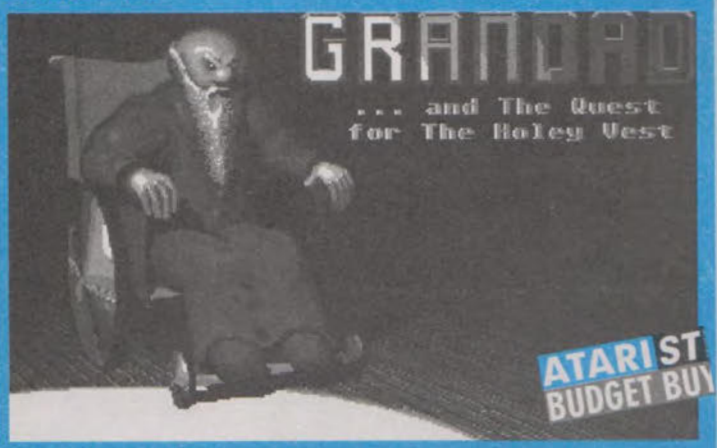
PD ZONE

This month's journey into the PD Zone continues with a look at all the very latest game releases

GRANDAD AND THE QUEST FOR THE HOLEY VEST

L.A.P.D. ● DISK NO: G.222 ● £2.00 ● MEMORY: 0.5 MB ● SHAREWARE



Out with the armour and weaponry, in with the wheelchair and false teeth watch out James Bond!

IN BRIEF: ***Grandad*** is an arcade adventure with a difference – forget the six-foot hero with biceps the size of Bournemouth and welcome a new breed of hero. Yes, you control Grandad in his electric wheelchair on a Quest for the Holey Vest.

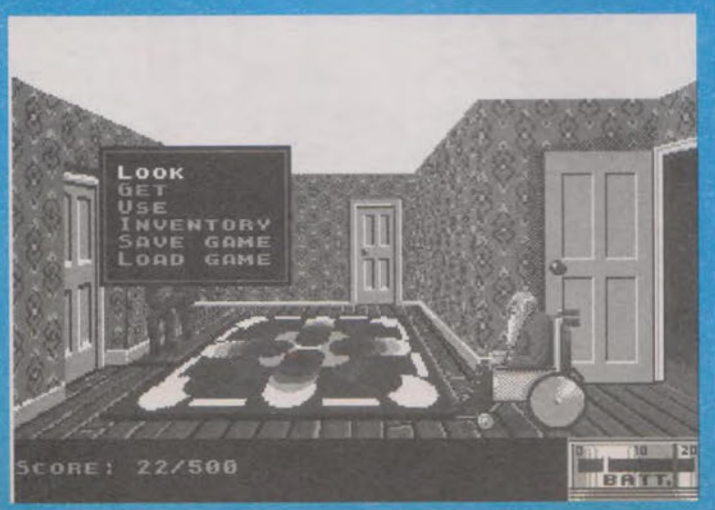
The action takes place around Grandad's house, which somehow seems to be stuck in a 60s timewarp, and is controlled completely by joystick. Pressing the fire button brings up a menu which will take care of picking up, putting down and using objects. Interaction with other characters – including the spotty kid next door, Lucy Lastic et al – involves "looking" at them and then choosing from a list of suitably Grandadish dialogue.

The graphics are incredible throughout the game and a strong thread of humour ties the game together (take a look at the books in the bookcase for instance!) – this has to be the best adventure to grace the public domain for a long time.

ST REVIEW COMMENT: "***Grandad*** is an almost perfect arcade adventure. The puzzles are enjoyable rather than impossible and the animation and graphics are superbly detailed, right down to the GB sticker on the back of Grandad's wheelchair!"

✪✪✪✪✪

Guide Grandad's wheelchair around his tastefully decorated home in search of the elusive Holey Vest.



THE HUNT FOR GREY NOVEMBER

FLOPPYSHOP ● DISK NO: GAM.3278 ● £2.50 ● MEMORY: 0.5 MB ● PUBLIC DOMAIN

IN BRIEF: A group of terrorists have stolen your submarines and once again the World's security lies entirely in your hands (how's that for originality – it is my day off you know?!). Fortunately, these villains didn't manage to get their hands on the air force, so it's your job to pick out the submarines using sonar and leave them your calling card by means of a depth charge.

You move the plane over the ocean via the mouse and when you find something, a digitised voice screams "I've got him, I've got him". The screen then changes and you see your plane with the submarine below, the idea being to charge them at exactly the right level.

In practice, however, these terrorists will be able to sleep safe in their berths, because you will more than likely find that actually getting the depth and the aim to a stage where you can have any real impact is virtually impossible!

ST REVIEW COMMENT: "***The Hunt For Grey November***'s graphics and sound leave little to be desired, but unfortunately the play can be extremely frustrating. If you enjoy semi-strategy games and don't mind being pushed to the very limits of your patience, this is one game that comes highly recommended."

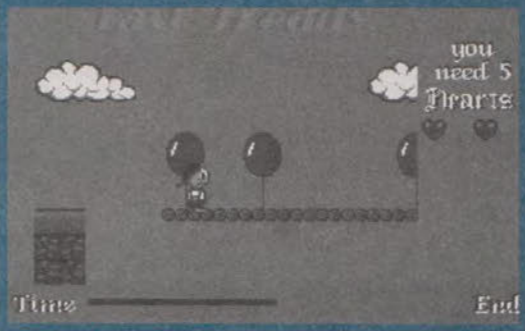
✪✪✪

Join the Navy Lark with The Hunt for Grey November as another friendly ship takes a dive (quick – left hand down a bit!!).

The map screen - move your plane over the ocean, keeping a careful eye on the sonar for signs of a terrorist submarine.

FAST FREDDY

L.A.P.D. ● DISK NO: G.208 ● £2.00 ● MEMORY: 0.5 MB ● SHAREWARE



Guide Fast Freddy around a series of islands in search of life-giving hearts.

I don't know about throwing stones, I'd be very surprised if Freddy didn't just vomit over the monsters!

IN BRIEF: Cute monsters, clean-cut heroes, bouncy sprites. No, you haven't picked up a copy of "Isn't My Console Amazing" magazine – ***Fast Freddy*** is a 100 per cent action arcade game in a decidedly console style, for your ST.

Graphics are in a similar style to ***Rainbow Islands***, and the idea is to collect five hearts by moving from island to island, finally making a quick getaway. Throw a stone at any of the monsters to clear your path.

As the levels progress, more monsters block your path and the time limit gets shorter and shorter. Original it may not be, but Freddy is playable and addictive for a while. The author also offers to design your own levels as and when you run out!

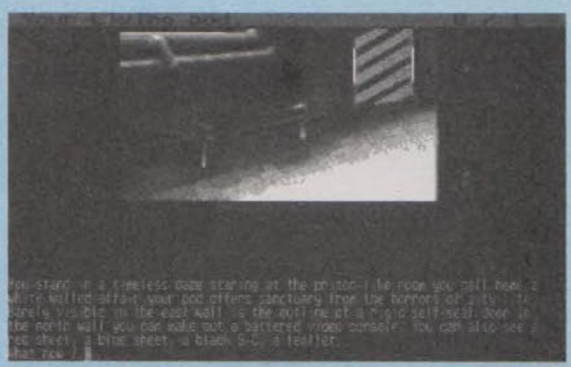
ST REVIEW COMMENT: "Maybe one for younger players. ***Freddy***'s action is fairly simple and the graphics make Sonic look positively macho! The scrolling is quite jerky, but this could be improved if the program was compiled."

✪✪✪

Eaglestar – things just seem to get more surreal from here on in!

EAGLESTAR

FLOPPYSHOP ● DISK NO: 3269 ● £2.50 ● MEMORY: 0.5 MB ● PUBLIC DOMAIN



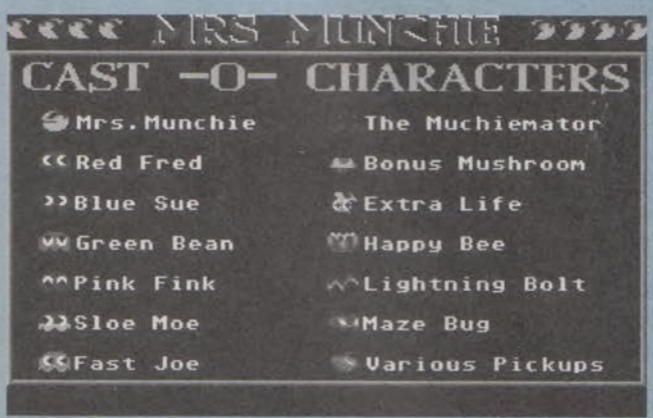
One mad dash for freedom and Eaglestar's all over – oh sorry, did I forget to mention the six hours of frustration first?

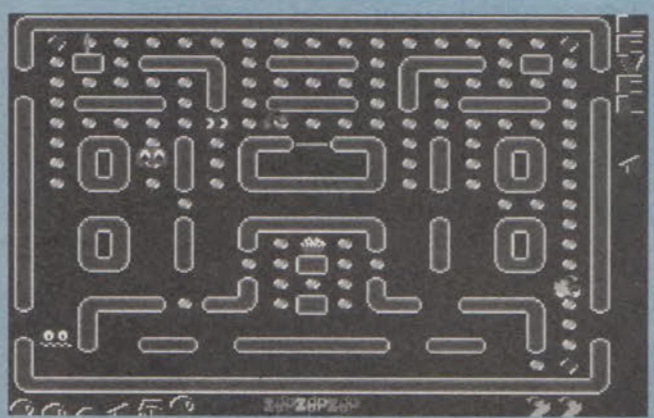
IN BRIEF: This game is set in the distant future. Earth's atmosphere has become just about unbreathable and you find yourself imprisoned in a huge complex. Your mission – if you accept it – is to escape the hated system to freedom.

The game is a text-based adventure, brightened up with the occasional static picture. Graphics are mostly well-drawn, although the odd picture lets it down. As the adventure was created using STAC, there are no worries about the interface – if you've used one you've used them all.

ST REVIEW COMMENT: "If you enjoy text adventures and like words beginning with 'cyber', ***Eaglestar*** is likely to tickle your fancy. The setting is atmospheric and the grammar generally good."

✪✪✪





Far left: The opposition – had better hope Mrs. Munchie's up to it.

Left: Rediscover the arcade magic with Mrs. Munchie.

MRS. MUNCHIE

GOODMAN ENTERPRISES ● DISK NO: GD1667 ● £2.75 ● MEMORY: 1 MB ● SHAREWARE

IN BRIEF: You can see it coming can't you? Well, yes it is another ***Pacman*** clone, but don't switch off yet – this one is actually pretty good!!

Mrs. Munchie comes direct from the States and is blast from the distant arcade past. In case any of you haven't had the chance to play Pacman (what planet have you been living on for the past 10 years?), the idea of the game is to steer your character around a maze gathering the pills you need to survive.

Collect them all and you move onto the next level – if only all things in life were this simple! Beasties are in the form of ghosts which do their best to make Mrs. Munchie history.

The game is full of nice touches and players of ***Pacman*** will find the sampled effects very familiar (I'll say no more!). Added to the original power-pills are lightening bolts, "majik" mushrooms and many more...

ST REVIEW COMMENT: "You tend to forget how much fun ***Pacman*** was. ***Munchie***'s sound effects go a long way to recapturing the arcade atmosphere and in no time you find yourself needing just that one more go – magic!"

✪✪✪✪

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PD ZONE

And to wrap up this month's voyage, here's a round-up of the top utilities

PHOTOCHROME

FLOPPYSHOP ● DISK NO: ART.3303C ● £2.50 ● MEMORY: 0.5 MB ● SHAREWARE

ATARI ST BUDGET BUY

IN BRIEF: Sixteen colours on screen seemed like an awful lot back when the ST was released. Nowadays people accept nothing less than photorealistic pictures, many containing over 256 colours.

Photochrome converts some of these pictures into a format which the ST can handle and it can display up to 19,200 colours at a time! Quite a few well-known formats can be given the ST treatment including IFF, QRT 24-bit and Amiga Real 3D pictures. For the 24-bit pictures, which often contain more colours than even ***Photochrome*** can handle, several methods of dithering and fractal reduction can be applied.

The quality of the results have to be seen to be believed. Since most of the currently available pictures are converted from the Amiga they "only" contain 4096 colours.

ST REVIEW COMMENT: "***Photochrome*** must be the biggest breakthrough in ST graphics this decade! Forget VGA!"

✪✪✪✪✪

Sick of 16 colours? Then check out Photochrome for a taste of the Falcon without the outlay!

Even if your interest doesn't lie in designing your own pictures, the disk is worth getting hold of just for the slideshow!

THE FULLSCREEN CONSTRUCTION KIT

COMPUTER CONNECTIONS ● DISK NO: 775 ● £1.60 ● MEMORY: 1 MB ● PUBLIC DOMAIN

IN BRIEF: Have you ever noticed the ugly black border running around everything you draw on your ST? Well, ***The Fullscreen Construction Kit*** is a neat little utility to fill this blank space with a "real" picture – overscanning, to use the correct term.

The way it accomplishes this is a little bit annoying, but most will probably agree that the finished effect is worth the effort. Instead of a custom-written art package being supplied, you are asked to draw four 230x137 quarters in ***Degas*** and simply connect them together with the Kit. The result can then be displayed or saved to disk.

Several Akiraesque pictures are included together with a custom-written slideshow. ***GFA Basic*** and assembler source code is also available, so you need never return to a bordered title screen again!

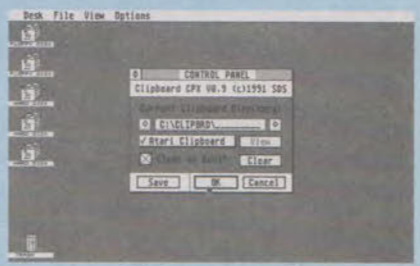
ST REVIEW COMMENT: "Apart from a few bugs, ***The Fullscreen Construction Kit*** is very good. The results are even better, but drawing a picture in four separate quarters takes the patience of several saints!"

✪✪✪✪

CLIPBOARD CPX

FLOPPYSHOP ● DISK NO: UTL.3230 ● £2.50 ● MEMORY: 0.5 MB ● PUBIC DOMAIN

IN BRIEF: Anyone who has used a Macintosh will tell you how handy a properly implemented clipboard can be. In short, they allow you to cut text and graphics from one application and simply paste them into another program, even though you may have quit the first.



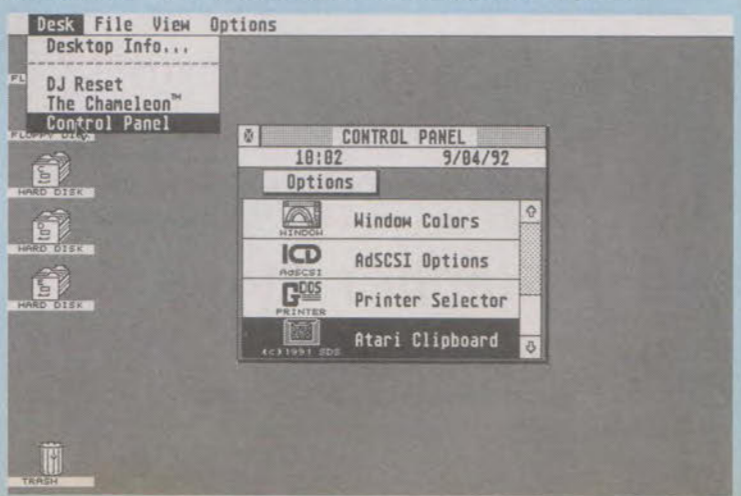
Clipboard runs from Atari's XControl, so you don't even have to sacrifice an accessory slot.

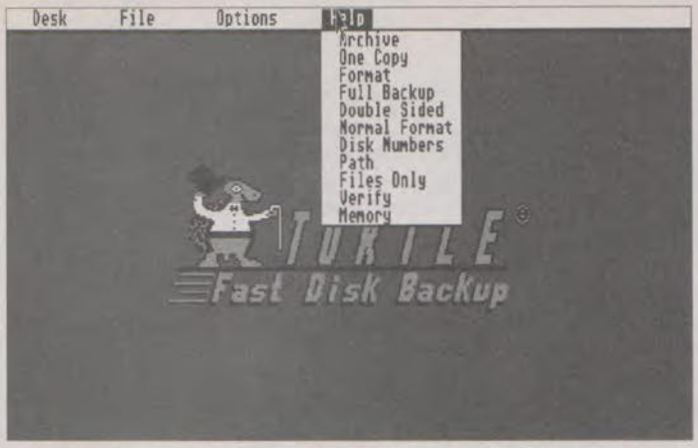
Clipboard accomplishes all this and more from the comfort of the new Atari control panel, ***XControl***, and as such doesn't even use up an accessory slot. Rather than sitting in valuable RAM, all files are copied to a specified directory on-disk where other programs can load them for use. This is fine if you're working from a hard drive, but can be troublesome on floppies.

ST REVIEW COMMENT: "A wonderful little utility. If only more software houses could see the light and use the protocol."

✪✪✪

Cut text and graphics from one application and simply paste them into another – if only more applications supported Clipboard!





Speed up hard disk access with the Cold Hard Cache (and you can expect slightly better results than these!).

HARD DISK UTILITIES

MERLIN PD ● DISK NO: STR001 ● 99P ● MEMORY: 0.5 MB ● PUBLIC DOMAIN/SHAREWARE

IN BRIEF: The public domain is littered with utilities to help you keep a check on hard disks, but picking the wheat from the proverbial weeds can be difficult. Luckily Merlin PD has taken the time to collect the very best specimens and put them all on a single disk.

Fourteen utilities are included, ranging from back-up software to a file finder – surprisingly handy considering that an average 40 MB hard disk contains around 4,000 files! Quick Lock is also invaluable in preventing write access to certain drives – beat that virus scum!

Those of you who use a hard drive will find DLII's defragmentation option useful, but a back-up is recommended.

ST REVIEW COMMENT: "A nice selection with one or two 'dodos'. Documentation is good and beginners shouldn't have many problems."

✪✪✪

SAGROTAN

FLOPPYSHOP ● DISK NO: UTL.3020 ● £2.50 ● MEMORY: 0.5 MB ● PUBLIC DOMAIN

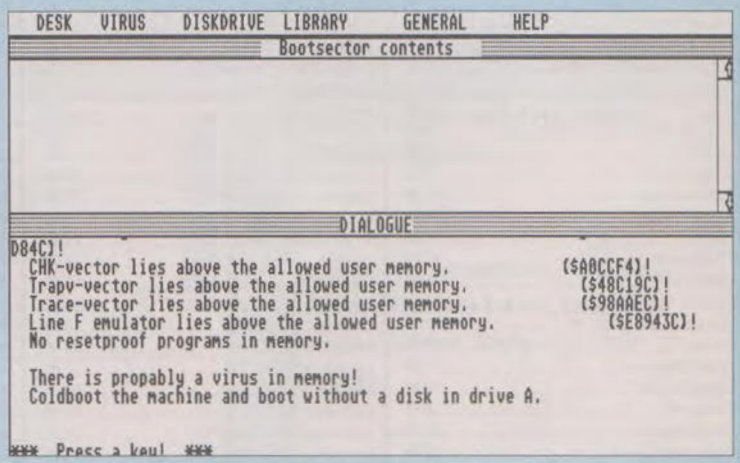
IN BRIEF: One virus can destroy weeks or even months of work, so it makes sense to keep your disk collection squeaky clean. ***Sagrotan*** is about the best public domain utility for that.

The interface is fully GEM-based and gives a report of progress as the nasties are found, or otherwise. The heart of the system is a library file which contains complete information on over 500 viruses and the executable bootsectors (found on most game and demo disks). As well as looking for tell-tale traits of a link virus, ***Sagrotan*** also stores the size of many packages, making diagnosis of new strains possible.

Of course, you can also repair infected disks and should you discover a new virus, you have the option to add it to ***Sagrotan***'s "brain" file.

ST REVIEW COMMENT: "***Sagrotan*** is second only to the ***Ultimate Virus Killer***. As with all virus killers there's the possibility of doing more damage than good, but generally – ignore this package at your peril!"

✪✪✪✪



Sagrotan carries out a check of your ST's memory each time it's run.

TOP TEN UTILITIES

1) ALCHIMIE JUNIOR • SOFTVILLE • DISK NO: MUS50 • £2.00 • MEMORY: 1 MB • SHAREWARE

A top-flight multi-tasking MIDI sequencer from Switzerland with a huge range of powerful features. The totally graphical interface is a joy to use, but the documentation is a bit flaky thanks to a translation from French.

2) ANI ST • SOFTVILLE • DISK NO: ART25 • £2.00 • MEMORY: 0.5 MB • PUBLIC DOMAIN

Once a commercial product, this has now been released into the public domain. Animations are constructed by transforming, or "tweening" shapes over a NeoChrome or Degas background.

3) THE FULLSCREEN CONSTRUCTION KIT • COMPUTER CONNECTIONS • DISK NO: 775 • £1.60 • MEMORY: 1 MB • PUBLIC DOMAIN

Push your screen resolution way beyond the Atari imposed 320x200, low-resolution limit with this superb French utility. It is slightly awkward to use due to the lack of a custom art package, but it talks to all versions of the ST (including STE).

4) SAGROTAN • FLOPPYSHOP • DISK NO: UTL.3020 • £2.50 • MEMORY: 0.5 MB • PUBLIC DOMAIN

This release recognises over 500 bootsectors and makes light work of testing entire disk collections. Whatever happens, don't say that we didn't warn you!!

5) PHOTOCHROME • FLOPPYSHOP • DISK NO: ART.3303C • £2.50 • MEMORY: 0.5 MB • SHAREWARE

Virtually any picture (providing it doesn't contain over 37,000 colours!) can now grace your ST's screen with a little help from ***Photochrome***.

6) DC MOUSEOMETER • FLOPPYSHOP • DISK NO: UTL.394 • £2.50 • MEMORY: 0.5 MB • PUBLIC DOMAIN

Pop DC Mouseometer in your folder and you need never wonder how far your mouse has travelled in a computing session again. Thoroughly pointless, but how else are you supposed to tell whether your mouse lives up to the manufacturer's guarantee?

7) XCONTROL • L.A.P.D. • DISK NO: CATALOGUE DISK • £2.00 • MEMORY: 0.5 MB • PUBLIC DOMAIN

Add a taste of Apple to your ST with Atari's latest (totally unlike the Macintosh) Control Panel. A new form of desk accessory is given in the Control Panel Extensions (or CPX for short) and you can expect to see dozens of these handy utilities turning up in the public domain over the next few months.

8) UNTOUCHABLES SOURCE DISK 1 • L.A.P.D. • DISK NO: P36 • £2.00 • MEMORY: 0.5 MB • PUBLIC DOMAIN

Pick up a copy of this disk and you'll be scrolling, bouncing, twisting and turning ST graphics in no time! The source code – in ***Devpac 2*** format – is well documented and will prove invaluable for any budding game, demo or utility programmer.

9) AUTOSORT • THE ST CLUB • DMG.23 • £1.60 • MEMORY: 0.5 MB • SHAREWARE

"Make sure this utility is not quite the last, but definitely not the first program to run in your AUTO folder". OK, so it's a bit of an exaggeration, but ***AUTOsort*** comes in handy if you want to persuade your AUTO folder to run in the right order, without copying the whole thing onto a floppy disk first.

10) ARCSHELL • COMPUTER CONNECTIONS • DISK NO: 658 • £1.60 • MEMORY: 0.5 MB • SHAREWARE

This neat little front end for the "ARC" archiver can literally save you hours of work! All of ARC's extensive range of features are supported by this utility – including compression, encryption and, of course, extraction. The entire program is GEM-based and is therefore a real doddle to use.

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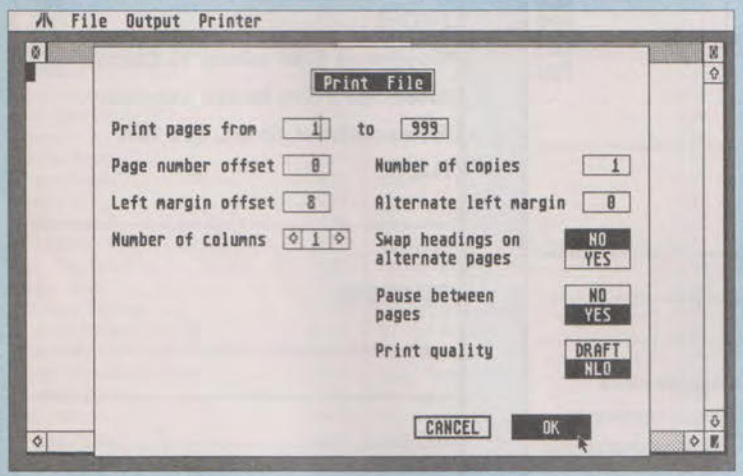
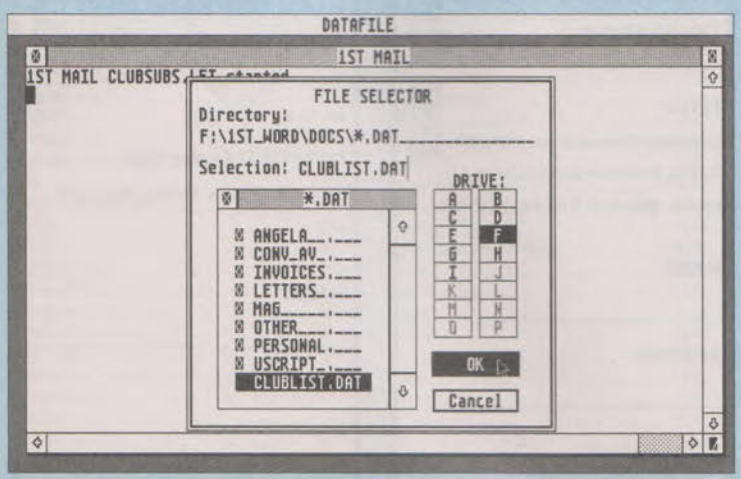
GETTING STARTED WITH FIRST WORD PLUS

André Willey concludes his First Word Plus tutorial series with a look at the program's extensive mailmerge facilities

PART THREE



After selecting the filename you wish to print, First Mail presents you with a dialogue box not unlike the print selector in First Word Plus. One new facility here is the ability to select the number of columns you wish to print – although multi-column output is not generally used for letters, it can be very helpful if you want to print address labels afterwards.



Once you have selected all your print requirements and are satisfied that they are exactly as you want them, the next step in putting together your mailmerge is to choose the name of the data file which contains the names and addresses that you are intending to merge into the letter.

Over the past couple of months we've discovered how to create and print individual documents in ***First Word Plus***, but there is one major word processing task which we haven't covered so far – mailmerge. This combines the facilities of a database with those of a word processor, allowing you to create multiple letters or documents based on information contained in another file.

At one time or another, virtually everyone must have received an official-looking letter which starts: "Yes!!! You, Mr Smith, have been personally selected from all the people who live in your street to enter the second stage of our Grand Prize Draw..."

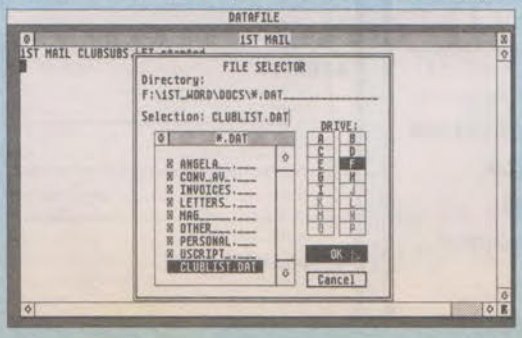
What the letter neglects to tell you, of course, is that the first stage of this exciting "prize draw" was nothing more than a large computer sifting through thousands upon thousands of names and addresses, obtained from companies which hold and sell personal data on every one of us.

PUT TO GOOD USE

Thankfully, this reprehensible abuse of current technology can have rather more legitimate uses. If you've just moved house and want to write to all your friends telling them your new address, you could write an individual letter to each one – but better still, get your computer to do the job for you. Or perhaps you run a local club and want to speed up the process of informing the members of the latest meeting dates, or that their subscription is due for renewal.

The ***First Word Plus*** package includes a powerful mailmerge program called ***First Mail*** which can do all of this and much more besides. The procedure breaks down into three distinct stages. First you must create the raw data file, which will contain the personal details that will be used in each letter. Then you need to create the letter itself, with gaps into which the information from the first file can be inserted. Finally, the mailmerge program, which is called ***1ST_MAIL.PRG***, is used to combine both documents into a succession of seemingly personalised letters.

The ***First Mail*** program is capable of adjusting the margins, indents and justification of your letter so that the newly-merged text fits neatly into the original format. You can even chain multiple documents together if you need to, perhaps printing a series of letters first, followed by a set of address labels to go on the envelopes.



By including a "display" command within your document you can keep an eye on your mailmerge. If the list of names turns into addresses, you know something has gone seriously wrong...

DATA FILES

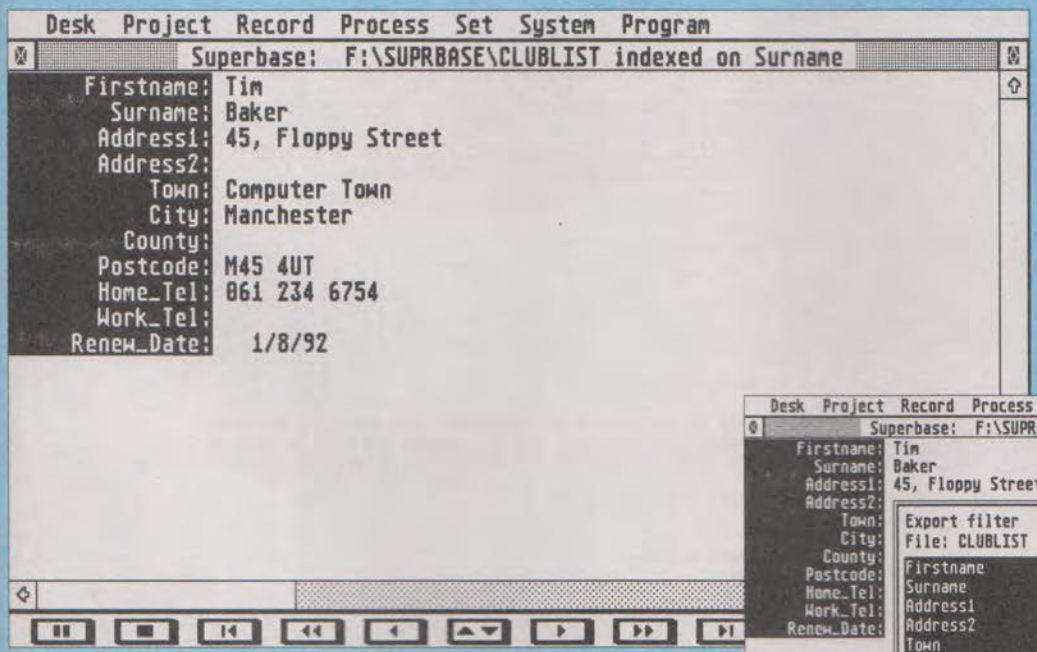
The first stage in your mailmerge is to compile a data file. Here's how. . .

A data file need be nothing more than a list of names and addresses, although it is quite common to include other information such as telephone numbers and miscellaneous details. If you decide to type the list into ***First Word Plus***, remember to save it as "Text" rather than in "Word Processor" mode.

The most common layout for personal data is to store all the separate pieces of information about each person – their name, address, postcode, and so on – on a single line, with each item separated from its neighbour by a comma. These separate items of information are usually known as fields. An entire line of data for one person is then referred to as a record.

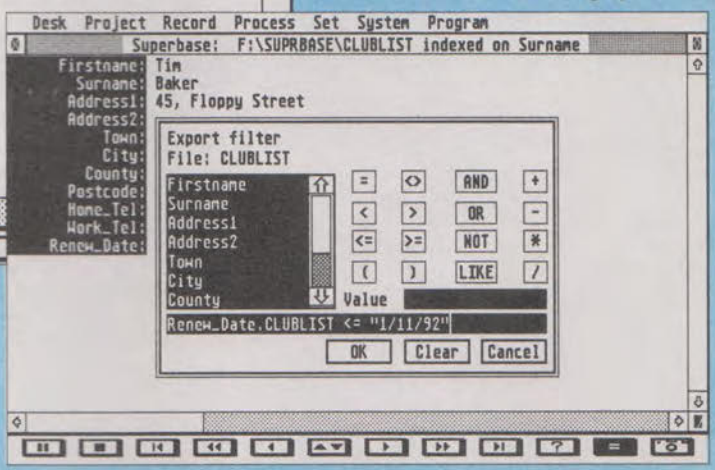
The exact format of this list is very important, as any deviation can cause the mailmerge program to lose track of where each record starts and finishes. If, for example, you do not know a person's postcode, you must still insert the comma separating it from the rest of the address. If several elements of an address are missing, you may need to have several commas side by side, in which case it is vital to ensure that you don't lose count of them!

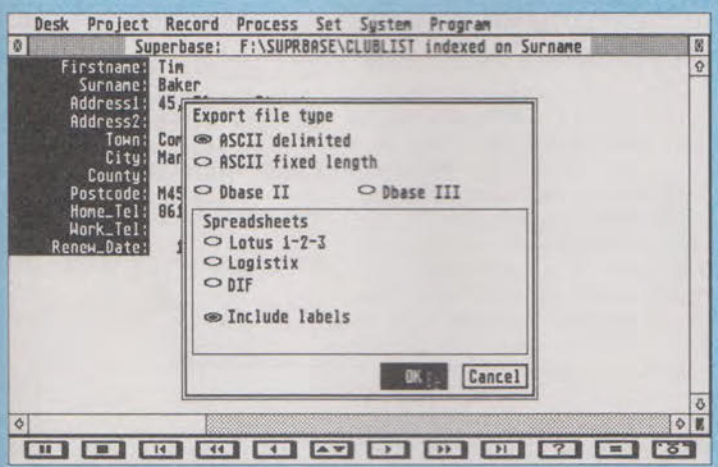
By far the simplest way to maintain such data is to use a database program, such as Superbase Personal, which can create a mailmerge list whenever you need it. That way you can leave the management of the individual records and fields up to the database, and not spend all your time counting commas.



The basic layout of a database file will look like this, with separate lines for the name and for each part of the address, plus maybe some extra information such as telephone numbers. In this case, a membership renewal date is also included.

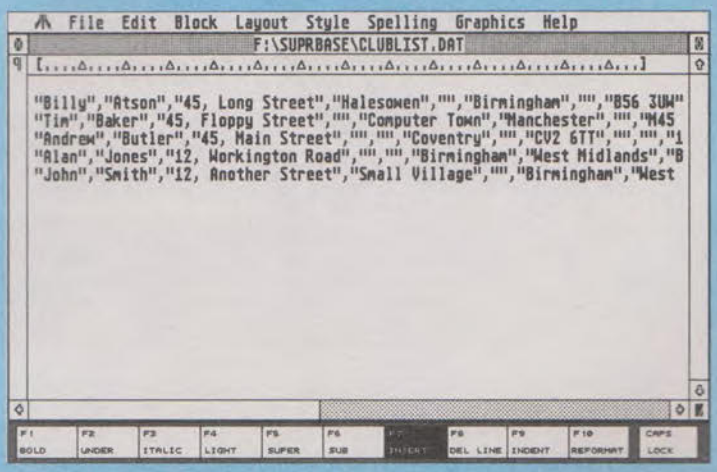
When you tell a database to export information to a mailmerge file, it usually allows you to select the range of data you require – below, only members with expired renewal dates will be sent to the mailmerge file.

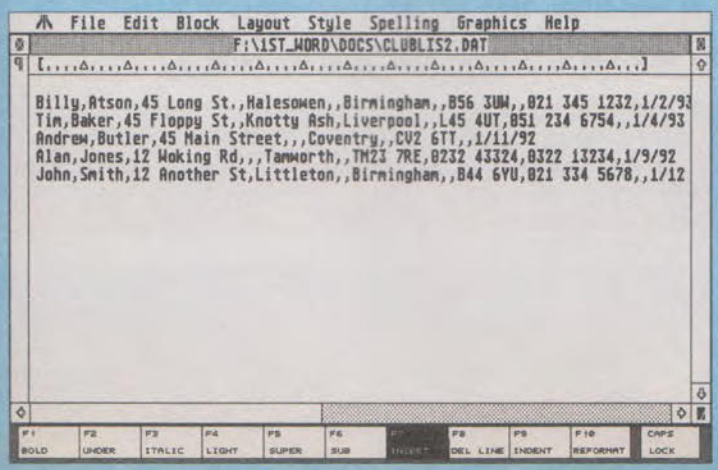




LEFT: Here, Superbase is asking what format should be used for the exported data. For First Mail, always select plain ASCII output.

BELOW: Load the file into First Word Plus for checking. Each field is in quotes, to stop any commas in the data being mistaken for the comma separating each field.





LEFT: If you don't own a database program you can enter the details by hand. Don't enclose every piece of text in quotes, only those which contain commas. Each person's details must be on a separate line: don't worry if it overflows the edge of the screen.

GETTING IT WRITE

After you've created your list of names and addresses, all that remains to do is to write the letter itself

The majority of the letter will be much the same as any other you may have written in ***First Word Plus***, but there are certain special commands which are used to control the subsequent mail merge operation. These are always typed in light text, obtained by pressing the F4 key.

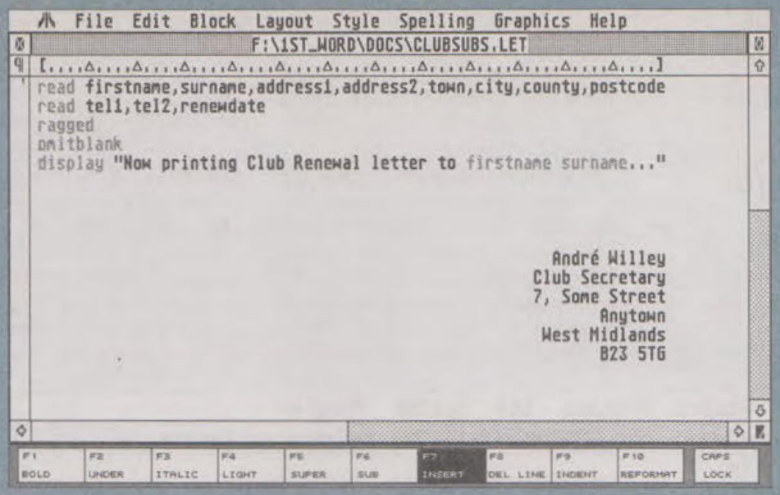
The first command you will need is "read", which fetches a line of information from the data file and assigns field names which may be used elsewhere in the document. Whenever you next use one of those field names, it will be replaced by the appropriate item of text from the data file. You don't have to use everything that you read – for example, it is unlikely that you will need to include someone's telephone number when writing a letter to them.

It is extremely important to ensure that the amount of names in the "read" command matches the number of items on each line of the data file – if not, you'll fall victim to some very strange and time wasting results! A typical symptom of this sort of mismatch is when lines which should be part of an address suddenly start appearing in the "Dear whoever" section of the letter. If this happens, check you haven't omitted any names from the "read" line, or maybe you've miscounted a comma in the data file if you created that by hand.

The command "omitblank" is very useful if the data you are using includes addresses. When you create a data file, you must allow enough fields to cope with the longest possible address – say three general purpose lines, plus a town, city, county and postcode. This means that most addresses will contain a number of blank lines, which obviously shouldn't be printed out. The omitblank command forces ***FirstMail*** to ignore any such lines when printing.

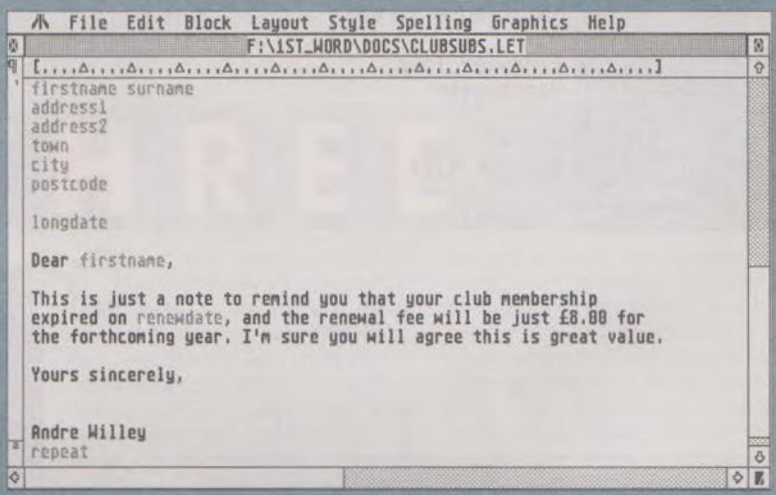
The last command in a mailmerge letter is usually "repeat", which is placed straight after a new page marker. It will cause the mailmerge program to read in the next line of data and print a revised page. Once that page is finished, the repeat command will start on the next person's data, and so on until a letter has been printed for each person listed in the data file.

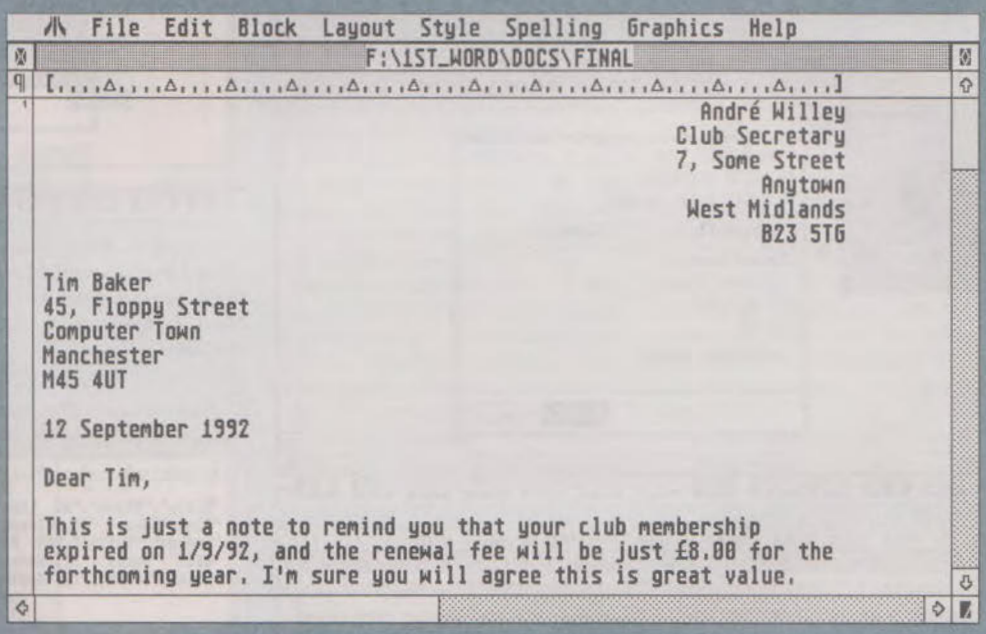
You can even use a special command, "input", within your document, which will cause ***First Mail*** to pause and take some text from the keyboard each time it is encountered. You could, for example, use this to enter a series of first names to be printed on party invitations.



At the start of any mailmerge letter there will be a series of control commands describing the sort of information that is contained in the associated data file. Each field is thus given a name, which can be referred to later.

Within the body of the letter, field names entered in "light" text are replaced by information read from the data file. There is a variety of other commands, such as "longdate" which inserts the current date straight into your letter.





And finally, this is how the finished result should look. Using the Mailmerge facility will save you an immense amount of time especially if you frequently have to write circulars, letter to club members and so on.

DATA PROTECTION ACT

In order to prevent any potential misuse of personal data stored on computers, the Government recently introduced the Data Protection Act, which requires anyone storing such data on a computer to register its use with the Agency. Even if you are only running a small local club or newsletter, you are required by law to register. You must also inform each member that their personal information is being stored on computer, and make that information available to them upon request.

PD AUTHORS SOUGHT

Write a program for our coverdisks and you could earn up to £500 – with a minimum payment of £50 for even the smallest of your best utilities...

If you've written any neat programs, fun games, incredible utilities, or anything that you think other people might want to see, why not turn your hard work into hard cash?

Unlike mags that offer to pay you £1000, we won't promise you the earth, but if we use your programs you may get paid a small fee, and if your work is exceptional you could earn up to £500.

You may not rate your small routine that works out every prime number between one and five, but it could be just what somebody else needs. We're also interested in seeing any outstanding PD that hasn't been around for years.

Please put your programs etc, onto a standard ST disk. Full documentation should also be included on the disk.

Send your completed form to: ST Review Coverdisk Submissions, 26 Brunswick Park Gardens, London N11 1EJ.

PLEASE NOTE THAT ALL READ-ME FILES MUST BE IN ASCII.

ST REVIEW PROGRAM SUBMISSION FORM

NAME.....

ADRESS.....

.....

.....

.....

PHONE.....

PROGRAM SIZE IN K.....

VERSION OF TOS YOU ARE RUNNING.....

PROGRAM NAME.....

ADDITIONAL FILES REQUIRED BY MAIN PROGRAM

.....

.....

BRIEF SUMMARY OF WHAT MAIN PROGRAM DOES

.....

.....

.....

.....

.....

TYPE OF PROGRAM:

GRAPHICS/MUSIC PACKAGE ☐

GAME ☐

DEMO ☐

PROGRAMMER'S TOOL ☐

PROGRAMMER'S ROUTINE ☐

FUN ☐

OTHER (PLEASE SPECIFY).....

PLEASE ENSURE THAT YOUR DISKS ARE VIRUS FREE AND THAT YOUR NAME, ADDRESS, AND PROGRAM NAME ARE WRITTEN ON THE DISK.

IMPORTANT

You MUST sign this declaration before your programs will be considered: "The above named program(s) are submitted for exclusive publication in ATARI ST REVIEW magazine. It/they are wholly my own work and I agree to indemnify EMAP Images against any possible legal action should copyright problems arise.

SIGNED.....

DATE.....

WORKING WITH

PART FOUR – SUB PROGRAMS

This month, Ofir Gal looks at how to get around a common problem with read-me files

If you have ever tried to read a read_me file like the ones you get on the cover disk, you must have been wondering why it is not possible to scroll back. Many times you miss a word and the only way to see it again is to quit and show the file again. In this tutorial you will learn how to write your own read_it program. The program will use the file selector to load a file and enable you to scroll back and forth through the text.

SUB PROGRAMS

A sub program is a routine inside your program that performs a certain task. It is convenient and easier to define a sub and then call it as many times as required. Using subs is not much different to using TOS calls, except that the sub is defined by you.

You can give a sub any name you like, and the name will usually help you to remember what the sub does. Example 1 is a simple demonstration of a sub program.

As you can see, a sub is defined by giving it a name and declaring the parameters that the sub will use. When calling a sub, the parameters are passed in the same order as that in which they are defined in the sub, with a separating comma. A sub can do virtually anything: it can display things on screen, play the speaker or call the operating system. In this month's program you will use a sub to show the text on the screen each time the mouse is pressed.

A sub program can have its own variables, but unlike normal variables, you must declare them in the beginning of the sub as STATIC. A sub can also share variables with the rest of the program if the variables are defined using SHARED. In short, a variable must be declared one way or another in the beginning of the sub.

In example 2 the sub boxtext draws a box around text.

Notice how many times the sub is called and how the values passed to it are different each time. Most well structured programs follow this idea of defining subs to perform all tasks while the main body of the program simply calls the subs.

THE FILE SELECTOR

The file selector is the dialogue box that TOS displays whenever you load or save files. Using the file selector from your program is not that easy, which is why we have included a sub on the cover disk that does all the dirty work for you. To use the sub you must first copy the file FSELECT.BAS to your work disk. To enable the sub from your program type in these lines at the beginnng of your program:

```
DEFINT a-z
LIBRARY "gemaes"
REM $include a:\fselect.bas
```

The AES library enables the program to access the file selector. The third line imports the file directly into the program so you must have the file FSELECT.BAS on the root directory of disk A (not inside any folder). To actually use the sub to select a file from disk use fileselect file$. The sub will display the file selector and allow you to select a file in the normal way, the name of the file will then be stored in the variable file$. If all this sounds confusing try running example 3.

If you pressed cancel in the file selector, or if some disk error has occurred, file$ will be empty (file$=""), otherwise it contains the full name of the file including the path, so you may well see a file name like A:\PROGS\TEST.BAS. Apart from displaying the name of the file, the program will not harm your disk in any way.

ARRAYS

You should by now be familiar with variables and you should also be aware of how useful they are in a program. Arrays are a special kind of variable, they enable you to store many variables under the same name but with a different index. Each of the array elements is accessed by the name of the variable followed by an index number in brackets. The following are valid expressions:

```
g(0)=7 'store the number 7 in the first element of the array g
PRINT c$(1) 'print the second element of text array c$
```

You can also use a variable instead of the index number. To print the values of elements 0 to 10 of the array "stuff" -

```
FOR i=0 to 10
        PRINT stuff(i)
NEXT i
```

Arrays give you a way of storing many numbers or text strings in a logical and organised manner. This is exactly what you need for the file reading program.

When you load the file you must store it somewhere and an array of text strings is the ideal storage space. The last thing to remember is that before you can use an array it must be defined.

As you see from example A, an array can have any name and any size. Since arrays use memory, it is best to define the size that is actually required.

Subs may share the array elements with the main program by using the SHARED statement, but you may NOT use DIM inside a sub.

EXAMPLE 1

```
'first define the sub
SUB whichisbigger(first,second)        'sub name and parameters
IF first>second THEN
        PRINT "First number is greater"
ELSEIF first=second THEN
        PRINT "Numbers are equal"
ELSEIF first<second THEN
        PRINT "Second number is greater"
END IF
END SUB                                'end of sub definition

whichisbigger 100,200                  'call sub
whichisbigger 52,48                    'call sub
```

EXAMPLE 2

```
DEFINT a-z
LIBRARY "gemvdi"
MOUSE -1

vst_alignment 1,1                      'centre aligned text
vsf_color 1                            'black colour for graphics
vsf_perimeter 1                        'black perimeter for box
vsf_interior 0                         'white interior for box

FOR i=50 TO 150 STEP 4                 'loop and increment i in steps of 4
        boxtext "ST",i,i               'call boxtext
        boxtext "ST",300-i,i           'call boxtext
NEXT i

SUB boxtext(a$,x1,y1)                  'sub definition
STATIC x2,y2                           'sub variables must be static
x2=x1+60                               'set sub variables
y2=y1+60
v_bar x1,y1,x2,y2                      'draw a box
v_gtext x1+30,y1+30,a$                 'draw text
END SUB
```

EXAMPLE 3

```
DEFINT a-z
LIBRARY "gemaes"
REM $include a:\fselect.bas
fileselect file$
PRINT file$
```

HISOFT BASIC

EXAMPLE A

```
DIM onearray(10)          'define an array called
                          'onearray with 11 elements
DIM anotherarray(99)      'define an array called
                          'anotherarray with 100 elements
```

EXAMPLE B

```
SUB show_text(startline)          'the sub will take the start line
SHARED text$()                    'and must share text$ with the program
STATIC m,displine                 'declare sub variables
CLS                               'clear screen from previous
text
FOR m=startline TO startline+24
        displine=m-startline      'display line is always 0 to 24
        v_gtext 0,displine*8,text$(m)
NEXT m
END SUB
```

LOADING FILES FROM DISK

With the file selector it is easy to load files from disk - the fileselect sub will store the name of the selected file in the variable file$ ready for you to read.

To load the file from disk you must use a few commands as shown in example four:

The program now loads the file, then it uses LINE INPUT #1 to read the file a line at a time into the variable text$, then each line is displayed using PRINT and this is repeated until the program reaches the end of the file. You have, however, no control over the display at the moment because once the line is displayed it is replaced by the next one and the only way to see it again is to run the program again.

To be able to see the line again you must store it in an array, and each line of text will then occupy one element in the array. The program will first store the whole file in the array, then it will go about displaying the text. Since the whole file will be in memory, there is no reason why you could not display it again without having to re-load the file. Example five loads a file and displays it on screen. You can't scroll through the text yet, but we're getting there...

EXAMPLE 4

```
DEFINT a-z
LIBRARY "gemaes"
REM $include a:\fselect.bas

fileselect file$                  'call file selector
                                  'and return result in file$
OPEN file$ FOR INPUT AS #1        'open file for reading
DO                                'start loop
      LINE INPUT #1,text$         'read line and store in variable
      PRINT text$                 'print line
LOOP UNTIL EOF(1)                 'loop until the end of the file
CLOSE #1                          'must always close files
```

EXAMPLE 5

```
DEFINT a-z
LIBRARY "gemaes"
REM $include a:\fselect.bas

DIM text$(3000)                   'define a text array for 3001 lines
                                  'this should be enough
fileselect file$                  'call file selector
                                  'and return result in file$
OPEN file$ FOR INPUT AS #1        'open file for reading
DO                                'start loop
LINE INPUT #1,text$(i)            'read line and store in
                                  'array element number i
INCR i                            'increment i
LOOP UNTIL EOF(1)                 'loop until the end of the file
CLOSE #1                          'must always close files
lastline=i                        'store the number of lines

FOR i=0 to lastline               'loop from line 0 to last line
PRINT text$(i)                    'print line
NEXT i
```

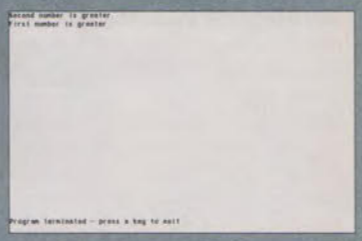
SCROLLING

To enable scrolling we must use the VDI v_gtext call instead of PRINT. While PRINT is very easy to use, it doesn't provide you with the same flexibility as drawing the text directly from the operating system. The VDI call uses x and y co-ordinates to display the text to screen and to simplify things a little we will limit the program to work in medium resolution only. If you use WINDOW FULLW and CLS at the beginning of the program you will be able to display 25 lines on screen which means that v_gtext needs to be called 25 times, each time its y co-ordinate will increment by eight (the size of a text character in med-res is 8x8 pixels). The routine replaces the PRINT line in the program:

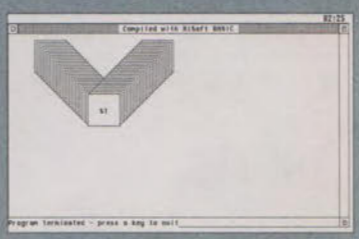
```
FOR m=0 TO 24
                        'loop 25 times
      v_gtext 0,m*8,text$(m)
      'display text
NEXT m
```

To produce scrolling back and forth through the file we simply need to change the start point of the FOR m=...NEXT m loop. If we enclose the display part of the program in a sub, it will be much easier to call it whenever the display needs updating. See example B.

The sub takes the real line number to display as the parameter startline. The sub then clears the screen and runs through 25 lines starting with startline. Displine is there because, regardless of which real line it displays, calculation of screen display assumes the first line to be zero. When m starts looping, regardless of its start value, it is equal to the startline and therefore displine is 0, as m increments displine increments accordingly. When v_gtext is called it uses dis-



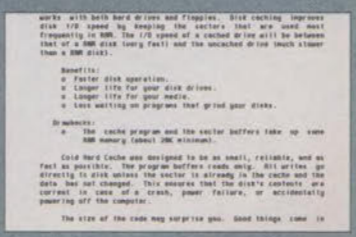
Example 1.



Example 2.

Example 3.

Example 4.



Example 6.

pline to calculate the position on screen, but uses m for the real text line stored as text$(m).

All you need now is to put the whole thing together within a loop which will check the mouse buttons. If the left button is pressed startline will increment and if the right is pressed, startline will decrease.

You should note that the parameter passed to a sub need not have the same name inside the sub. See example six.

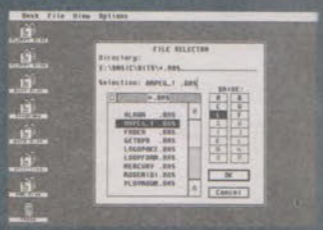
The program now scrolls back and forth and enables you to read the file. On the cover disk you will find the full program, READ_IT.BAS. This also includes the use of the shift keys to enable scrolling one page at a time as well as compatibility with med and high resolution.

Next month you will learn how to use the AES library to display alert boxes and more... In the mean time - if you have any questions, ideas or comments please send them in.

THE AES

The AES is the most complex part of TOS. The AES library in ***HiSoft BASIC*** enables access to all AES functions such as the file selector, alert boxes, dialogue boxes, windows, menus and icons. To be able to use the AES to the fullest a resource construction set such as WERCS or K-Resource is recommended. A resource construction program enables you to easily create a resource file containing all the AES objects.

THE FILE SELECTOR



The file selector enables you to select a file to load or save.

The AES (see above) is used to call the file selector, which in turn lets the user select a file to load or save. The name of the file consists of the drive letter followed by the folder(s), if there are any, and ends with the actual file name.

By way of example, a file called README.DOC in a folder called STUFF on disk A is returned by the file selector as follows: A:\STUFF\README.DOC.

EXAMPLE 6

```
DEFINT a-z
LIBRARY "gemaes","gemvdi"
REM $include a:\fselect.bas

WINDOW FULLW                          'full window
CLS                                   'clear screen

fileselect file$                      'call file selector sub
MOUSE -1                              'remove mouse
DIM text$(3000)                       'define text array for file

IF file$<>"" THEN                     'if a file was selected
        OPEN file$ FOR INPUT AS #1    'open file and load it
        DO                            'into the array
        INCR i                        'line by line
        LINE INPUT #1,text$(i)
        LOOP UNTIL EOF(1)             'to the end of the file
        CLOSE #1                      'close file
ELSE
        SYSTEM                        'stop if no file selected
END IF

lastline=i                            'this is the last line of file
show_text curline                     'call display sub -
                                      'curline is 0 so first 25
                                      'lines will be displayed
DO                                    'check mouse loop
        button=MOUSE(2)
        SELECT CASE button
        CASE 1:INCR curline
        CASE 2:DECR curline
        CASE 3:SYSTEM                 'if both buttons stop program
        END SELECT
        IF curline<0 THEN curline=0   'can't do lines below 0
        IF curline>lastline-24 THEN curline=lastline-24
                                      'or bigger than last line
        IF button>0 THEN show_text curline
                                      'mouse pressed so show text again
                                      'curline is passed as a
                                      'parameter
LOOP

SUB show_text(startline)              'the sub take the start line parameter
SHARED text$()                        'and must share text$ with the program
STATIC m,displine                     'declare sub variables
CLS                                   'clear screen from previous text
FOR m=startline TO startline+24
        displine=m-startline          'display line is always 0 to 24
        v_gtext 0,displine*8,text$(m)
NEXT m
END SUB
```

NEW COMMANDS

REM $INCLUDE –
This includes a file in your program as if it was a part of it. It works the same way as inserting the file.

DIM –
Define array name and size. This command must be used before any array reference.

OPEN FILENAME FOR INPUT AS #CHANNEL-NUMBER –
Before a file is loaded you must first open it. You may use channels 1 to 255.

CLOSE #CHANNEL NUMBER –
This command closes an opened file. The channel number must be the same as the one assigned to the open file.

CLOSE –
If no channel number is specified, CLOSE will close ALL open files.

LINE INPUT #CHANNEL-NUMBER –
This command reads a file from disk a line at a time.

EOF(CHANNELNUMBER) –
End Of File. Normally prevents the program from reading beyond the end of a file.

STATIC –
Variables in a sub program must be declared as STATIC before they can be used.

Static variables are internal to the sub and so cannot be used outside it.

SHARED –
A sub can share variables with the main program if they are declared as SHARED before they are used.

VST_ALIGNMENT X,Y –
This VDI call sets text alignment. The call takes two parameters - the first (x) sets horizontal alignment, the second vertical alignment.

VSF_INTERIOR VALUE –
Used in conjunction with vsf_color to set the fill colour of VDI primitives. To create a hollow box set the value to 0, if the value is 1 the box will be solid.

VSF_PERIMETER VALUE –
This is similar to vsf_interior, and is used to set the perimeter colour of VDI primitives.

WIN! A PHILIPS COLOUR MONITOR WORTH OVER £200

WITH LOTUS CHALLENGE II AND III

Fed up with squinting at the TV screen? Then it could be your lucky day! Here's your chance to get your hands on a Philips CM8833 colour monitor, together with two great racing games from Gremlin and entry to two prize draws – and all for the price of a stamp!

The Philips CM8833 Mk II monitor features stereo sound and excellent picture quality. There will be no more squinting to read text and you will get a clarity and sharpness that no television screen could give you, making it the only sensible option if you're serious about your ST. We liked it so much that we gave it a rating of 88 per cent in our round-up in Issue five.

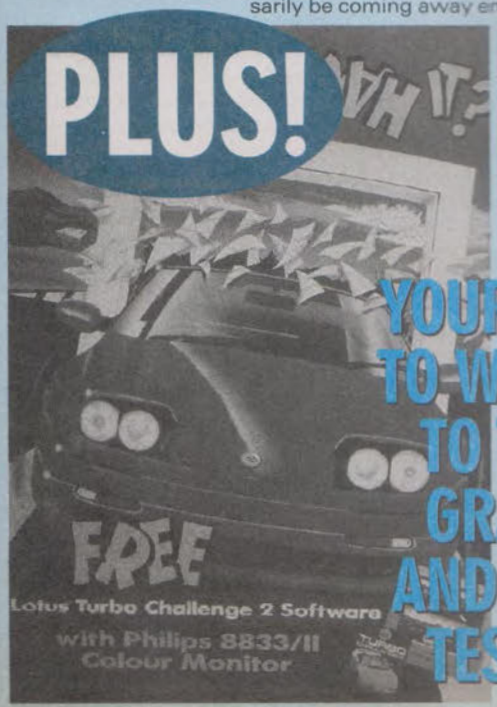
The new packaging for the CM8833 Mk II includes Gremlin's excellent ***Lotus Turbo Challenge II***. We've thrown in a copy of ***Lotus III, The Ultimate Challenge***, also from Gremlin, for the winner. This new game features a unique track editor with several new scenarios to test your skills and fast, hectic racing. It's great for playing with friends, too, either on a split screen or connected to another ST – ideal for pushing you and your new monitor to the limits.

In the pack you'll find an entry form for the Philips Grand Prix competition. The prize winner will be whisked off to the British Grand Prix in style. You'll have a grandstand seat for the morning practice and the race itself and will be taken for a helicopter ride over the racetrack. All this and an opportunity to meet a Formula One driver too!

Also included is the chance to win one of 40 radio-controlled model Ferrari Testarossa cars. Ten of these will be given away by Philips every month between now and January, so anyone buying a Philips monitor in that time, including the winner of this competition, will be in with a chance of winning one.

Even if you're not lucky enough to scoop the big one, you won't necessarily be coming away empty-handed: we've got five runner-up prizes of Lotus III to give away.

So what are you waiting for? Just write down the answers to our three easy questions on the right and send them to us before the closing date of 14th November.



YOUR CHANCE TO WIN A TRIP TO THE 1993 GRAND PRIX AND A MODEL TESTAROSSA

HOW TO ENTER

To enter, answer the following questions:

1. Who is the 1992 World Formula One car racing champion?

2. What colour flag is waved at the end of a Grand Prix race?

3. What percentage did we rate the CM8833 Mk II?

Send your answers on a postcard to Monitor Madness, Atari ST Review, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU, to reach us by 14th November. The competition is not open to employees of EMAP Images, Philips or Gremlin. Multiple entries will be eliminated. The first correct answer drawn after the closing date will win a Philips CM8833 Mk II Monitor with ***Lotus II*** pack (including entry form for the Grand Prix competition) and ***Lotus III, The Ultimate Challenge***. The next five will each win a copy of ***Lotus III***. Normal rules apply, and the Editor's decision is final.

ASK THE EXPERTS

We can help. If you have a problem regarding your ST and can't find an answer, drop us a line here at Ask The Experts and our team of experts will get to work on it on your behalf

PC DRIVE ON THE ST?

I have an Atari 1040 STFM purchased in 1988, which I upgraded with a 1.44 MB drive, Cumana 720K second drive and AT-Speed.

My old IBM PC/XT compatible computer has recently given up on me and I will not bother to either service it or buy a new one. The only thing useful from this is the 40 MB hard card it has on it (called Megacard, assembled in the UK, with a Western Digital drive and controller). It is working perfectly well and I would not like to lose it.

Since hard disks for the ST, especially large capacity ones, are a bit out of my price range, I would like to know if it is possible to connect my Megacard to the ST and use it there, for the ST as well as for the AT-Speed. If the answer is yes, how is that possible? Would I need a separate controller card or would it not be worth the bother?

A. Kitselis, Sheffield

You're out of luck, I'm afraid. You can't use the Megacard on the ST. The ST needs a SCSI controller and drive, which the PC hasn't got.

Hard disk drives are coming down in price all the time, and you can find out more about building your own in our feature in issue five. The SCSI interface is slightly more expensive than the PC drives, but there are several advantages, the main one being the ability to address up to eight devices from one controller, as opposed to RLL or IDE, which will address two drives only.

As for the AT-Speed, I can only assume that you are talking about an emulator, in which case you will be able to use a SCSI drive for both.

TALK ISN'T CHEAP!

I live in Leeds and have recently discovered modems. I am the owner of an Atari 520 STFM and would very much like to purchase one, but I cannot find any for the ST, let alone at a decent price. Ideally, I'd like to buy a second-hand one that is Hayes compatible V.22 bis. I would be very obliged if you could let me have some general information on modems and where I could buy a good one at a reasonable price.

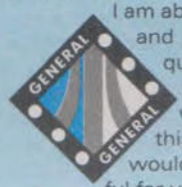
Also, could you fill me in on the software needed, as I know absolutely nothing about it.

Liam Kilgallon, Leeds

The first thing to realise, Liam, is that the costs do not stop at buying a modem. They only start there. Bear in mind that the 'phone bill will increase quite dramatically when you get a modem.

Most modems currently available will work with the ST, and any dealer will be able to give you the lowdown on them. You will need an RS232 lead to interface the ST to it. A good terminal program like Freeze Dried Terminal, Vanterm, Uniterm or Dterm will get you up and running quite quickly. These are all P.D. or shareware. The best places to look for a second-hand modem are the classified magazines such as Micro Mart or even Exchange and Mart, as a lot of people sell them when they get the first 'phone bill!

STFM VS STE



I am about to get an ST and I have many questions, so I doubt that you will want to print this. However, I would be very grateful for your help.

The few people with computers that I know all claim that theirs is the best, whether it's an STFM, an STE or another make. In anticipation of getting an ST I've bought issues four and five of your mag and found it to be well balanced and informative, even for a novice like myself. Consequently I decided to write to you for answers as you would be unbiased.

My computer will be at the centre of a MIDI studio and also used as the hub of a small business I hope to start by next year. I will be buying second-hand, intending this to eventually become a second computer.

1. Should I get an STFM or an STE? Whichever one I get will be a 1040. I understand the STE has a blitter, later TOS version and stereo output, but I am given to understand that some programs written for the pre-STE machines have problems due to some clever routines. I used to work in a recording studio where, due to compatibility problems, we ran an early ST in the main studio. Will my copy of Cubase 1.5 run on the STE?

2. Is four Megabytes the maximum capability? Is there an external RAM extension that could be plugged in at the back?

3. Is there a way to check that the computer I'm about to buy is working 100 per cent, some kind of internal diagnostic test?

4. How much should I expect to pay for a 1040 STFM, to be fitted with a blitter, TOS 2.06 and four Megabytes if I have it all done at the same time?

5. Is there software available to run several programs at once? I may wish to use a sequencer, sample editor, synth editor and W.P. simultaneously and wish to save all relevant information (lyrics, sequence, sound and sample info) as one file per song. I've heard a whisper of programs called Switcher or Twister.

6 Does the STE have an FM output (for a TV)? and can you recommend a high resolution emulator. I've heard of people having problems with some emulators.

7. Is there software that would split a large screen into four? This would be useful for running several editing screens at once.

8. How can I get hold of issues one, two and three? I understand that you've run out of issue one. Will it be reprinted?

9. In issue five, I only found 21 programs. What did I miss?

Being unemployed, finances are on a shoestring, so it is vital that I get the right base unit (FM or E). I mean to expand the RAM as much as possible. Ideally, eight Megabytes would be good, especially as a laser printer takes two megs and ***Crackart*** takes one. This leaves only one meg for the artwork itself (I presume).

My main worry is compatibility. Will the programs I already have and use on my friend's STFM be compatible and run on the STE? And will the programs I'm running now run on the Falcon? In other words, can it slow down?

Your help will be gratefully received.

Mahn Davis, Camden, London

It strikes me that you are confusing the issue a little. You talk of wanting to store several different outputs as 'one file'. This is not possible with any program on any machine.

All of the MIDI programs should work fine with either computer, so that should not be a factor in your choice. I would suggest that the STE would be the better bet, as upgrading the memory is easier and cheaper. The maximum is four Megabytes, although there are rumours that larger capacity upgrades are being developed.

If you plan on adding a TOS upgrade and a blitter, any savings that you may make by buying an STFM will be negated and the STE would be cheaper anyway.

When it comes to testing the machine you are thinking of buying, there are no tests that I would rely on. Take any peripherals you are likely to use and test the ports. Most home users will not have used the MIDI ports, so they should be OK. Use your own software and make sure it runs without any problems. If a memory upgrade has already been fitted, the owner should have a memory checking program. There are no guarantees when buying second-hand, so check everything out as thoroughly as you can before you part with your cash.

The STE comes with an RF modulator as standard, so it will work with a TV, but if you want to use the computer for serious MIDI work, you'll need a mono monitor. Few MIDI programs will work with any reliability through a mono emulator, if at all, so this option is ruled out.

Atari claims that the Falcon is expected to be 99 per cent ST compatible, so all your software should run.

I would suggest that you plan out exactly what you expect from your new purchase, otherwise you could be disappointed. Keep reading Atari ST Review for an insight into the machine's capabilities. You can get hold of issues two and three by calling our back issues department on 0733 898100. Unfortunately, issue one has now sold out and there are no plans to reprint it at present.

The 22nd program on the cover disks was a version of STAC for owners of four megabyte machines as the original would not run with this configuration.

COVER DISK PROBLEMS

My son bought a copy of ***ST Review***, issue five with the free cover disks. When he got them home and tried them, he couldn't get them to work. We took them back to the newsagent and he replaced them.

When we got the new disks home, they did not work either, so I thought I'd write to you to see if there is a problem with the disks. At £3.95, it is quite a lot out of my son's pocket money as he doesn't get much. If you wish me to send the disks back for testing, please let me know.

Mrs. C. Booth, Stoke on Trent, Staffs

It is always hard to diagnose problems at a distance, but my guess is that your son's computer is an older ST with a single-sided disk drive. It was decided that as these are very much in the minority, the disks supplied with the magazine would be double-sided to provide the maximum in value.

I would suggest an upgrade. Several companies offer a new drive starting at around £40. For slightly more, you could buy a second external drive which will read the disks without having to dissect your ST. You could try Power Computing on 0234 843388.

WHERE IN THE WORD?

On page 125 of issue four (August 1992) of Atari ST Review, you mention a thesaurus. Unfortunately you do not state where this is available from. I would be obliged if you could let me have details of stockists as I have been unable to find one myself.

Phillip Martin, Wakefield, W. Yorkshire

Kuma Software offers an excellent thesaurus called K-Roget. All Kuma software is distributed by HiSoft who can be reached on 0525 718181, or write to them at The Old School, Greenfield, Bedford, MK45 5DE.

AMATEUR RADIO ON THE STE

I see from issue five's Ask The Experts pages that one of them is from a fellow radio amateur. Perhaps he could be persuaded to pass on to readers information on radio programs available for the ST. Hardly any are advertised in magazines. Maybe other readers could help me. I would be grateful for information on how to connect the audio output of a radio to my STE, to allow a suitable program to decode Morse Code or RTTY (Radio Teletype) signals for example.

I had programs on the old 800XL/130XE, but other magazines ignore all my letters for help with interfacing. I bought the STE in the hope that someone else might be using one with amateur radio or shortwave listening.

Putting my television specialist hat on for a moment, I have the answer to Mark Richardson's problem regarding lack of sound from his STFM bought in Germany. The F.M. sound carrier used in Germany is 5.5 Mhz and the one used in the U.K. is 6 Mhz. A local TV engineer should be able to retune the R.F. modulator in Mark's ST and cure the fault.

James Frampton (G6CUE), Welling, Kent

Firstly, thanks for your help on behalf of Mark, James. I'm sure that will help him out.

I am a radio amateur myself, although I don't use my ST for RTTY or Morse. I use my machine for Packet Radio, which uses the RS232 port to connect to a TNC. I'm sure that someone out there is using the ST for this purpose, so if they'd like to drop us a line, we'll pass the information on to you. Software for the ST is available from most PD libraries. They have a selection of packet radio terminal programs, morse tutors, satellite positioning programs and many others.

Can our experts help you? If you have a question or problem with your ST or any hardware or software that you are using with it, put it on paper and send it to us. Our team of experts will answer all your question. Please be patient, however, as the level of response is so hugethat it might take us a while to deal with your enquiry.

Send your letter to: Ask The Experts, ST Review, 30-32 Farringdon Lane, London, EC1R, 3AU.

To help us, please mark the outside of your envelope with the nature of your enquiry.

Please note that we are unable to enter into personal correspondence, but we will do our best to answer all your questions within these pages

VIC LENNARD

Music, MIDI and sound recording.

Our very own technical editor can actually handle most enquiries that you have but as President of the UK MIDI Association, there's no-one more tuned into the ST music scene than him. A wiz with a mixing desk too, he can help with all your musical enquiries from playing music to recording

TONY KAYE

General Problems.

Our very own Tony Kaye will look at any problems to do with your ST and its day-to-day running.

JOHN MALLINSON

Word Processors, DTP and Printers

If reincarnation is true, then John will no doubt return to this earth in the guise of a laser printer. If you have any problems with your Word Processing, DTP or printing, be it dot matrix, bubblejet, or better, then John will be the answer to your problem.

GARTH SUMPTER

Games and consumer watchdog...

Yes our very own editor will be looking at your consumer problems. Want to know where to get that game or program? Garth will know or can find out. As the consumer watchdog, he can also tell you where to get the product that you want or what to do if you're not satisfied once you've got it.

TONY DILLON

STOS/Graphics

The writer of the STOS tutorial, Tony has already imparted some little gems of information but is still on call to answer all your STOS programing questions and graphics questions.

It's your chance to have your say. You may want to complain, make a suggestion or offer some constructive criticism about a current topic. Drop us a line at Points Of View and air your opinions. You may even win some software if yours is the best letter.

LETTERS

CUT UP BY COUPONS!

Your magazine this month scored 40% on the cut-out coupons test. You must do better!

I have counted at least six cut-out coupons in this issue, not counting those in the body of an advertisement. Cutting these out would result in losing part of the articles on the reverse side of the page on four out of the six.

I don't mind losing part of an advertisement but I do object strongly when it happens to remove part or all of a page dealing with things like MIDI, ***HiSoft BASIC***, and other tutorials. Besides, if one used all of the coupons, the magazine would look a tatty mess.

So can you please ensure that the removal of coupons does not make holes in very useful articles.

What about putting all of the coupons together on one or two pages, and making sure that there are only adverts on the reverse side of them?

George Hogg, Londonderry, N. Ireland

If we did that, no doubt we'd get complaints from people who wish to keep the adverts! All of the coupons are guidelines and, provided you are only sending one entry, you can photocopy the page and send that in or even duplicate the coupon on a plain piece of paper. This way you don't need to cut the magazine up at all.

THE LAST WORD ON FIRST WORD

Can you please explain to me in simple terms how to load ***First Word Plus*** from issue five's coverdisk on my ST? I cannot get to the file selector screen, although all the other programs on the disk load OK.

At first I thought it was the disk, but I bought another copy of your mag and I still can't get in on it. Please help.

A. Riley, Ashton-under-Lyne, Lancs

A few people have had the same problem as yourself. The answer, I'm pleased to say, is a simple one. I would guess that you keep getting TOS error 35. This is an out of memory error caused by the RAMdisk taking the available memory away from the machine.Simply delete the RAMdisk in the AUTO folder and the program should then run with no problems.

To do this, drag the file FASTRAMD.PRG from the AUTO folder to the trashcan. Then click on OK in the following dialogue box. Next, switch the computer off (and that means off – don't just restart) and leave it for at least 10 seconds.

Switch it on again and try running the program.

GAMES COVERAGE

I am writing to say that I disagree with the readers who say you should stop games coverage and concentrate on the more serious uses of the ST. There may be a few other magazines like ***ST Format*** and ***ST User*** which are more or less the same format as ***ST Review***, but in my opinion, they are not nearly as good. Your magazine has better reviews with the 'Pros and Cons' and Buyers Guide being really helpful. Your comparison tests on hardware are really good too.

Your disks are good with free games, utilities and programs instead of the usual games demos you get with some magazines. The programs on the disks are much easier to archive as well, without the hassle of an ARCX.TTP program which sometimes doesn't work. The MIDI section is also excellent.

The main point in your favour, though, is the way your articles are easily understood by the beginner and all the jargon is explained.

If you continue to publish your magazine up to the same standard as the first five I have bought then I think you will have no problem in out-selling your rivals. Please don't change – I think you've got the balance just right.

Rowan Hackett, East Kilbride, Scotland

High praise indeed. I'm glad we manage to satisfy some of you. We'll never get it right for everyone, so all we can hope for is to satisfy the majority.

It looks like we're close to the correct balance, but that does not mean that we won't listen to suggestions. There is a need to cover games as well as everything else. There are few people who can honestly say that they NEVER play them.

AMIGA BASHING AGAIN

In issue five of you magazine, S. Whalley was slagging off the ST and ***ST Review***.

First of all, I'd like to ask why he was reading an ST mag if he owns an Amiga? And secondly, does he know what on earth he's trying to do by writing to you?

He says he has owned an ST and now owns an Amiga Plus (haven't they stopped making them?) and claims that the Amiga's Workbench is 'far superior' to the ST's GEM system. Having used the Amiga before I bought my ST, I found the Amiga's workbench to be hard to understand and very user-UNfriendly.

When I compare the two systems, I find that the GEM system is the easier to learn, is more user-friendly and above all, more flexible than the Workbench. He went on to say that you couldn't get a 3D modelling kit on the ST that even comes close to a certain program on the Amiga. Maybe he's right, but that's not because the ST is not capable of this, it's because the ST market is beginning to be neglected in favour of the Amiga. However, games like Microprose's ***F1 GP***, ***Team Suzuki***, ***Vroom*** and ***Epic*** are a lot better on the ST. I think most people would agree that the Amiga is a lot slower than the ST in the 3D department.

His letter was rounded off with a sarcastic use for the ST, so I thought I would end my letter in a similar fashion. S.Whalley, use your Amiga and its power pack seriously, as FOOTWARMERS!

Barron Finn, Tamworth, Staffs

Well, Barron, it seems that you really are a little upset. As you know, we refuse to rise to the bait in the ST vs Amiga war, save to say that they are both good machines. Any comparison can be made one-sided by picking out specific programs and can show either machine in a good or bad light, but many deficiencies are explained by looking at which machine a program was written for originally. We prefer the ST but respect the opinions of anyone who wants to offer constructive criticism. All the war can do is eventually lead to the demise of one or both machines. So come on, chaps, if you can't say anything positive, don't say anything at all.

HONESTY IS THE BEST POLICY

Firstly, I would like to congratulate you on an excellent magazine which is fast becoming the premier mag for the ST (if it hasn't already done so)! Secondly, I would like to congratulate you on the very honest way you answer letters. I like the way you refused to give Ian Harvey tips to games he hasn't even bought yet, which would have spoiled the games for him. I like the way you regard the Amiga. Your main rival always refers to it as the Amoeba, and PC Compatibles as PC Contemptables (this coming from a magazine whose company also produces magazines for the PC and Amiga). Surely the point is that rivalry between the Amiga and the ST ensures that Atari and Commodore are forced to continually improve their respective machines and keep prices low. This must be good news for owners of both systems.

My ST is now eight years old and I'm seriously thinking of upgrading to either a PC or a Falcon. I'm very envious of PC users as they have some really great software to choose from, so do I buy a PC or a Falcon with a PC emulator? Can the Falcon really run PC programs (including colour SVGA games) at an acceptable speed? Not being technically minded, I believe that the average 386 PC is faster than the Falcon. Are software companies really going to produce games especially for the Falcon? They didn't for the STE! PC or Falcon, your honest opinion please.

Two quick questions concerning comms and the Falcon. Firstly, can I connect my modem to the Falcon? The picture in issue five shows a different type of port. Secondly, I know what LZH and ARC are now, but what are ARJ and ZIP?

Larry Roberts, Neath, S. Wales

If you are that keen on running PC games, then the honest answer has to be to buy the PC. However, if you want to continue running your ST games and the new Falcon games too, then the Falcon is for you. Clock speed matters little when it comes to gameplay. The clock speed of the 386 can be faster than the Falcon, but when you take the graphics and sound specific chips into consideration, technically the PC is not even in the race. It's down to programming and not the hardware at the end of the day. The Falcon is technically superior to the 386 which, let's face it, is now old technology. The 486 and now the P5 are available and have frightening speed capabilities.

Time will give the final answer to your question, but I would seriously consider the Falcon. Running any kind of emulator for any computer will never be quite as good as running the original machine, so it's up to you to decide what you want from your new box.

You should have no problems at all connecting your modem to the Falcon. All you need is a small 25 to 9 pin adaptor lead, available from any good computer dealer.

ARJ and ZIP files are similar to the other files you mention. They are just using a different method of compaction. You need a specific program to un-archive them which should be available to download from the BBS that you find the files on.

LASTING LISTINGS?

I am putting pen to paper to make a criticism of an otherwise excellent magazine. I feel that you have too much games coverage, but there again, this is only my opinion as a 55 year-old, which to the computer generation must seem positively ancient!

The main reason for this letter, however, is a request. I am harking back to the heady days of my first computer, a 1K Sinclair Spectrum, followed by a 48K Commodore. I miss the programme listings and the enjoyment of typing these in and trying to get them to work (am I a masochist?). Would it be possible to include in your mag some listings, perhaps in ***STOS*** or ***HiSoft BASIC*** to cater for people like myself? I know there are lots of others out there who feel the same way as myself, as I have discussed it with many friends bemoaning the loss of this old pastime. Well, you asked for reader input, and you got it!

Dave Sumner, Ilfracombe, N. Devon

Did you ever actually manage to get any of those old listings to run? I tried several without success! Seriously though, if we get enough letters asking for them, we'll see what we can do, but in the meantime, if you're following our HiSoft BASIC tutorials, then there are small programs there that you can use whilst you reminisce about your Spectrum.

SOLDERED UPGRADES

First of all I would like to say that ***ST Review*** has now replaced another ST title as my first choice. My only criticism is the price of subscribing for a year. £50 is a lot to spend in one go. Is it not possible to pay for half-yearly subs or even quarterly by direct debit as offered by another mag?

Also, is it possible to upgrade a 520 STFM with solder chips? If so, will I have to send it off to someone to have it done?

James Aubrey, Sutton, Surrey

Sorry James, the subs are not handled by us directly and the administrative cost of a six-month subscription, we feel,

EDUCATE THE RETAILERS

LETTER OF THE MONTH

I have waited to see the general direction of your magazine before writing. For the most part, I am well pleased, but I would like to see one or two minor changes.

I am 38 years old, married and have two children, the oldest being three and a half. Uses for the ST are word processing (***Write On***), spreadsheets (***K Spread 2***), pre-school education, games and anything else that happens to catch my eye. As you can see, a pretty widespread range.

I'd like to see a small ads page. It works well for the ST Club magazine but seems sadly lacking in the commercial publications.

Although the blue pages are excellent, could we not see an expansion of the PD Zone and move it to the main body of the magazine? The graphics of some PD software is equal to some of the commercial packages available, so why not show it at its best? Could we see a section purely for shareware? This surely has to be an area of the market that will boom if people support it, but it does need promotion.

Like all magazines you offer inducements to subscribe, but why only a choice of five games and two graphics packages? There is much more to the Atari than this, so why not reflect a greater choice?

Coverdisks go a long way in influencing my decision to buy. ***ST Format*** has supplied ***K Spread 2*** and ***Write On*** in special deals with the producers recently, both first class programs, especially when you consider that ***Write On*** can still be purchased commercially for about £45. Couldn't we see similar products on your cover?

As to support for the Atari through the retail outlets, it is very patchy. In my town we have one branch of Dixons, whose hardware support is typically as follows: KXP 1123 printer, which sells for £250. I bought mine for £166 by mail order; Philips CM8833 Mk II monitor (described on their pre-printed card as high resolution), selling for £299. The assistant I spoke to did not seem to know what high resolution meant. On inquiring about a replacement mouse and Atari's own applications packages, I was met with surprise that anyone would want such items for anything other than a PC.

There are better dealers around. Mine is 15 miles away, but due to their small size, prices are not always as keen as they could be. To someone like myself on a very tight budget, this is a major consideration.

If Atari is serious about moving away from the games-only image, then why not offer training courses for retailers, or better still open a range of retail outlets themselves. If this is too costly, how about renting space within existing stores like Dixons. Or how about operating a mail order business for all hardware and software, regardless of manufacturer, from their UK headquarters, coupled with widespread advertising through magazines like yours?

It is up to the end user to make his or her views known. Atari had, in the past, earned its reputation for non-existent support, and most retailers seem content to receive maximum profit for minimum service. To be fair, there are some superb exceptions to this situation, but they are far too few. If we want better support, then we must demand it by not shopping at stores with no product knowledge and unrealistic prices, and by making Atari UK aware of what we want.

R. Levy, Clacton-on-Sea, Essex

I think the last few issues should have satisfied your hunger for good commercial packages, Mr. Levy. Watch out for more in the coming months. As for the support for the ST, it has always been a problem with whatever you buy. You'll be met with the same blank responses if you ask what the sample rate of a CD is, for example (44.1 Khz if you're interested, by the way). Unfortunately, the multiples do not give their staff the in-depth product knowledge that is really needed so, unless it happens to be the salesperson's favourite, you are unlikely to get informed advice. Atari would not be able to set up a mail order department without upsetting retailers, not to mention the work involved. Imagine if Ford sold their cars direct instead of using the dealer network. There would be an uproar!

Some of your suggestions for changes to the magazine are already being implemented for future issues, as we always try to constantly improve on our design and content.

ARE YOU A WINNER?

Find out if one of our grand prizes are on their way to you. Did you get the answers right? This is where you find out...
In issue four (August 1992), we offered you the chance to win a complete MIDI set up, a Star LC-200 colour printer, a trip to Belgium including a visit to Space Camp and a Cool Croc Twins goody bag. Here is a full list of the lucky winners.

MIDI MONTHLY COMPETITION

In issue four's MIDI competition, we asked you two serious questions and three that were a bit of fun. The answers were:

1. The Swedish group who first recorded ***Winner Takes It All*** was ABBA.

2. There are 49 keys on the Roland PC 200 Mk II.

The other three questions had variable answers, although I think 85 hours on ST music in a week was a bit of an exaggeration!

The first name drawn, and winner of the Roland equipment and a copy of Microdeal Concerto is... Dave Sherriff from Binley, West Midlands.

The three runners-up, who each receive a copy of Concerto are:

Geoffrey Smith from Ottery St. Mary, Devon; D. Edlin, Selby, N. Yorks; and Colin Thornton, Bradford, W. Yorks

STAR LC-200

The questions were easy for this one and most of you got them right. If you're still struggling, though, here they are. . .

1. There are four NLQ fonts on the printer.

2. We gave the LC-200 four stars for print quality.

3. The Orator font uses small and large capitals throughout.

4. A colour ribbon for the LC-200 costs £11.00.

The difficult part was thinking of an original use for the printer. Lots of you decided that this was to print things! The winner was Chris Morgan from Stalybridge in Cheshire. He would use the printer to "endlessly print letters to a Mr. Readers Digest to get my own back".

Well done, Chris. Your printer will be on its way to you very soon.

COOL CROC TWINS

Congratulations to those of you who knew that ***Peter Pan*** was the children's story made into the film ***Hook*** and remembered that the crocodile had an alarm clock inside him that ticked loudly and gave his position away.

Cool Croc Twins packs of sunglasses, T-shirt, baseball cap and game are on their way to: A. Smith, Cumbernauld, Glasgow; D. Harvey, Stoke-on-Trent, Staffs; Tony Greenwood, Bristol, Avon; Peter Newbitt, Southampton, Hants; James Moran, Solihull, W. Mids; Phil Miller, Washington, Tyne and Wear; A. Peckham, Bristol, Avon; Del Holden, Cheltenham, Glos; James Love, Nottingham and Graham Cahill, Dublin, Eire.

Copies of the game go to: Elizabeth Dron, Sutton, Surrey; R. Storey, Coventry; David Osborne, St Mary's Bay, Kent; R. Turner, Plymouth, Devon; T. Gibson, Ledbury, Herts; Andy Brown, North Berwick, East Lothian; Christopher Kent, Newport Pagnell; Colin Workman, Belfast, N. Ireland; Simon Thorn, Enfield, Middx and James Fox, Belper, Derbys.

BLAST OFF!

The first Shuttle to make it into space was Columbia (Enterprise never got out of the Earth's atmosphere), and the original method of launching was on the back of a Boeing 747.

The first correct answer drawn was from Rob Bartlett from Ferndown, Dorset, who will be off to Belgium for a trip to Space Camp.

The 20 winners of the Shuttle game and Virgin T-Shirt are:

D. Stanford, Belper, Derbyshire; John Edwards, Basingstoke, Hants; Paul Redgate, Peterborough, Cambs; D.C. Rigby, Chilwell, Notts; C. Turner, Plymouth, Devon; K. Hanna, Northwich, Cheshire; Peter Newbit, Southampton, Hants; David Lal, Glasgow; Jon Chase, Milton Keynes, Bucks; Steven Roe, Wigan, Lancs; Graham Young, Rawdon, W. Yorks; Colin Howard, Cheltenham, Glos; P. Mistretta, Frome, Somerset; Simon Ashe, Rochester, Kent; Brian Gotts, Wanstead, London; Robert Randell, Guernsey, C.I.; Del Holden, Cheltenham, Glos; Simon Oram, Newbold Verdon, Leics; Adrian Toon, Sutton-In-Ashfield, Notts; Pete Davies, Southwold, Suffolk and Robert Groves, Stowmarket, Suffolk.

T-Shirts are on their way to:

Carl James, Northampton; G. Irwin, Wirral, Merseyside; Mrs. R. Siddiqui, Kilburn, London; Stuart Chalmers, Falkirk, Scotland; Thomas Pengo, Padua, Italy; Carleton Rutter, Aston, Birmingham; Lyndon Pritchard, Risca, S. Wales; Andrew Bogue, Sourport-on-Severn, Worcs; Jon Burt, Snodland, Kent and A. Gunton, Camberley, Surrey.

Congratulations to all our winners. If you weren't lucky enough this time, keep trying, you never know whose name is going to be next out of the hat!

does not reflect very good value for money.

As for the upgrade, yes, it is possible. But why not go for the XtraRAM Deluxe type of upgrade, which you could fit yourself and eventually populate it with four megabytes. Using the solder method, you could only put another half a meg into the machine.

This method involves a fair amount of soldering, so an outside company is going to charge quite a lot for their time. If you are interested in the X-tra RAM upgrade and having it fitted, why not try the Atari Workshop on 081 693 1919.

PROBLEM SOLVED

I read with interest the letter from Mark Richardson of County Limerick, Ireland. The clue to his problem is the fact that the computer came from Germany where, I believe that the intermediate frequency of the sound channel may be at 5.5 Mhz. I know that the frequency here in England is 6 Mhz, so if Ireland has the same as us, there is a 0.5 Mhz error.

If the television is only used for the computer the best way out of this problem would be to ask a local TV repair man to change the ceramic filters as these would probably not be expensive, and possibly tweak the final coil. If, as I suspect, the television is a TX9, the filter reference would be CF1 and CF2 and the coil L62.

A note of caution – these sets should not be worked on without a mains isolating transformer as the metalwork is live. It is important, for this reason alone, that the television is taken to a dealer.

A.E. Cutmore, Gosport, Hants

A very good point. Don't try and repair it yourself, Mark. There are a number of dealers in your area who would not charge you too much to put things right.

Make sure, however, that you get a quote for the work before you commit yourself to anything, and remember that you will not be able to use the television normally afterwards.

If the TV is used for other purposes, it might be worth asking the dealer if the modification can be made switchable, so that you can then just manually switch between the two frequencies whenever you need to.

COMPARISONS

I am thinking of upgrading my old 520STFM which is now six years old. The question I have is do I go for the STE, or do I wait a little while and go for a Falcon. I like the idea of the new machine, but have heard that it may not be all that compatible with the older STs. What is your opinion of them both?

Jim Henderson, Bath, Avon

It is difficult to answer your question without knowing exactly what you are using your machine for.It depends on whether you play a lot of games or use the machine for more serious reasons. At the end of the day, the choice is yours, but study what you want before you buy. Not all ST games will run on the Falcon, but there should be a good range available in the next 12 months.

Send your letters to Points Of View, ST Review, 30-32 Farringdon Lane, London, EC1R 3AU. The sender of the best letter each month will win games or application programs of our choice to the value of at least £50.

Please note that personal correspondence cannot be entered into, but we will try and print your letter if we can. We reserve the right to edit letters where necessary without altering the context.

DIAL - A - TIP

Cheats, Tips, and Game Solutions

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0891 445 987

ST GAMESTIPS

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SHADOW OF THE BEAST I AND II

BARBARIAN II SOLUTION

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FIRST SAMURAI HELPLINE

0891 445 926

MAGIC POCKETS/RODLAND SOLUTION

0891 445 928

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WING-BACKS IN A SOCCER MANAGEMENT GAME

SOCCER SUPREMO

AN INTERNATIONAL MANAGEMENT GAME

In the traditional number-juggling soccer management game wing-backs. sweepers, formations, styles, tactics are, at best, cosmetic, at worst , meaningless. The unique match simulation at the heart of Soccer Supremo restores all these and more, allowing genuine control over team performance, In addition to the visual feedback on your team, this match allows substitions, tactical positional changes and workrate instructionsto individual players which then influence the flow of the match. The increased realism and control transforms the supreme, but childish, gameplay of the traditional game into a compulsive simulation..

Yet another England manager has learnt the hard way that controlling an international squad is a very different ballgame to club management. Every match is a cup-tie and every team - selection and result is picked apart by a voracious press. The pressure to succeed is incredible.

Soccer Supremo puts you in charge of a European national squad preparing for the European Nations Cup qualifiers. You have an initial four year contract that may be extended to six or eight years, or reduced to two, as the results dictate. You'll be expected to qualify for the Finals, then put up a show against the best European teams. but this is just preparation for the big one:The World Cup!

Customisation. The game will allow you to take the European nation of your choice and you will be allocated an initial squad of 16 players. You can introduce a further 34 players, making 50 in all, whose names and skills (but not levels) You can define yourself. These players are introduced gradually as you discover the weaknesses in your squad and also to create the balance of skills that match your style of play. The original 16 players can be defined in the same way using the EDIT program (free with the game) if you wish as well as the teams that will make up the opposition.

3D, 22 MAN MATCH DISPLAY

Continuous display of:
OU'LL/ATT/MID/DEF POSSESSION OF
STATS. IND PLAYER ACTIVITY STATS.
PLAYER FATIGUE /FITNESS STATS.
STATE-OF-THE-GAME INFORMATION
PLAYER-WITH-THE-BALL INFORMATION

IN MATCH TACTICAL MOVES

SUBSTITUTIONS
POSITIONAL CHANGES
OVERALL WORKRATE
IND. PLAYER WORKRATE

HEAD COACH V3

"From my point of view , the game has kept me sitting up at nights through holidays and weekends for up to 12 hours at a stretch, with miniscule breaks for food and other necessities.....It is a game I have no hesistation in recommending to anyone with even the slightest interest in American Football"

Headcoach V3 has been described as "the best game ever put onto a computer". It is the complete American Football game, a multi season epic with the very best strategic elements of the real thing. You will call the plays, devise the gameplans and develop the team.

Use the first season (2 pre-season games, 16 regular season games, and the play-offs) to discover your 45 man squad of players. Then exploit the college draft to improve the team and expand your game play to beat the very best the NFL can throw at you.

56 Screens of stats are available tohelp you to judge your players and team performances.

Players will age and teams will fade (a player will last about 6 seasons), but you will stay and rebuild....

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Please supply:

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ST	❑ £19.95	❑ £19.95	❑ £19.95

Head Coach works with ALL STs/monitors
SS and DIV 1 require colour monitor/TV.

LEARN THE LINGO

Our great Timeworks DTP package on this month's coverdisk will no doubt have you wanting to create your own masterpiece straight away. To get you off to a good start, here are some of the most common DTP terms explained

ARTWORK
The output version of the job. This "hard copy" is what is professionally required for reproduction.

BITMAPPED GRAPHICS
A picture composed of a series of dots with a specific number of dots per inch. Files with .IMG, .PI1, PI2, PI3 and .TIF extenders are examples of bitmap files. They are often called paint type graphics.

CROP
Cutting a picture to fit a given area, or so that only specific elements of that picture are reproduced.

DESKTOP PUBLISHING
Usually abbreviated to DTP, this covers the whole process of designing a document for printing using a computer. In the days before DTP, pages had to be laid out by hand using the "cut and paste" method. The new computerised process allows tremendous flexibility and means that you can design professional looking documents in your own home and for little cost.

ERROR MESSAGES
On the ST, these messages are not very well documented. Error messages occur when something is wrong although they do not always mean that you have a complete diasaster on your hands. For example, an 'out of memory' message may be cured by removing some accessories at boot-up.

FOLIOS AND FOOTERS
The page number is called a folio. Any information at the bottom of the page is called a footer and this usually shows the date and name of the document or magazine.

FONT
Each different style of lettering is called a font. This magazine is produced mainly in the 'Zurich' font.

GREYSCALE
Instead of using a range of colours, greyscale, as the name suggests, uses a mono range which goes from black to white. Most scanners can handle 256 different shades of grey. A better image can be created on paper using this method as most standard printers will print either black or nothing (white). The density of black on the page creates the grey tones.

HALFTONE SCREEN
The method by which a photographic image is presented for print. Halftone breaks the image down into black and white dots of varying size to give a tonal representation of the picture.

ITALIC
This is usually used to accentuate words in text. It is a typeface where the the letters lean to the right.

JUSTIFIED TEXT
Justification is used to align text by adding spaces or part spaces to the text so that it lines up on both sides of the column. Text can be ranged left which means that it lines up on the left and is ragged on the right, or ranged right, the opposite. It can also be centred, which means that the column will be ragged on both sides. All our text is either ranged left or justified, as on this page.

KERNING
Altering the spacing around the letters so that they take up relative and not uniform space. For example, an "i" does not occupy the same amount of space as a "w", as is the case on a typewriter.

LEADING
A printing term meaning the space between two lines of text. This is a term from the old manual days of typesetting when lead would be used to space the lines.

MENU BAR
At the top of the working screen, there is a line of words showing the different options that are available to you. Run the mouse to the one you want and a further menu will drop down. Then select the option you want to run by highlighting it with the mouse.

NETWORKING
Connecting your ST to a friend's using a lead is a simple form of Networking, using one machine to control or serve others.

ORPHAN
This term applies when the first lines of a paragraph fall at the base of a column or page and is separated from the rest of the text.

PHOTOTYPESETTING
Type images are set out using a computerised process where they are projected onto photographic film. This replaces the old system of setting them out by hand, and is known as phototypesetting.

QUIT
The command used by a lot of programs to exit.

RULER
A ruler can be displayed and the measurements set so that you can keep your layout consistent.

SERIF
Small tails sometimes used in fonts are known as 'serifs'. Text without these tails are known as Sans Serif.

TIFF
Tagged Image File Format. A way of storing graphics that can be read by a range of DTP packages. This is the standard bitmap graphics format developed by Aldus.

UNTITLED.DTP
Timeworks will always start up with a blank page to which it gives a dummy name. This is changed by using the Save As option when saving for the first time.

VECTOR GRAPHICS
Sometimes called object oriented or draw type graphics, these are a set of commands defining lines and curves as opposed to bitmaps. These can be resized or stretched without losing definition.

WIDOWS
The tail end of a paragraph separated from the rest of the text in the same way as orphans at the beginning of the paragraph.

X-CONTROL
Atari's new configurable Control Panel. Allows you to edit the environment for comfort in terms of colour, mouse response, keyclicks, bell and other options.

ZOO
This is a method of compression of data which is usually used to send programs via the telephone lines when using a modem.

WYSIWYG

What You See Is What You Get. This is a phrase that's used quite a lot in computing. You may have heard it in connection with DTP or word processing.

What it means, simply, is that what appears on the screen is what will be printed. In other words, there is no need to waste paper printing your document just to get an idea of what the finished item is going to look like.

Timeworks can import text and picture from your word processor and graphics packages. This means that you can continue to use the programs you are used to in order to create the text and pictures. You can then use a DTP package to present them in a pleasing, professional way.

DTP is ideal for newsletters, leaflets and anything else where presentation is important. You could even use it for producing a high-quality CV. Try presenting your next thesis to your tutor printed from a DTP package and see your grades improve overnight (provided the material content is correct!).

CHARTS

We show you the reviews, but what you buy is what really counts. Here's what your pockets are saying this month. . .

FULL-PRICE GAMES

1 Sensible Soccer	Renegade	£25.99
2 Grand Prix	Microprose	£34.99
3 Striker	Rage	£25.99
4 Crazy Cars 3	Titus	£25.99
5 Knights of the Sky	Microprose	£34.99
6 Fire and Ice	Renegade	£25.99
7 Epic	Ocean	£29.99
8 F15 Strike Eagle 2	Microprose	£34.99
9 Graham Taylor	Krisalis	£25.99
10 Parasol Stars	Ocean	£25.99
11 Lure of the Temptress	Virgin	£29.99
12 Addams Family	Ocean	£25.99
13 Oh No More Lemmings	Psygnosis	£25.99
14 Populous 2 (1 MB)	Electronic Arts	£25.99
15 Bitmap Collection	Renegade	£25.99
16 Microprose Golf	Microprose	£34.99
17 Jimmy White Snooker	Virgin	£25.99
18 Legend	Mindscape	£29.99
19 A320 Airbus	Thalion	£34.99
20 Hook	Ocean	£24.99

TOP 10 ADD-ONS

1 Quickshot Python	Quickshot	£10.99
2 Naksha Mouse/Operation Stealth	Naksha	£29.99
3 Competition Pro Extra	Dynamix	£14.99
4 Competition Pro Black	Dynamix	£14.99
5 Apache 1	Quickshot	£7.99
6 Quickjoy Junior	Spectravideo	£6.99
7 Konix Speedking	Konix	£12.99
8 Zipstick Autofire	Sonmax	£14.99
9 Logic 3 Gamaray	Spectravideo	£22.99
10 Alpha Ray	Spectravideo	£11.99

BUDGET GAMES

1 Panza Kick Boxing	Kixx	£7.99
2 Pang	Hit Squad	£7.99
3 Battle Chess	Star Performers	£10.99
4 Emlyn Hughes Soccer	Touchdown	£9.99
5 James Pond	GBH	£7.99
6 F15 Combat Pilot	Action 16	£9.99
7 Ultima Golf	GBH	£9.99
8 Seymour goes to Hollywood	Codemasters	£7.99
9 1st Division Football Manager	Codemasters	£7.99
10 Italia '90	Tronix	£9.99
11 Treasure Island Dizzy	Codemasters	£6.99
12 Total Recall	Hit Squad	£7.99
13 Rainbow Islands	Hit Squad	£7.99
14 Bubble Bobble	Hit Squad	£7.99
15 Turrican 2	Kixx	£7.99
16 Int. Karate +	Hit Squad	£7.99
17 New Zealand Story	Hit Squad	£7.99
18 Stunt Car Racer	Kixx	£7.99
19 Man Utd	GBH	£9.99
20 Rick Dangerous	Kixx	£7.99

EDUCATION – TOP FIVE

1 Funschool 4 (7-11 yrs)	Europress	£24.99
2 Funschool 4 (5 yrs)	Europress	£24.99
3 Play & Read	Prisma	£24.99
4 Thomas the Tank Engine	Alternative	£24.99
5 Donald's Alphabet Chase	Infogrames	£24.99

TOP FIVE UTILITIES

1 STOS 3D	Europress	£34.99
2 STOS Compiler	Europress	£24.99
3 Master Sound	Microdeal	£39.99
4 3D Construction Kit	Domark	£49.99
5 Deluxe Paint	Electronic Arts	£49.99

National charts supplied by Microbyte.

Wherever there is news, wherever there is controversy, there will always be opinions. And this is the place for people to air them....

OPINION

Should full-price games be put on cover-disks? We get both sides of the story; a software house and a magazine publisher

IF YOU HAVE AN OPINION THAT YOU WANT AIRED, THEN DROP US A LINE AT: OPINION, ST REVIEW, PRIORY COURT, 30-32 FARRINGDON LANE, LONDON EC1R 3AU

MONEY, MONEY, MONEY

Would free software put people off buying full price games, or would it be seen as a bonus with something they'd usually buy?

Garry Williams, publisher of ST review. He believes full-price games will return to cover disks.

Almost everyone likes the idea of getting something for nothing, and a full-price game for free is an almost irresistible offer to any magazine buyer. For us as publishers, the benefit would be measured in selling more copies of the magazines, which would force other magazines to compete. Giving away two or three games an issue could then become commonplace.

The situation with software houses would not be as good. We could end up in the danger of killing the goose that lays the golden egg. Would people regularly buy games at £20 plus if they knew that they may well get it free on the cover of a magazine in six to eight months?

Cover-mounted games aren't feasible with consoles so financial pressure from falling sales, high-development costs and piracy problems may force software houses to produce only for the lucrative console market. With less software releases, magazines suffer a drop in advertising revenue, which means thinner issues or higher cover prices.

Many companies have decided it is no longer worthwhile publishing ST games, and by selling their old titles to magazines would damage the profitability of those who still produce games in this market.

If people get used to getting top quality games for free it will take a lot of development and marketing expenditure to persuade them to buy the latest games. Software houses will not take these financial risks and will eventually be forced into markets with greater returns.

The pressure on magazines to produce consistently growing circulation figures to attract advertisers may mean that magazines will inevitably return to running full-priced games at some stage soon. Once one magazine takes that step the rest will be forced to follow. Time will be the best judge as to whether this is a wise move.

COVER-MOUNTED HORRORS

Editorial quality, or free game jamboree? Could free software spell the end of your favourite magazines?

Gary Bracey, Sotware Director at Ocean. The return of free games could spell disaster for magazines.

The issue of full-price games being given away free has been a contentious one for a number of years. Sinclair Spectrum magazines began a cover-mount 'war', which I recall culminated in one particular issue of Crash! magazine proffering SEVEN full-price games on three cassettes! The irony was that this issue only had about ten editorial pages.

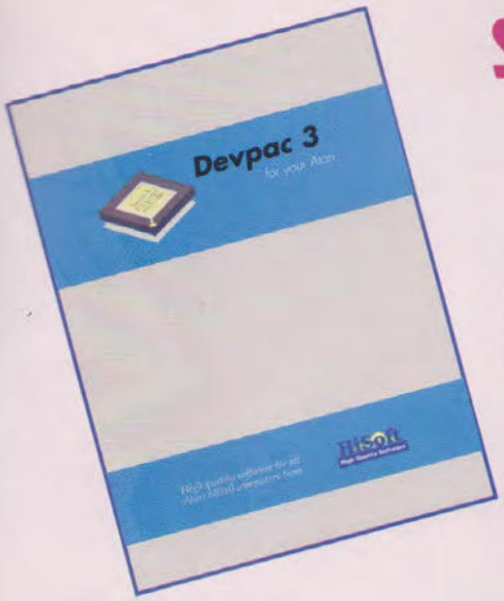
From the above, one can only deduce that these magazines were being purchased because of their giveaways rather than their content.

Apart from actual long-term commercial damage inflicted on the software publishers ('who cares??!!', I hear you scream), so eloquently expressed by Garry, surely the integrity of the magazine is also brought into question.

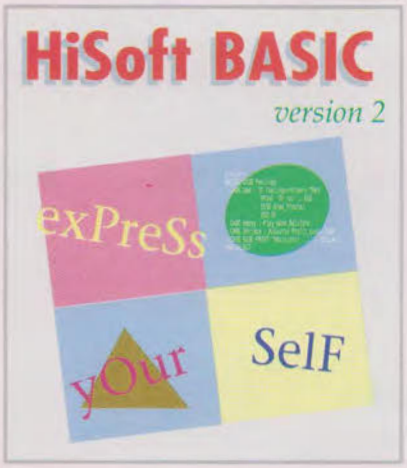
Quite simply, if there were NO cover-disks on any mags (and I include PD disks in this), then surely the magazines' strengths, and presumably sales, would be judged by the editorial content. This is as it should be, however I believe this is not the case. Certainly in those old Spectrum days, the magazines were purchased solely because of quality (and maybe quantity) of the games given away. It would be dreadful to think that this is creeping into the thinking of the readers of ST Review and it's competitors. Do the magazines seek to exploit this? Yes, unfortunately. Look at an ad for any 16-bit games-orientated magazine and see how prominently the 'give-away' is featured. We've given 'bit and pieces' away with our games occasionally (badges, keyrings etc), but I would be mortified to think that this was the main reasbn someone purchased out product.

I'm certain the person who originally came up with the cover-disk concept was quite proud of their accomplishments, never realising that their idea would eventually overshadow the creative achievements of the people they were hoping to assist.

Software that matches the Hardware



HiSoft is renowned for its range of language systems, utilities and entertainment programs on the Atari ST/STE/TT and, now, the new Falcon. We have been writing for the Atari 680x0 computers since they were first introduced into the UK and thus we know both the hardware and software intimately. Our company policy is always to offer the highest quality software at an affordable price with a complete range of backup support options - in these uncertain, difficult times, we'd like to put a smile on your face.



Here at last ... Devpac 3

Our long-awaited sequel to the popular Devpac 2 assembler package is available at last. The all-new Devpac 3 contains the following major enhancements:

- *brand-new multi-window editor with many user-friendly features*
- *68000-68040, 68881/2, 68851 support*
- *30% faster assembly speed than Devpac 2*
- *many new options and optimisations*
- *new linker (borrowed from Lattice C) giving a much faster link time*
- *improved 680000-68040 debugger with true assembler source level debugging*
- *works on all STs including the new Falcon*

There is much, much more than we can possibly talk about here (a totally new manual for instance) so please write or call for more detail.

The RRP of Devpac 3 ST is £79.95 - upgrades are available to registered users of DevpacST 2 for £39.95.

The BASIC of the 90s

The only BASIC, of UK origin, for all Atari 680x0 computers that is still being improved and supported.

- *easy-to-use, friendly environment*
- *superb high-level GEM toolkit with source*
- *resource construction set & debugger*
- *super-fast compilation to machine code*
- *extensive, two-volume documentation*
- *works on all STs including the new Falcon*

Diamonds are forever

Awarded a 'Format Gold' rating of 92%, Diamond Back II is *the* back-up program.

- *image or file-by-file back-up, including incremental back-up by date or archive bit*
- *extremely fast with optional compression*
- *load and save customised configurations*
- *flexible disk formatting options with support for high-density drives*
- *clear, helpful user documentation*

HiSoft BASIC 1

Simply no Competition

This latest version of the already massively popular Lattice C 5 package, confirms it as the market leader in ANSI packages for the Atari 680x0 computers.

- *full compatibility with the STE, TT and new Falcon computers*
- *extended and improved editing environment including a brand-new project manager with 'make' facility*
- *easier-to-use and extended options*
- *improved ANSI support*
- *complete range of maths co-processor libraries including auto-detecting*
- *FSM GDOS, CPX & other libraries*
- *faster linker with common block support, support for DRI format*

This Month's Crazy Offers

For the next 3 months, in ST Review, we will be offering, each month, two of our high quality packages at a ridiculously low price. Each offer is only valid for a short time and is subject to stocks being available.

This month's first product is Harlekin 2.06 - a superb combination of utilities in one desk accessory; there's an editor, a RAM disk, a disk/memory editor, a set of disk routines for copying, deleting, moving etc., a print spooler, extensive user-defined macros and a complete time management system that is a sophisticated appointment diary and calendar in one. All this, plus manual, for only £24.95 (RRP £59.95); 1Mb memory is recommended.

Secondly, we are offering the complete HiSoft BASIC 1 package (as featured on ST Review's cover disk recently) for only £19.95 - this includes the software and ring-bound manual, together with the chance to upgrade to HiSoft BASIC 2 for only £49.95.

These offers are exclusive to ST Review readers and are valid until 31 October 1992. You must use the coupon in this advertisement when ordering.

Please phone or write for upgrade prices from earlier versions of BASIC, Devpac and Lattice C 5

The above is only a small selection of our range of software for the Atari 680x0 computers - other titles include KnifeST, WERCS, ProFlight, FTL Modula-2, HiSoft C, Power BASIC, HiSoft FORTH, Wordflair, Tempus 2, K-Spread, K-Word, K-Data and more. All HiSoft software is available from good computer shops - if you have difficulty obtaining our products from your local shop, please give us a call. You can also order our software directly from us, by telephone or by mail, using Mastercard/Access/Visa/Switch/Connect etc. or by simply sending us a cheque/PO. Prices include P&P and VAT within the UK - please enquire about out export terms.

for more information on any of our products, please call HiSoft on +44 (0) 525 718181, or fax us on +44 (0) 525 713716 or write to us at: The Old School, Greenfield, Bedford MK45 5DE UK.

HiSoft
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Special Order Form

Use this special order form to obtain your HiSoft software (some titles at very special prices until the end of October 1992). Order more than £100 worth of goods and we will send you a £10 voucher for future purchases from HiSoft.

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HiSoft BASIC 2	£79.95	☐
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