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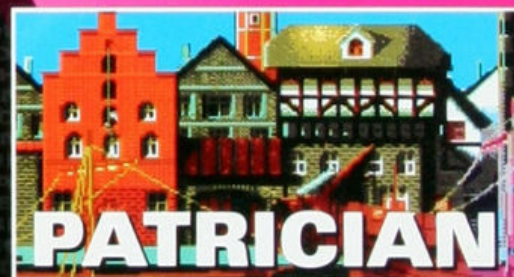
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See page 19

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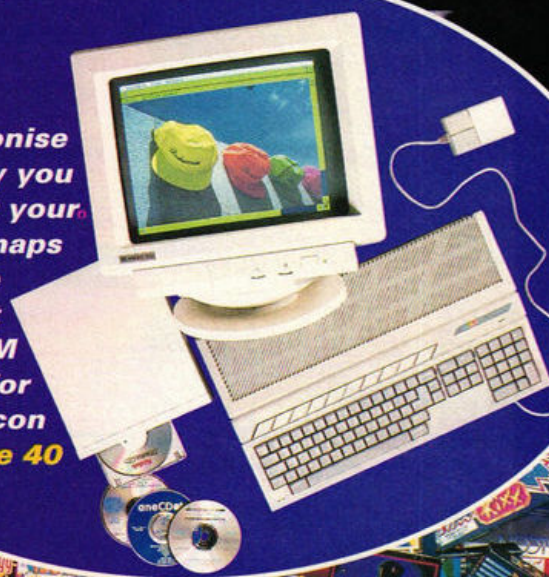
GET TO KNOW YOUR ST INSIDE OUT!

We show you how your ST works the easy way - so put that hammer away!

page 46



Revolutionise the way you look at your holiday snaps with the first CD ROM program for the Falcon
page 40



POCKET MONEY FANTASIES

Check out 50 of the best value games money can buy on page 31



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ST FORMAT ■ ISSUE 50 ■ SEPTEMBER 1993

HELLO AND WELCOME TO STF



Paula Richards,
EDITOR

This month we celebrate 50 issues of *ST FORMAT* - for 50 months now we've been at the forefront of ST computing, bringing you the best and most authoritative reviews, latest news and the greatest features. To mark that fact we've got a huge feature showing you 50 ways in which you can really use your ST to its fullest potential - if you've only ever touched it for word processing and games, you're going to suddenly realise how sheltered you've been - all this

starts on page 19. We're looking to the future as well with the first CD-ROM software in the shape of Photo CD that works on the ST and Falcon. Find out what we thought of it on page 40. We put loads of games under the microscope this issue when we work out what we believe the definitive budget releases are (page 31) as well as reviewing the latest games - *Legends of Valour* (page 66) and *The Patrician* (page 70) which has done amazingly well in the German ST charts. With the usual blend of hints, tips, and loads of reviews, this is certainly one of the best issues yet, so wish us Happy Birthday and join in the fun... Have a great month.

FEATURES

19 YOUR FLEXIBLE FRIEND

There are hundreds of things you can use your ST for - we give you the inspiration to start exploiting it.

31 POCKET MONEY FANTASIES

The definitive guide to those not-quite-full-price games.

40 CD-ROM TAKES OFF

Discover the potential of CD ROM and the Falcon with our preview of Photo CD.

44 PERSISTENCE OF VISION PERSISTS

Continue to create photo-realistic pictures with last month's *Persistence Of Vision* raytracer.



■ Continue on your quest to create amazing photo-realistic pics with the *Persistence of Vision* Raytracer.

46 YOUR ST REVEALED

Get to know exactly how your ST works - and you don't even need to take off its lid!

50 KICK WITH YOUR STICKS

What's the best waggler for your game playing frenzies? Choose from our selection of joysticks.

REGULARS

7 NEWS

Why are Atari switching their loyalties?

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Make the most of every one of your Disk programs.

38 REVIEW: TKR FAX MODEM

Perfect for sending faxes - but at what cost?

38 REVIEW: TKR TELE OFFICE

Great fax software... or nothing special?

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62 REVIEW: PRINTER

What is it like?

63 REVIEW: HARD DRIVE

Does this one stand out from the crowd?

63 REVIEW: MONO MONITOR

Another in the line of Atari monitor substitutes.

64 REVIEW: SPEEDO GDOS

How does this new font system compare to GDOS?

65 SCREENPLAY

Get into a frenzy with *Ancient Art of War in the Skies* (page 74), *Fire Force* (page 80), *Legends of Valour* (page 66), *Nicky 2* (page 76) and *The Patrician* (page 70).

79 WIN LOADS OF GAMES

Your chance to win a heap of *FORMAT* Gold games.

81 NEXT MONTH

Benefits - and lots of 'em. Find out what they are here.

82 GAMEBUSTERS

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88 CAPTAIN BLUNDER

Ask him a question and he'll do his best to answer.

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50 of the best programs from the Public Domain.

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Treat yourself to one of our special bargains.

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What's been really irritating you about life with your ST?

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Keep in touch with the major players in the ST world.

106 PIXEL PAINTING

A bit of art and culture comes to your ST.

COVER DISK 50



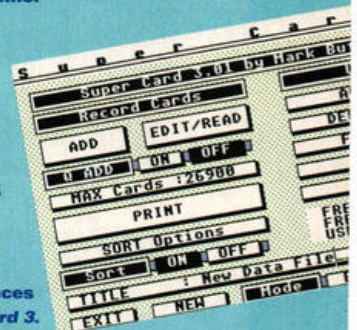
Flavours of the month are, well, just very tasty...

■ **Civilization** - a massive playable demo of this year's biggest god game.



■ Check out this *FORMAT* Gold winning game demo.

■ **Supercard 3** - keep your collections in order with this fully-featured database.



■ Cross references galore with *Supercard 3*.

■ **Punt** - original and frantic platform game.

■ **Big Life** - fascinating game of life, death and birth.

■ **Puzword** - challenging logic and skill puzzles.

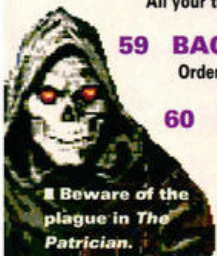
■ **Chord Dictionary** - check out those guitar chord patterns.

■ **Runes** - discover the secrets of the future the stones hold.

■ **Mega Depack** - unpacks and repacks files more efficiently.

TURN TO PAGE 12 FOR
FULL DETAILS!

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■ Beware of the plague in *The Patrician*.



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ATARI SHUN THE FAR EAST

by Paula Richards

Atari's new 64-bit console, the Jaguar, is to be made in the USA by computer manufacturing giants IBM. This follows the disastrous experiences Atari have had with the cheaper Far East manufacturers of the Falcon, effectively putting back widespread distribution of the machine by almost a year.

The company are determined to make a huge splash with the Jaguar – and they'll only do this if they get everything right throughout the manufacturing, distribution and marketing process. Sam Tramiel, president of Atari explained "Because the Jaguar will feature such an array of visual and audio special effects, we wanted to work with a premier company who we are confident can manufacture the product we have developed."

False economies

Sales of the Falcon in the UK are presently at a very low level of 7,500 units – appalling considering they were supposed to be on the streets before Christmas 1993 and

reaching sales of 150,000 by Christmas this year. Whether they make that figure now is doubtful. Darryl Still, Atari UK's Marketing Manager, explained that the costs of making machines in the Far East is a lot cheaper than in the US but it seems as if they've been making false economies. The first batch of Falcons to be made failed the qual-

"It later transpired that it was actually the quality control equipment that was faulty"

ity control tests they were put through, which delayed their release, then the second batch also failed the tests.

Since Atari are so determined to produce quality products, unlike at least one of their main competitors, they could not conceive of allowing these machines to go out. This was a bit of a mistake as it turned out, since it later transpired that it was actually the quality control equipment that was faulty. Atari attempted to try other Far Eastern manufacturers but met with little success – deadlines not being met, for example – which has



■ Distribution of the Falcon has been severely hampered by quality control difficulties in Taiwan.

led to very few machines actually being available in this country, although vast quantities of machines are supposedly going to be here "imminently." The only problem is that we've heard this so many times before that such claims are beginning to lose credibility.

Regaining reputations

The only way they're likely to regain a reputation as anything more than a company who are brilliant at designing excellent technology-beating machines is by coming up with the goods they're promising for the Jaguar – and this is a great chance for them that so far they seem to be rising to.

As well as the deal with IBM, who have their own reasons, likely to be largely financial following incredibly bad losses last year, for wanting to get into the the mass

consumer electronics market, Atari have tied up a deal with Time Warner, the world's largest media and entertainment company. This enables Atari and third party licensed publishers to develop titles for the Jaguar. They've also been attempting to keep a high profile in the computer trade press and among the software publishers – many of whom are keen to develop for the Jaguar.

Still admits that the order of new machines releases isn't quite working out as planned – it now looks more likely that for a good few months to come the Falcon will remain a specialist music machine and that, with the release of the Jaguar, Atari will once more become a household name, thus encouraging people to "buy Atari" and software houses to develop for their other platforms.

CGS GETS IN SHAPE

Exciting new hardware and software packages for the Falcon are on sale now.

CGS are translating the InShape graphics package into English. The program comprises a suite of programs enabling the Falcon to perform 24-bit colour raytracing, 3D modelling and rendering. There is a wide range of natural textures

and effects available enabling realistic looking clouds and other natural objects to be generated.

InShape is the first graphics modelling package which requires the Falcon to have a co-processor installed, CGS are to supply the program with an optional co-processor if your machine doesn't

have one. The co-processors are also available separately, the 68881 costs £52.88 and you can buy the 68882 for £76.38.

The first SIMMs memory expansion board for the Falcon is now available from CGS for £76.38 without RAM – the board is a direct plug-in replacement for the Falcon board and accepts four 1MByte or 4MByte SIMMs so you can expand your machine to either 4MBytes or 16MBytes.

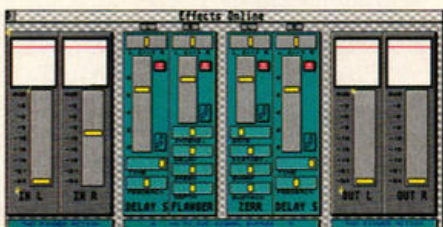
CGS are translating the DigiTape direct to hard drive recording program – this is an 8-track direct to drive system costing £120 while the full blown 32-track version of

■ 24-bit colour raytracing is one of the most exciting abilities of the In-Shape graphics package.



DigiTape is £399. Both versions have a full range of built-in real-time sound effects and processor modules, and because the system is modular, extra effects modules and features can be added later. Contact CGS ComputerBild on ☎ 081 686 8121 for more details.

■ DigiTape from CGS showing the range of effects available in the Lite version. DigiTape Lite can record up to eight tracks direct to hard drive at frequencies of up to 50Khz.



GAMES INDUSTRY JAGUAR

by Rob Mead

The major UK software houses have given a resounding thumbs-up to Atari's new 64-bit console, the Jaguar.

This exciting news follows a development conference held at Atari's UK headquarters in Slough which was attended by over 20 software publishers including major ST supporters Ocean, Audiogenic and US Gold.

Ocean's development director Gary Racey confessed to being extremely cynical about Atari's claims for the Jaguar before the conference: "We went in feeling very sceptical about what the machine could do, but we came out feeling very impressed." Such

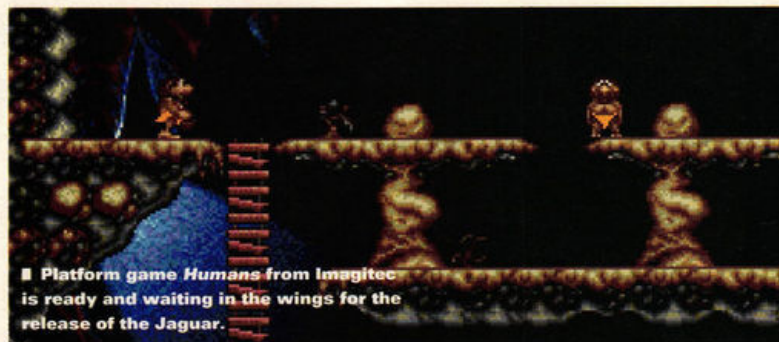
uncharacteristic support for Atari was echoed by Elite Systems, a major player in the handheld and console markets with games like *Paperboy* and *Dragon's Lair*.

Elite director Steve Wilcox described the Jaguar as "techni-

"We went in feeling very sceptical about what the machine could do but came out very impressed"

Gary Racey, Ocean

cally very exciting" and his company is actively considering development games software for the machine. Audiogenic are also



Platform game *Humans* from Imagitec is ready and waiting in the wings for the release of the Jaguar.

enthusiastic about what Atari's new baby has to offer. Managing Director Peter Calver said "The machine is very powerful. It's as powerful or more powerful than anything that's come out on the market so far... it's certainly better than the Mega CD or Amiga CD consoles." However, Calver warned that Atari could ruin the Jaguar's potential by gearing it exclusively to high-spec *Starfox* clones. "[Atari] are not really interested in sports or platform games because they don't make the most of the machine - but just because you've got a 140mph car, it doesn't

mean you have to drive it like that all the time. There has to be room for simpler games too."

These feelings of concern were also expressed by US Gold who argued Atari really needed to release a high profile games title which could fire the public's imagination and make them rush out and buy the machine: "What Atari need is a hot title like *Street Fighter 2* or *Sonic* to get people interested in the Jaguar." However, they felt Atari didn't have such a Mega Drive-beating title at the moment. Despite this caution, US Gold are still enthusiastic about the machine's

ZOOL ARRIVES ON THE ST



Be the envy of your console-owning pals this autumn with a little help from a ninja ant called Zool.

Platforming wonder-game Zool is finally going to be released on the ST in October. This great news follows months of speculation about Gremlin Graphics plans to release an ST version of the game.

Zool: Ninja of the Nth Dimension stars a supercool ant-like hero who you have to guide across seven cutely colourful worlds. There are plenty of goodies to collect, baddies to zap and levels to leap around - all the usual platforming stuff.

What's really brilliant though is the speed of the gameplay making *Zool* very special - the little chap really zips around the screen and with two speed options as well as three different difficulty levels so you're really going to be in for a major arcade treat.

Zool is set for release in October, price £25.99. Phone Gremlin on 0742 753423 if you want to know more.

The second Future Entertainment Show

FUTURE

The country's biggest computer game show, The Future Entertainment Show, is making its return in a big way this autumn with a four day extravaganza in the Grand Hall at Olympia. As well as loads of attractions - last year, for example,

there was a helter skelter - software houses will be showing off their latest and greatest games for the ST and other formats. You're also going to have the chance to get stocked up with as many bits of gear as you can manage to carry - see the boxout below about the ST-related companies who are so far booked to appear

WHO'S GOING TO BE THERE?

The FES is a huge event catering for all computer formats - these are the people who are likely to interest you most. Remember there's still another four months to go so this is just the present situation

16/32 PD library	Imports programs like <i>Xenomorph</i> from Lexicor, PD library, computer accessories
Core Design	Software house - <i>Doodlebug</i>
Datel Electronics	Computer accessories
Digitia International	Accounts programs for the ST
Gasteiner Technologies	Sales of computers (Falcons et al), accessories, software
Philips Interactive Media	CD ROM drives
Power Computing	ST software and hardware
Snap Computer Supplies	Disks and other accessories
Supra	Modems and other hardware
US Gold	Software house
WTS Electronics	Repairs and peripherals

FLOCKS TO



■ President of Imagitec, Martin Hooley reckons that the Jaguar is very exciting, "it's a brilliant machine."

potential and are working closely with software developers

Imagitec who already have several Jaguar titles in the pipeline. Imagitec president Martin Hooley confirmed that two games – *Humans* and *Raiden* – were already available for release and confessed "I'm very excited about the Jaguar, it's a brilliant machine."

One possible spin-off from the enthusiastic response which has greeted the Jaguar so far is

"The machine is certainly better than the Mega-CD or Amiga-CD consoles"

Pater Calver, Audiogenic

that the major software houses could start gearing themselves up to produce more Falcon software.



■ A brilliantly coloured shoot-em-up, *Raiden* makes the most of the amazing colour capabilities of the Jaguar.

Until now only software houses Silmarils and Thalion have been prepared to commit themselves to developing games for the Falcon, but this could snowball if the Jaguar sparks off renewed interest in all things Atari.

In particular, developments on the CD-ROM front means we could see a whole plethora of games being released on CD for both the Jaguar and Falcon, since converting games to cope with other operating systems is relatively straightforward.

ENTERTAINMENT SHOW

there. The show, which opens on Thursday 11 November and goes on until Sunday 14 November, has a live broadcast of Channel 4's GamesMaster show on the Thursday and if you book to go on the Friday you'll receive a special world preview ticket for the Disney spectacular *Aladdin*. It's likely to be packed at the weekend so why not take advantage of these extra weekday events? You can only get

into the show if you've got a ticket – so take note of the hotline number and book your place now.

The Future Entertainment Show is being held on Thursday 11 November (10am to 8pm including the GamesMaster Live broadcast), Friday 12 November from 10am until 5pm then Saturday 13 and Sunday 14 from 9am to 5pm in

the Grand Hall at Olympia. Tickets cost £6.95 each or come with your family (any four people including at least one adult) for £24.95. Remember you can't buy tickets on the day – ring ☎ 051 365 5085 to guarantee your place.



■ Scenes from last year's Future Entertainment Show. Above Allan Brett and Tony Eaton, winners of the National Computer Games Championships, were presented with their prize money by Bad Influence presenter, Andy Crane. Right, crowds gathered quickly last year – don't miss out on your chance to go to the show, make sure you book your ticket well in advance.

SNIPPETS

Le'ST Get Serious!

The latest Atari ST and Falcon hardware and software developments will be on sale at the slightly predictably titled Le'ST Get Serious Show!, organised by developers to showcase the potential of Atari machines.

It is to be a "serious" show with expert advice and information on the latest innovations in music, video, DTP, sound sampling and MIDI. Exhibitors include Titan Designs, CGS ComputerBild, Compo Software and 16/32 Systems. System Solutions' range of ST, TT and Falcon hardware and software is also to be available.

New Falcon hardware on sale includes the SIMMs memory upgrade board from CGS ComputerBild, the Falcon Speed PC Emulator and Screen Blaster Overscan board from Compo Software and the new Graffiti genlock, Exposé true colour video digitiser and Fresco genlock with video titling software from Titan Designs. The Graffiti genlock can also be used with the STE and STFM using a suitable adaptor.

A novel feature of the show will be a fitting service for any upgrades and add-ons purchased, if you take your machine along with you any peripherals you buy will be fitted free of charge.

The show is to be held on Saturday 14 August at the Novotel in Hammersmith from 10am to 6pm with entry costing £3 until 2pm, anyone arriving after 2pm can get in for £1.50. More shows are planned for London (Sunday 26 Sept), Manchester and Birmingham. Contact Ray Cross (☎ 081 686 8121) or David Encliff (☎ 021 414 1630) for more details.

Compo blast off

Compo Software are now selling their Screen Blaster overscan board for the Falcon, a small hardware add-on to enhance your Falcon's screen display.

The Screen Blaster is a small plug-in device that increases the screen resolution of the Falcon to somewhere between 880 x 600 pixels and 1,152 x 832 pixels, depending on your monitor's capabilities. If your VGA or SVGA monitor has a variable screen sync rate (not the same as a multisync monitor) then you can access the higher resolutions. Screen Blaster costs £79.99 and is available now.

The Falcon Speed PC emulator is also available now, it is a 286 emulator and runs with Windows 3.1 at the standard VGA resolution of 640 x 480 pixels in 16 colours. The board costs £229 and plugs directly into the internal expansion slot of the Falcon, so you void your warranty when you install it.

Contact Compo Software on ☎ 0480 891819 for the latest information.

THE TOP TWENTY

Your guide to the top-selling ST games throughout the UK

This month	Last month	Game	Publisher	Price	STF Rating
1.	(2)	Chaos Engine	Renegade	£25.99	94%
2.	(5)	Lemmings 2	Psygnosis	£29.99	96%
3.	(-)	Championship Manager 93	Domark	£29.99	80%
4.	(1)	Sensible Soccer 92/93	Renegade	£25.99	91%
5.	(7)	Pirates	Kixx XL	£12.99	74%
6.	(4)	Premier Manager	Gremlin	£25.99	85%
7.	(-)	Addams Family	Hit Squad	£9.99	74%
8.	(6)	Street Fighter 2	US Gold	£27.99	91%
9.	(8)	World Class Cricket	Audiogenic	£29.99	85%
10.	(3)	B17 Flying Fortress	Microprose	£34.99	87%
11.	(11)	Prince of Persia	Hit Squad	£7.99	90%
12.	(9)	First Division Manager	Codemasters	£7.99	64%
13.	(12)	F-19 Stealth Fighter	Kixx XL	£16.99	96%
14.	(10)	Civilization	Microprose	£34.99	92%
15.	(-)	Terminator 2	Hit Squad	£7.99	63%
16.	(-)	RBI 2 Baseball	Hit Squad	£7.99	62%
17.	(-)	Maniac Mansion	Kixx XL	£12.99	73%
18.	(-)	James Pond 2: Robocod	Kixx	£9.99	86%
19.	(14)	The Simpsons	Hit Squad	£9.99	74%
20.	(-)	Reach for the Skies	Virgin	£30.99	88%



Only two new games – *Championship Manager '93* and *Reach for the Skies* – make their debuts this month. The budget labels continue to dominate the chart with no fewer than ten titles in the top 20, including old faves like *The Simpsons* and *James Pond 2*. *Chaos Engine* manages to dislodge that other Renegade fave *Sensible Soccer* from its pole position with *Lemmings 2* leaping into second place.

SNIPPETS

£159 STFM's go down a storm

"We are buying £159 STFM's from Atari and selling them by the bucketload; people really appreciate being able to buy them at such exceptional value. It's good to see that Atari are working from a European perspective, this idea has really worked well for them," said Neal O'Nions of Compo. This comment comes in a month when Bob Brodie of Atari US denied the existence of this great value ST and Darryl Still of Atari UK said Atari were so pleased with the way the sales had gone that they would consider extending production of them. Perhaps if Brodie had communicated with Atari UK he'd have thought twice before indulging in Compuserve chat about European matters.

Sounds fantastic

If you are using your ST or Falcon for music, sound sampling or direct to hard drive recording you need high powered speakers for the best sound reproduction.

Roland have a new range of speakers designed specially for use with computer systems, they have magnetically shielded power supplies to prevent damage to floppy disks and monitors making them ideal for desktop use.

There are three sets of speakers in the range, the MA-20 Micro Monitor has a 15W 5 inch speaker and costs £105.75, the MA-7 Stereo Micro Monitor consists of a pair of vertical speakers for £158.63 and the CS-30 Stereo Micro Monitor contains three speakers with powerful sub-bass system in a single unit for £117.50.

Contact Roland Digital Group on 0252 816181.

It's specific

HiSoft have launched Falcon specific versions of their popular programming languages, along with upgraded versions of the ST releases. Supplied with every Falcon version of *Devpac 3*, *HiSoft Basic 2* and *Lattice C* are 256 page books providing full details of programming for the Falcon, including full details of writing software compatible with both MultiTOS, SpeedoGDOS and TOS 4. The ST versions of HiSoft's languages are available both as upgrades and also as complete packages – *Devpac 3.10*, *Lattice C 5.60* and *HiSoft Basic 2.10*. Call HiSoft on 0252 718181.

William Shakespeare kicks off a tale of intrigue, plague and blood-feuds in *King-maker*, US Gold's latest god game.

US GOLD CROWN THEMSELVES KING

Legends of Valour publishers US Gold have unveiled a new Civilization-beating god-game called Kingmaker.

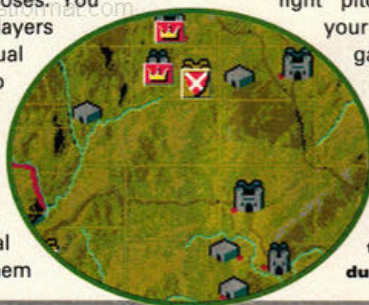
Based on the highly-successful board game of the same name, *Kingmaker* embroils you in a monumental struggle for power during the War of the Roses. You and up to five players control individual factions allied to the royal houses of York and Lancaster. The aim of the game is to possess the last surviving royal heir and crown them

king. Gameplay takes place over a digitised map of the UK, complete with the many historic towns and castles which the factions seek to control. You have to capture one of the Royal pieces and seize control of strategic towns and castles.

As well as enabling you to fight pitched battles with your opponents, the game features its own highly developed artificial

intelligence which throws plenty of random elements into the gameplay – your armies and members of the royal families can be struck down by plague or bad weather can prevent a crucial battle taking place. Even the fight sequences are subject to ST-generated upsets – your most powerful nobles could be killed or a powerful army be defeated by a weaker one. The inclusion of artificial intelligence means the game never becomes monotonous – there's no strategy you can adopt which is going to enable you win when you play.

Kingmaker looks like being a real stormer when it's released in September, price £TBA. Phone US Gold 021 625 3366 if you want to know more.



The mighty armies of Mowbray and Neville clash on the battlefields of England during the Wars of the

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COVER DISK 50

This month's Cover Disk is er, blue... and it's packed with loads of goodies for you to load up and discover

Civilization

BY: MICROPROSE
RESOLUTION: LOW ONLY
FOLDER: CIVIL
FILES: CIVIL1.TOS, CIVIL2.TOS
UNCOMPRESSED SIZE: 479K
GET STARTED WITH: SEE BELOW

The nature of humans is to explore and invent. From the very early beginnings the human race has developed civilisations that span the globe. *Civilization* is a blockbuster of a game that puts you in the driving seat guiding the course of history.

To fit the demo on our Cover Disk it has been archived. Get a blank disk ready and copy CIVIL1.TOS and CIVIL2.TOS onto it. Now run CIVIL1.TOS, after a minute or two a clutch of files will have been unarchived onto your new disk. Now delete CIVIL1.TOS to leave room for the second set of files. Now run CIVIL2.TOS. When it's finished you are ready to run the demo by running GAME.PRG.

You start off with one group of settlers. At the top of the screen is a set of menus to give commands and keep track of events. The Game menu enables you to set the tax rate and luxuries rate. From the Orders menu you can give you groups their marching orders. The Advisers menu gives you an

This month's selection of amazing programs

Civilization

Playable demo of this absolutely cracking god game.

Uncompressed size: 479K
Page 12

Super Card 3

Custom card based database

Uncompressed Size: 252K
Page 14

Punt

Kick those sprites about with this delightful platform game.

Size: 113K
Page 13

Big Life

The classic game of life on a very large scale.

Size: 50K
Page 14

Puzword

Horrible brain stretching puzzles with words.

Size: 13K
Page 14

Chord Dictionary

Get those fingers in the right place on your guitar with the Chord Dictionary and strum away.

Size: 15K
Page 16

Mega Depack

Utility to unpack any file.

Size: 44K
Page 16

Runes

Consult the viking stones with this runic interpreter.

Size: 69K
Page 16

Cover Disk Back-Up

Make hassle free copies of your Disk.

Size: 13K
Page 16

Make the most of your ST with our 50 inspirational ideas on page 19.



The pursuit of scientific knowledge is crucial. With each new invention and discovery new items can be produced to improve your people's lot.

a suitable place to build a city. You can move them by clicking on an adjacent square with the mouse or using the numeric keypad. When you find a suitable place to found your city, next to water and plenty of good arable land, press . After naming your city you can click on the city itself to enter the city screen and pick something for your people to produce – a good start is some militia who you can send off exploring the landscape. Settlers can also be used to irrigate the land surrounding a city and also for building roads between different settlements.

There are many complex factors that determine your civilisation's success – from scientific

overview of each aspect of your civilisation. The World menu enables you to look at your civilisation in comparison to the others

and the Civlopedia enables you to look up any unit or construction.

Your first step is to move your settlers around until you find

It's early days, you've got two cities and your settlers are hard at work. Pretty soon you'll come across other civilisations with designs on your land so some military muscle is in order.



CITYSCAPE

The city is the root of all civilisations including yours. It is where you collect food and resources and produce new units. Click on a city to bring up this screen

1 Population – the city's population, if it appears in black then they are unhappy and you could be in trouble.

2 Resources – the top row is the amount of food being produced, excess being shown on the right. The second row is your raw materials. The third row is the amount of trade. The last row shows luxuries, revenue and scientific research.

3 Food storage – holds any surplus food, once it's full, the population gains one unit and it's emptied.

Before you take even one step further, read this carefully

Tread carefully

To keep your *STF* Cover Disk safe, write-protect it by moving the black tab so you can see through the hole. Nothing can now be written to your Disk. Write-protection also keeps your Disk safe from viruses.

Study the map

Space on the Cover Disk pages is limited, so you may find text files for some programs on the Disk. These

have the file extension DOC. It's always a good idea to read these for more information on a program. Double-click on them and select Show to display the text. If text disappears off the screen when you try to read a DOC file in low res, change to medium resolution and try again.

Avoid the pitfalls

To keep your *ST FORMAT* Cover Disk safe you should make a backup, so if

anything goes wrong, you still have the original. Because we use a special disk format to squeeze programs on to the Disk, you can't do a direct disk to disk copy. We've made life easy for you, however, with this *Back-up* program. Follow the instructions on page 16 and you can't go wrong. Now there's no need to risk damaging or losing your disk again!

Some programs are compressed to fit on the Disk and cannot be run

directly from it. Follow the instructions here and it'll all be fine.

Is your drive obsolete?

We use a double-sided disk format. If you own a single-sided drive, you can't read *STF* Cover Disks, or much of the new software since single-sided drives are obsolete.

You are strongly advised to buy a new double-sided drive which can cost as little as £35.

Punt

BY: STEVEN KIRBY

RESOLUTION: LOW ONLY

FOLDER: PUNT

FILES: PUNT_II.DOC, PUNT.PRГ

SIZE: 113K

READ: PUNT_II.DOC

GET STARTED WITH: PUNT.PRГ

A platform game with a bit of a twist, instead of the usual bombing and shooting of things, you kick them about instead.

You are a purple dog, no insult intended, who has to get all the changlings into the cages on each level by

■ The Secret Life of a Purple Mutt, Part 12.

"Thank Woof for that, Biffa's finally gone out. Now I can put my feet up and ogle the babes in my Crufts video. But first, I'm going to go next door and scare the crap out that soppy cat, heh heh, heh."



kicking them onto the platforms. And just to complicate matters, it's a race against the clock.

It's all joystick controlled – press Fire to get past the intro screens. The changlings look just like peas with eyes. Run up to them and press Fire on your joystick to

■ Loads of the little devils. *Punt* has you kicking the green chaps about trying to get them into the cages. The cages near the bottom of each level are easy, though the ones at the top require planning and skill.

send them skyward. Beware though because if they miss the cage and fall too far they turn into very angry red peas and zap your time if you touch them. There are bonus potions to pick up and if you collect the letters to spell BONUS you can complete the level by

pressing the Spacebar. The levels get progressively harder to complete as you have to kick more changlings up more platforms to finish each one.

It's original, it's frantic and a lot of fun – it could just keep you glued to your ST.



advance through to your people's happiness. An unhappy bunch of people may revolt.

You can't save during the demo game and to save space all the large flash graphics have been left off. The game lasts until 0 AD. The challenge is to make it to that date with the strongest civilisation. It's a complex game of strategy

and there are dozens of influences over the game.

Space on the Cover Disk pages is limited so you have to do a lot of the finding out for yourself. The full game comes with a 120 plus page manual. Once you get bitten by the *Civilization* bug you are in for some serious long nights. It's brilliant!



■ The theatre of action, the world as you know it. You give your units commands in turn. The settlers are the most useful, able to irrigate, industrialise and build roads.



4 Home city – any units raised from the city appear here, you have to have the resources to keep them up.

5 Information window – by clicking on any of the four icons you can access details on the other units in the city.

6 Improvements – any will appear here, each having a different effects on your city.

7 City map – shows what areas of land around the city are being worked and what the land is producing.

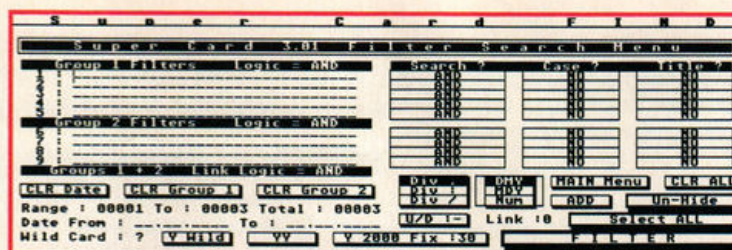
8 Production – shows what you are currently working to produce and how many units of production have been put towards it. Click on Change to pick a new item to produce and then Buy to spend money to complete an item quickly.

Super Card 3

BY: B WARE
 RESOLUTION: MEDIUM OR HIGH
 FOLDER: SCARD
 FILES: CONV_5_1.BWE,
 SC_301.F.BWE, READ_ME.DOC,
 EXTRACT7.PRG, CONV_5_1.TOS,
 SC_301.F.TOS
 READ: READ_ME.DOC
 UNCOMPRESSED SIZE: 202K
 AND 50K
 GET STARTED WITH: SEE BELOW

Super Card is back and it's bigger and better than ever. It's a database built around cards. Each card can hold any text you like, it has an open structure for data entry and blisteringly fast search routines.

In order to squeeze it onto the Cover Disk, *Super Card* is in a special archive. You need two spare disks. Run EXTRACT7.PRG, and press either <A> or to select the program and follow the instructions. Your new disk is formatted, accompanied by a slightly strange screen display. The program then



■ The filter screen - there are very sophisticated filters that give you a great deal of control over the cards you select.

unarchives itself to the disks. You get one disk with the main *Super Card 3* program and another with *Convert*, which as the name suggests, converts data into *Super Card 3* format from earlier versions of *Super Card*, *First Word*, *First Word Plus* and *B Base 2*.

Along with the main program there is a folder full of example databases and a folder full of documentation including a healthy manual. You need to digest these carefully and completely to get the most from the program.

Here is the roughest rough and ready start. Run S_CARD_3.PRG. Press <Return> to get past the intro screens. From the main screen click on LOAD and select a

SC3 file from inside the examples folder. Now select Edit/Read and you meet the initially daunting filter screen. This enables you to filter through all the cards just choosing the ones you want. Click on Select All and no filtering takes

place. You now arrive at the first card of the database. You can move about the database using the cursor keys. Press <Help> for a full list of the keyboard commands.

The filters aren't nearly as difficult as they look. If you just want cards that contain a specific word then type that in as a group one filter then click on Filter. Only cards containing that word are selected.

Super Card 3 is Shareware and although you can use the program there are restrictions. It sulks, pausing randomly, and you can only save a maximum of 50 records. Registration costs between £5 - 15. Full details are in the documentation.

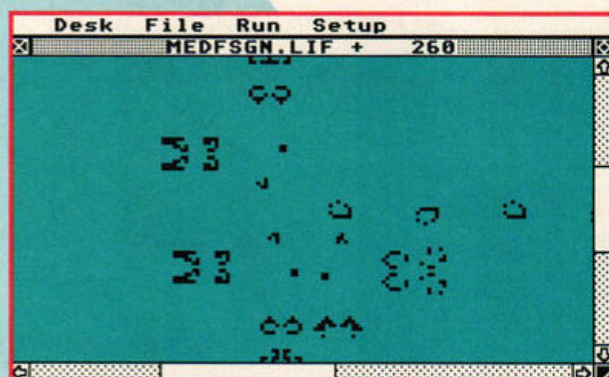


■ The main screen is icon-controlled and quick. You can sort, filter, add password protection and print your databases or just browse through them.

Big Life

BY: OWEN REES
 RESOLUTION: ALL
 RESOLUTIONS
 FOLDER: BIGLIFE
 FILES: BIGLIFE.PRG,
 BIGLIFE.RSC, BIGLIFE.DOC AND
 NINE EXAMPLE LIF FILES
 SIZE: 50K
 READ: BIGLIFE.DOC
 GET STARTED WITH:
 BIGLIFE.PRG

Invented by a chap called John Conway, *Big Life* is a game based on cells. Less of a game really and more of a mathematical phenomenon - from an arbitrary pattern - intricate and complex interacting patterns build up. The rules are



■ *Big Life* offers a huge grid for the absorbing game of life and could quite possibly send you dotty in the process.

very simple. The cells are arranged in a grid. For each generation there are three rules. If a dead cell has three live neighbours then it becomes alive. If a live cell has two or three adjacent live cells it stays alive otherwise it dies. Well, it all

sounds relatively easy but it can lead to some complex and fascinating patterns.

There have been dozens of versions on various computers but *Big Life* offers grids up to 65,535 cells square with up to 50,000 live

cells. It runs in all resolutions, you can use the scroll bars along the right and bottom borders to move around the grid.

Load BIGLIFE.PRG and go to the File menu to load one of the example patterns, then select Go from the Run menu. The game now chugs away on its own. Press the Spacebar to stop things. Click the left mouse button to add cells onto the grid and the right mouse button to zap cells.

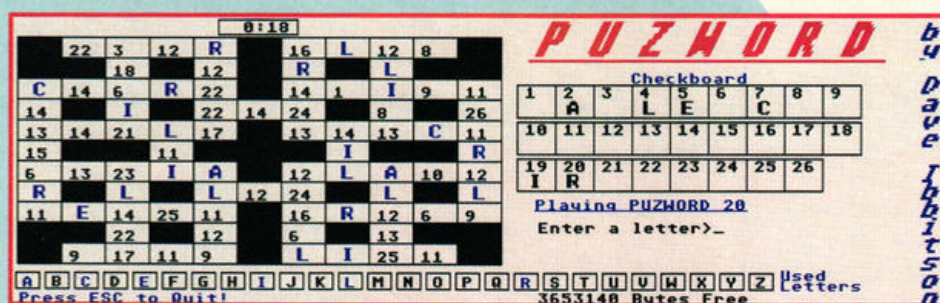
The Setup menu enables you to change the cell size, the speed of each generation and to centre the display. There is a fully comprehensive document to read.

Before too long you could find yourself pulled into the hypnotizing game of life - it's a funny old game, isn't it?

Puzword

BY: DAVE IBBITSON
 RESOLUTION: MEDIUM ONLY
 FOLDER: PUZWORD
 FILES: PUZWORD.PRG
 SIZE: 13K
 GET STARTED WITH:
 PUZWORD.PRG

Puzword looks innocent enough, a small puzzle game based on a crossword. It certainly sounds straightforward enough. But don't be fooled, beneath the calm exterior is a devious plot to increase the level of world tension. Instead



■ No flashy sound effects and graphics but that doesn't stop Puzword from being a serious time stealer with its cunning word puzzles.

of using clues to identify each word, each letter on the crossword is represented by a number. All you have to do is guess which number is which letter. Just enter the letter and then the number on

the keyboard. Be warned though, once you've made a decision that's it. You can't delete it, so try and be as sure as you possibly can before choosing. There are 40 puzzles to choose from which will keep even

the brainiest of brainboxes busy all week. If it all gets too much press <Esc> to restart *Puzword*, you can also take a look at the solution to the puzzles you've just failed so miserably to complete.

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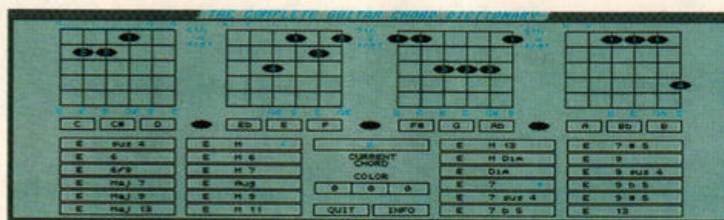
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Chord Dictionary

BY: JOHN WOODS
RESOLUTION: MEDIUM ONLY
FOLDER: CHORD
FILES: CHORD.PRG
SIZE: 15K
GET STARTED WITH:
CHORD.PRG

Learning to play the guitar can be a pretty confusing business, all of those complicated positions you need to bend your fingers into to make the chords. *The Chord Dictionary* is rather a helpful little chap, designed to make learning easier



Looking like some sort of secret code the *Chord Dictionary* reveals where your fingers go in the strange world of guitar chords.

by showing you the various finger positions for all the chords.

Just run CHORD.PRG then choose a note to tune your guitar on and then click on the little box marked Exit. Now you can select a chord and have the intricacies of the fingering revealed to you. All that remains is for you to bend

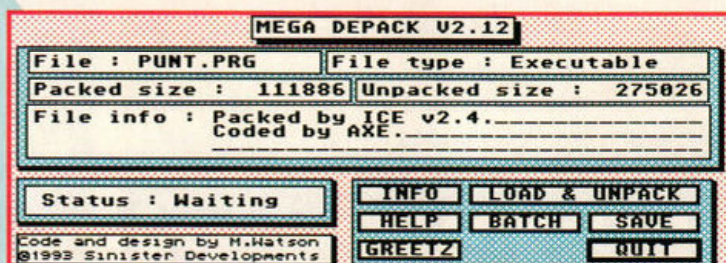
your fingers into the right places and strum to your heart's content.

The Cover Disk version is a demo and has all the major chords along with minors and sevenths. The full version has over 1,200 chords and is available directly from the author. Click on the little box marked Info for the details.

Mega Depack

BY: MIKE WATSON
RESOLUTION: HIGH OR MEDIUM
FOLDER: DEPACK
FILES: MEGA_DP2.PRG,
MEGA_DP2.RSC,
MEGA_DP2.DOC
SIZE: 44K
READ: MEGA_DP2.DOC
GET STARTED WITH:
MEGA_DP2.PRG

No matter what you're doing, there just never seems to be enough room on a disk. A clever way of making programs smaller is simply to pack them. Packers use a spot of maths to squash the files down and the program to unpack them is tacked onto the front of the file. When you run the program it is unpacked first and then it is run. One small problem is unless you



Mega Depack takes those packed files and restores them to their former selves. It recognises over 50 different types of packers.

already have a copy of the original unpacked file then you can't get hold of one, that is, until now. *Mega Depack* takes packed files and unquashes them and enables you to save the unpacked original files to disk.

If you have programs packed with older, less efficient packers you can now repack them with better ones. Early packers often had quite slow unpacking routines that made the screen flash rather horribly. The latest packers, like *Pack Ice*

from Cover Disk 39, are very fast, invisible and squash your programs to about as small as they are ever likely to get.

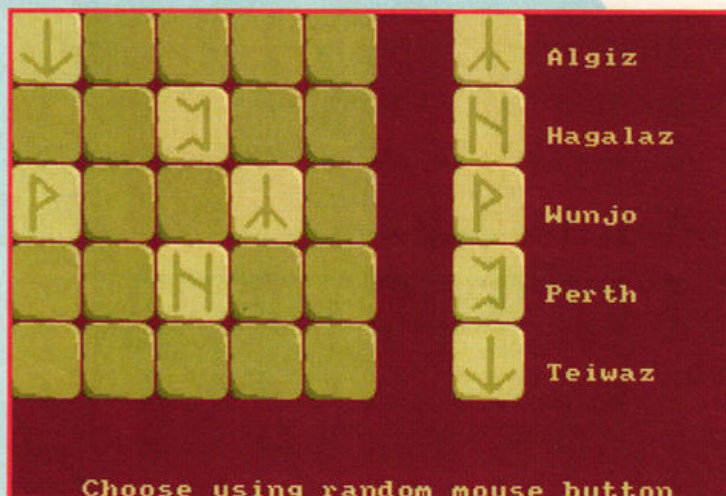
Using *Mega Depack* is as easy as falling off a log except you don't end up getting wet. Click on Load and Unpack and use the file selector to pick the file you want to unpack. *Mega Depack* recognises the packer it'll be unpacked and you can click on Save to save the file in all its unpacked glory. Simple and very useful.

RUNES

BY: PAUL VINCENT
RESOLUTION: LOW ONLY
FOLDER: RUNES
FILES: RUNES.PRG
SIZE: 69K
GET STARTED WITH: RUNES.PRG

The world can appear a strange and confusing place at times and life seems a long mysterious journey where you seem to have lost the guides. Not surprisingly most people want to know more, especially about the future – the great unknown. Many systems have emerged to tap into the unknown world of prediction and offer veiled insights into what is to come.

Runes is one method involving runes stones, the program uses 25 viking stones and offers four different methods of casting them. Get a question set in your mind



Runes brings the ancient arts of runic interpretation to your ST. A viable method of divination or a load of dingo's kidneys, you decide.

and click on either single rune, three or five rune spread or runic cross. Now pick your stones at random. The program then interprets the stones for you. Selecting auto

runes replacement means runes are replaced after selection increasing the range of available runes.

You can ask simple yes and no questions with a single stone,

Cover Disk Back-up

BY: BRIAN TILLEY
RESOLUTION: ALL
RESOLUTIONS
FOLDER: BACK_UP
FILES: BACK_UP.TOS
SIZE: 13K
GET STARTED WITH:
BACK_UP.TOS

No matter how careful you are with your Cover Disk there's always a chance something will go horribly wrong and leave you with damaged data on your precious disk. The only real protection is to make a copy.

Back-Up is just the program for making a copy of your Cover Disk, it's fast, efficient and clever. You can't do a standard Desktop copy because of the special format we use to get so many programs on each disk.

First write-protect your disk by moving the little black tab so you can see through the hole. Nothing can now be written or deleted from your disk. Now get a spare disk ready and run BACK_UP.TOS. From the menu press <1> to start copying your disk. The source disk is the one you're making a copy of and the destination disk the one you're copying it to. If you have two disk drives then drive A is used for the source disk and B for the destination. Swap disks when prompted. If you have 1MByte or more of RAM you only need to make one disk swap, brilliant. It also copies other unprotected disks with the minimum of fuss.

with an inverted rune meaning no. More complex questions involve up to six stones each with an area of influence. Which you use and how deeply you believe the interpretations are, is up to you. Click on each rune with the left button for an interpretation and click with the right button to return to the Main menu.

You might think it's all a load of cobblers of course, or you might think it offers a chance to tap into the subconscious mind that already knows the answer. We only use a small fraction of our brains, the rest is working away in the background well away from our conscious thoughts. *Runes* gives a gateway into that world through the seemingly random choosing of runes. This program is not to be confused with prunes, which are pieces of small dried fruit – containing a different type of stone – served with custard as a dessert.

What's your problem?

1. This Disk won't load!

Before you do anything else, check your drive. If it's older than 1988, it's probably single-sided and cannot format any disk to more than 360K – this also means it can't read ST FORMAT Cover Disks. Single-sided drives are obsolete and it's well worth upgrading. Replacement drives are easy to fit and cost as little as £35.

So your drive's spanking new, or at least it's double-sided. ST FORMAT duplicates hundreds of thousands of Disks every month so, unfortunately, some are bound to be defective or damaged in some way. If the Disk just won't load, or you can't open a window at all, there's nothing in it, or the folder names are gobbledygook – the Disk is defective. It doesn't happen often, but please accept our sincere apologies. You're guaranteed a free replacement if you return the Disk to:

**ST FORMAT September Disk Returns,
PO Box 21, Daventry, NN1 5BU**

Enclose a sturdy self-addressed envelope (unstamped – we'll pay for the postage) and a brief letter explaining the problem. If you're worried about trusting your precious Disk to the mails, the Royal Mail's Recorded Delivery service costs only 30p on top of the normal postage.

Please don't send your defective Disk to any other address than the above one – we have no stocks of Disks at the Bath or Somerton offices.

2. I can't work out this Cover Disk program!

Your Disk seems OK; everything loads, but you've got a problem with one of the programs. Make sure you've read all the relevant Cover Disk pages and any document files on the Disk. Try consulting your ST owner's manual – that may have the information you need. Still got a problem? Then give us a ring on Wednesday afternoon. Telephone the ST FORMAT Cover Disk Hotline ☎ 0225 442244 on Wednesday between 2 – 6 pm only.

We don't write the Cover Disk programs ourselves and don't know as much about them as the programmers, but we'll do our best to sort your problem out. Please note that the above phone line is for Cover Disk problems only.

3. I have a problem with this other program I bought!

The best place to start is the distributor of the program. Most software houses run some kind of helpline service – check the information that came with your software for the number.

4. I've still got an ST problem!

If you've still got a problem, you suspect your machine may be faulty, or you need an answer to a more general query – then you have two options. (a) Ring the official Atari Helpline ☎ 031 332 93233 on any day from Monday to Saturday 6 pm – 11 pm or on Sundays from 8pm to 11pm. (b) Write to ST Answers, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW – and let ST FORMAT's team of experts tackle your problem in the pages of STF. Please could you indicate on the envelope what type of problem it is.

Share your creations with STF

We pay for your software – games, utilities, demos – anything good, original and short. If you've written anything worthy of appearing on STF's Cover Disk, send it with this form and full documentation to: Clive Parker, ST FORMAT Cover Disk Editor, 30 Monmouth Street, Bath, Avon BA1 2BW. Please be patient: we get absolutely loads of submissions, and we try to give them all a fair testing!

Name _____

Address _____

Daytime phone _____ Program title _____

Total size in K _____

On a separate sheet, explain concisely what the program does and why you happen to think it's so brilliant.

Remember to: ☐ Include on-disk and paper documentation ☐ Write your name and address on the disk ☐ Use a virus-free disk ☐ Keep a copy of your program, because contributions are non-returnable ☐ Enclose an attractive bribe. Not that it makes a difference.

Please sign the following declaration: This program is submitted for publication in ST FORMAT. It is wholly my own work and I hereby agree to indemnify Future Publishing against any legal action should copyright problems arise.

Signed _____

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AND SUPPLY THE SOLUTION

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1Mb STE	£219.00
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4Mb STE	£319.00

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Discovery Pack £149.00

Falcon 030

- 16MHz 32 bit 68030 Central Processor, 16MHz Blitter, 32MHz 56001 Digital Signal Processor
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PC Speed STFM (XT)	£49.99
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AT Speed STE (8MHz)	£139.00
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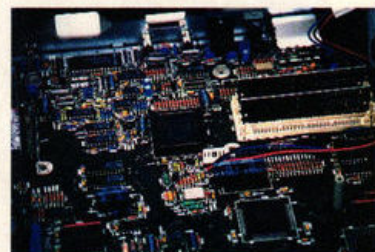
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Phone for price and availability of ST spares

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YOUR FLEXIBLE FRIEND

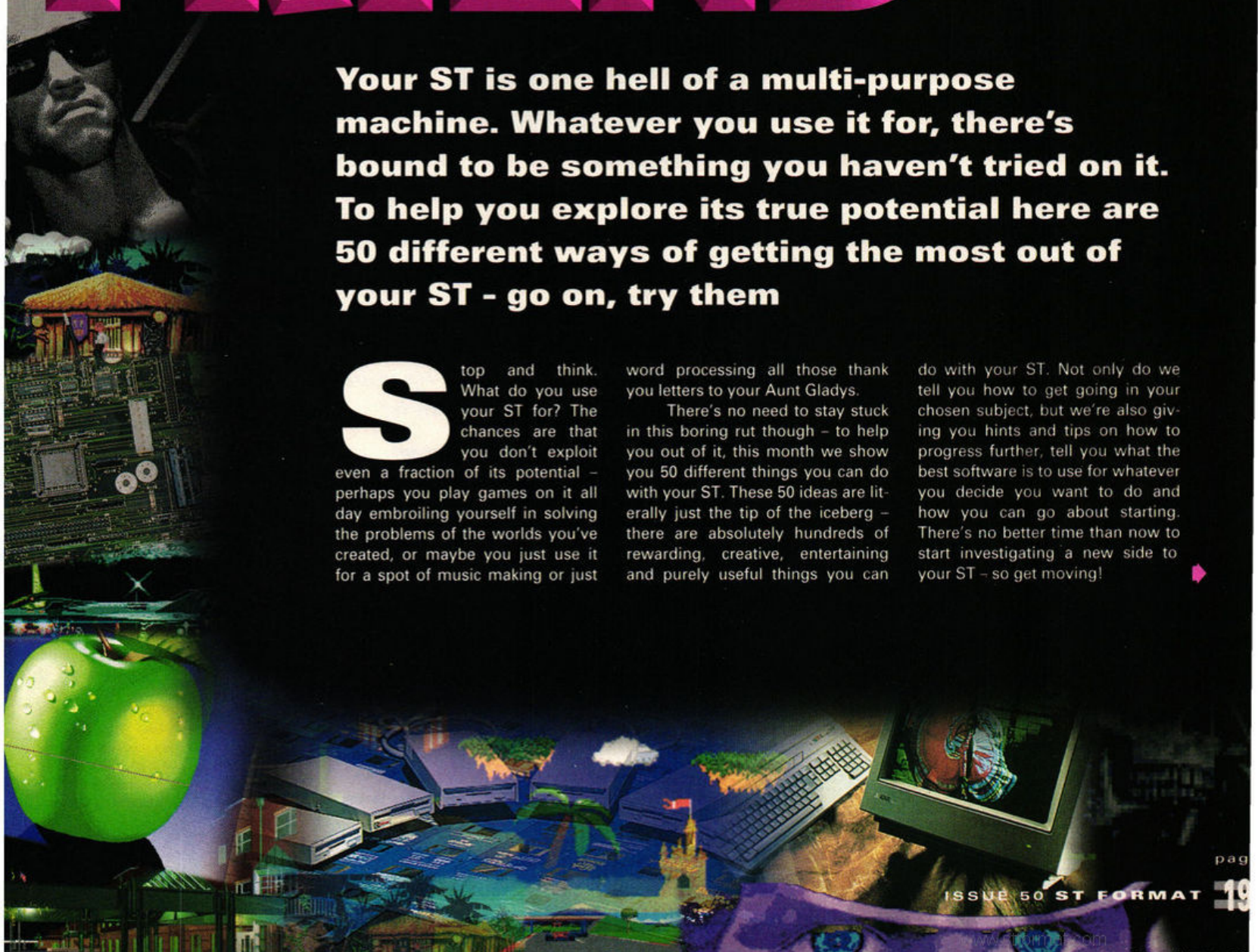
Your ST is one hell of a multi-purpose machine. Whatever you use it for, there's bound to be something you haven't tried on it. To help you explore its true potential here are 50 different ways of getting the most out of your ST - go on, try them

Stop and think. What do you use your ST for? The chances are that you don't exploit even a fraction of its potential - perhaps you play games on it all day embroiling yourself in solving the problems of the worlds you've created, or maybe you just use it for a spot of music making or just

word processing all those thank you letters to your Aunt Gladys.

There's no need to stay stuck in this boring rut though - to help you out of it, this month we show you 50 different things you can do with your ST. These 50 ideas are literally just the tip of the iceberg - there are absolutely hundreds of rewarding, creative, entertaining and purely useful things you can

do with your ST. Not only do we tell you how to get going in your chosen subject, but we're also giving you hints and tips on how to progress further, tell you what the best software is to use for whatever you decide you want to do and how you can go about starting. There's no better time than now to start investigating a new side to your ST - so get moving!





DIGITAL ART

► **Digital art is the newest artistic medium in town and your ST is the means to get into it. Once you get to grips with some of the software available, the power and scope are simply incredible. Go on, express yourself!**

1 GOING DOTTY

Pictures on your ST are made from pixels – little dots. The exact number and the choice of possible colours depends on what resolution you are in. Your ST can run in three different resolutions – low with 320 by 200 pixels and a choice of 16 colours, medium with 640 by 200 in four colours and high with 640 by 400 pixels in either black or white. Your ST uses what's known as a paletted screen, the colours are chosen from a much larger selection – 512 on an STFM and 4,096 on an STE. Each colour is made from mixing red, green and blue light. There are ways past the 16 colour limit by using clever technical wizardry – *Photochrome*, for example, from last month's Cover Disk can squeeze the full palette out of your ST.

2 3D MODELLING

You can't look behind an ordinary picture, it's impossible. 3D modelling enables you to create objects that have depth. They are defined as a series of points in three dimensional space joined by lines to form the facets of an object's surface. You start with a primitive – such as a cube or a triangle – then add new points and

alter the positions until you get the shape you're after. You can move them about and change your viewing position at will. Technical drawings take on a whole new life as you rotate an object and look at it from all angles. Objects can also be used as the building blocks for raytracing or 3D animations.

3 SCANNING

■ **Can't draw for toffee? No problem, with a scanner you can scan and save any picture you like, ideal for DTP and grabbing quality images for digital artwork.**



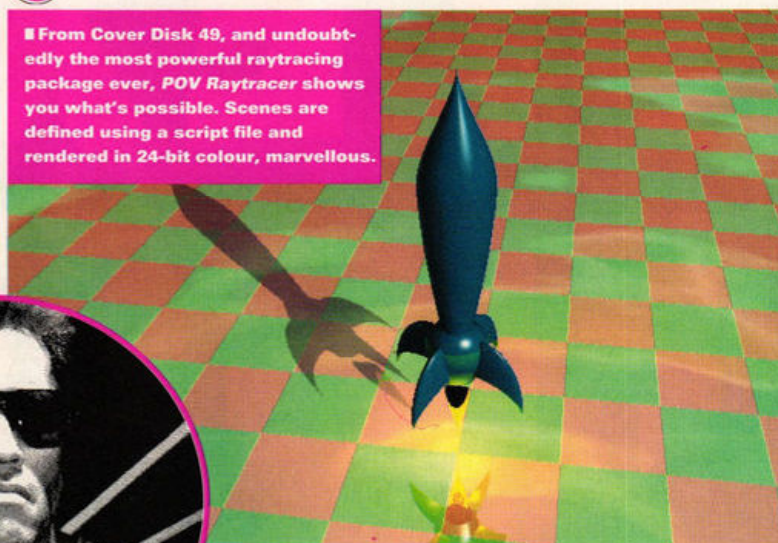
A scanner is an ingenious device which takes an image on paper or a reasonably flat surface and converts it into a digitised picture on your ST. The least expensive models are hand-held devices which can scan in images with resolutions of up to 400 dots per inch (dpi). Just drag the scanning head over a picture from a magazine and see the image build up bit by bit on your ST's screen.

Once scanned in, the pictures can then be imported into an art package or desktop publishing program. Images are captured in monochrome but can be converted into greyscales for colour work – but you lose some of the image's size. With a scanner you're no longer tied to what you can draw yourself, any graphic becomes a potential addition to your library.

■ **Starting from a simple set of objects, *Cyber Sculpt* - £9.99 from 16/32 Systems - enables you to build complex three dimensional models.**

4 RAYTRACING

■ **From Cover Disk 49, and undoubtedly the most powerful raytracing package ever, *POV Raytracer* shows you what's possible. Scenes are defined using a script file and rendered in 24-bit colour, marvellous.**



At the leading edge of the graphics business is raytracing. Your ST uses some very complex mathematical equations to produce incredibly realistic images complete with refractions and

"Add in the lights and camera position and let your ST loose on it"

reflections. Thankfully, you don't get involved with the number crunching side of things. All you need to do is supply the details on the scene you want raytraced. You define the objects, including their surface textures and properties, add in the lights and the camera position and let your ST loose on it. It's not a quick process, there are millions of calculations to make but the results can be genuine sock exploding material.

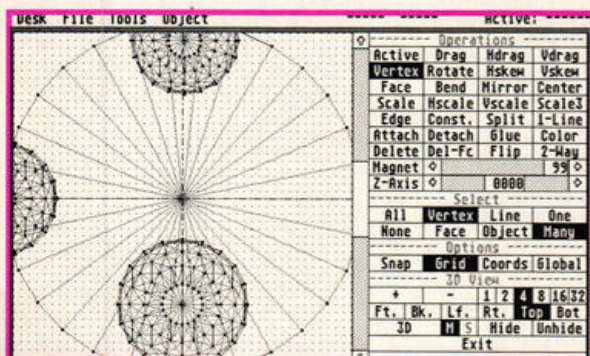
5 ANIMATION

A good ST graphic is one thing, but it doesn't have the same

impact as an animated sequence. There are dozens of suitable programs to create and edit animations, from basic flip screen stuff to dedicated 3D animation programs. Most art packages have some sort of animation facility built-in; *Deluxe Paint* – £59.99 from Electronic Arts – has an excellent block tweening studio and *Trip-A-Tron* from Cover Disk 40 has a sophisticated programmable video sequencer. If you don't fancy drawing each frame by hand you can use video digitisers, scanners, fractal programs, raytracers, 3D rendering and tweening to help generate your creations. Imagine, you can be the director of your own digital movies.



■ ***Prism Paint* from Cover Disk 48 is an ideal program for collating and touching up your animations. It uses clever compression methods to squeeze lots of frames out of the available memory.**



50 ideas

ST Format
Video Productions
Present...

6 VIDEO TITLING

It's so easy to connect your ST to a video recorder and tape the output, it's surprising not more people do it. You see, anything that is displayed on your ST's screen can be taped - that means graphics, animations and text. With some appropriate software you can create your own video titles - any

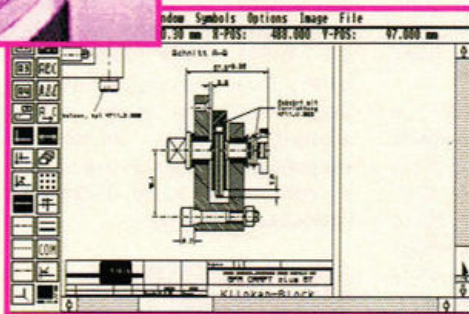
"Anything that's displayed on your ST's screen can be taped - graphics, animations and text"

program capable of animation will do the trick. There are dedicated machines to add text to videos but they're expensive and they don't give you anywhere near the flexibility or power of your ST. Using a genlock you can even mix your ST's output with another video source and record the combined picture on a second video. Give your videos the professional touch with decent titles and video effects.

7 CAD

Traditional technical drawing is an area in which your ST can really come into its own, especially when running a Computer Aided Design program (CAD). No worries about making mistakes or putting your 6H pencil through the paper, you can redraw as many times as you like and experiment with new designs in minutes rather than hours. The pictures are stored as

■ With your ST hooked up to your video recorder it becomes possible to create your own video titles and effects from static text to complex animations.



■ CAD doing its thing. This is GFA Draft 3 - £100 from GFA Data Media. It's great, you can scale your drawings accurately without a very sharp pencil or a good eye.

vectors, so you can get an incredible level of accuracy. No matter how much you zoom in, it never deteriorates. Using splines, faithful curves can be generated and you have all the tools, and more, that a professional draftsman would have. You can create detailed drawings for constructing everything from a new kitchen worktop to an ocean going ice-breaker.

8 VIDEO DIGITISING

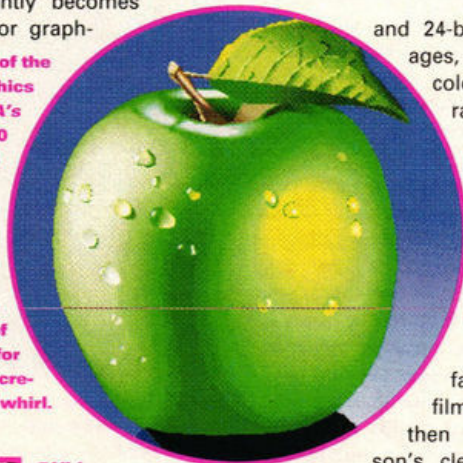
Connect a video recorder or television to a digitiser and connect that into the cartridge port of your ST and you can grab anything you see on your television. A world of images and animations are just

waiting to be plundered. Fancy swiping all your favourite *Dr Who* monsters for your own program? No problem. If you've a camcorder you can digitise the family cat. Using colour filters and a video camera - or an RGB splitter - you can also grab images in colour, only still frames though. The images can be edited before going into demos, games or your very own animated sequences to be recorded back onto tape.

9 VECTOR GRAPHICS

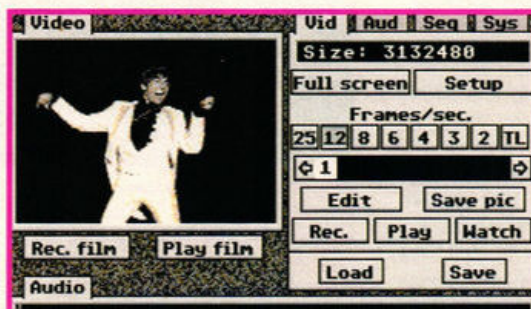
Vector graphics take a completely different approach to normal bitmapped pictures. Instead of being stored as a series of dots, the pictures are treated as a series of points and lines with a set of instructions on how to draw the image rather than just the image itself. You can zoom into a picture indefinitely without losing any resolution, zoom into a normal picture and it instantly becomes blocky. Vector graph-

■ The king of the vector graphics world is DA's Vector - £150 from CGS Computer-Bild. It creates vector graphics in 24-bit colour and has a multitude of tools for sending your creations into a whirl.



and 24-bit paint packages, genlocks, true colour digitisers, raytracers, picture processors and a lot more. Also on the cards are colour morphing programs, the effect made famous in the film *Willow* and then Michael Jackson's clever *Black* or *White* video.

All this development bodes well for the ST, many packages are being developed to be compatible across the entire range, including picture processing and amazing animation packages - this is called the "trickle down" effect. So, as Falcon programs are developed you can expect some of them to reach your ST too.



■ Video-master - £69.95 from Microdeal or £54.95 from our mail order section on page 98 - a delightful piece of kit that can digitise up to 25 frames a second with sound. Think of what you could do with that!

GAMING GREATS

▶ If you don't think your ST is a wicked game-playing machine, just get your hands on some of the best games around and you'll soon change your mind... This is what's on offer

11 SHOOT-'EM-UPS



■ Zap, zap, boom, splat! Turn your anger on your pals in Renegade's shoot-'em-up *The Chaos Engine*.

To the cry of, "Die, you alien scumbags!" the shoot-'em-up offers the biggest thrill you can get from your ST. All your darkest instincts come into play as you splatter wave after wave of incoming nasties with some ridiculously powerful weaponry. Gratuitous violence is the name of the game, and plenty of it. Plots and intellectual stimulation are the last things on your mind when you're pumping lead into a gang of bug-eyed monsters. Death is all, especially when it's your own life which is at stake.

The Bitmap Brothers' *Chaos Engine* - £25.99 from Renegade - is a perfect example of the gut-wrenching thrills of the shoot-'em-up. Fast, furious eight-way scrolling action, a motley collection of heroes and nasties seeping from every pore. You have to battle your way across four worlds and every step is a victory for mindless violence. Great stuff.

12 PLATFORM GAMES

If the killing fields of the *Chaos Engine* are too much for you to stomach, you can always try your hand at athletics. Platform games place you in control of inexplicably cute heroes and heroines which you can bounce around a series of

platforms collecting objects and zapping meanies. Most platform games are all about timing and precise flicks of the joystick to send your hero off a ledge at the right moment. The violence in these games is tempered by the inclusion of some puzzle elements - you have to solve problems to complete a level, for example - so you can't just rely on sheer brute force and ignorance alone.

Fire and Ice (£25.99) is another game from Renegade which proves how good a platform game can be. You control Cool Coyote - a cute wolf with street cred - who takes on evil snowmen and cross rabbits in a bid to solve each graphically superb level. If cliff-hanging excitement is what you're after, the platform game is hard to beat.

13 GOD GAMES

If you like things to be a bit more cerebral, you can't do much better than load up a god game on your ST. God games are so called



■ Transform your chosen people from a nation of idiots with spears... into a nation of idiots with atom bombs in Microprose's *Civilization*.

because you're placed in control of a whole city, country or civilisation and are responsible for ensuring their increasing good fortune and prosperity. There's a lot of strategic thinking required in god games. You have to plan everything you do very carefully and think of the consequences of each and every action. It's a miniature version of life, really. Often piling into a rival

country with all guns blazing is not the answer - you could just end up with riots and a revolution at home.

Civilization - £34.99 from Microprose - takes early god games like *Sim City* to their logical conclusion. Not content with managing a bustling city effectively, you have to control a whole race of people and lead them to bigger and better things, fighting off attacks from your neighbours and discovering some of the world's greatest inventions. Intellectually stimulating, god games are equally as addictive as some of the less sophisticated genres.

14 ADVENTURE GAMES

The adventure game is the nearest you can get to starring in a film on your ST. You get to roam around a variety of graphically superb and exotic locations, solving puzzles, meeting people and occasionally killing them. Most adventure games are strong on plot - you usually have to go and rescue some buxom girlie or help solve the world's problems and defeat the lords of darkness, but it's all a good excuse for some truly brain-teasing fun. Modern adv-

entures are controlled exclusively with point-and-click mouse controls, so there's no tedious typing to be done and there's usually more than a fair share of jokes to

"You have to go and rescue some buxom girlie or help solve the world's problems"

be cracked and lots of grisly discoveries to be made.

The Secret of Monkey Island - £25.99 from US Gold - is the archetypal adventure game. You get involved in a convoluted plot involving a female Governor, a ghostly villain and a rubber chicken. It's all quite confusing at first but, because you know you can't die, you merrily wander around insulting every one you meet, marvelling at the superb sets and defeating the evil Le Chuck. A classic game for a classic genre.

15 FLIGHT SIMS

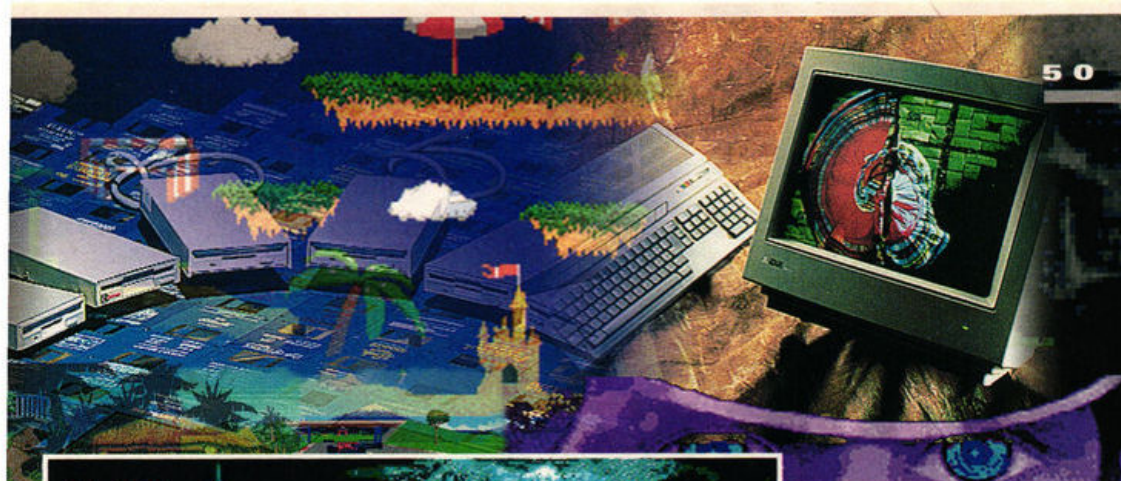
The nearest you've ever got to flying a plane is a charter flight to Majorca, right? Wrong. There are heaps of flight simulators on your ST which enable you to relive the thrills and spills of piloting your own aircraft. Most games in this genre concentrate on military aircraft performing daring deeds over enemy territory, like *Ancient Arts of War in the Skies* on page 74, for example. However, there are a few like *Airbus* - £25.99 from Tha-



■ "Doctor, I think I've got a native stuck in my throat." "Let's have a look, shall we? Say Ah." "ARRGH!" "Boy, have you got bad breath." "I know, I think the little chap was a bit rancid when I ate him." More fun and frolics in *Monkey Island*.

lion - which enable you to take control of a commercial aircraft. Flight sims are all about accuracy and attention to detail. You're usually confronted with an array of controls, maps and way-points and

50 ideas



F-19



Get off the ground and you'll never want to touch down in Microprose's brilliantly playable *F-19 Stealth Fighter* flight sim.

you need a lot of practice to get to grips with controlling the aircraft under your command – just like the real thing.

Microprose have made a point of specialising in flight sims and *F-19 Stealth Fighter* – £16.99 now from Kixx XL – is the pick of the bunch. Technically accurate and packed with playability, *F-19* is simply the best flight sim you can get for your ST.

16 SPORTS GAMES

From snooker to cycling, soccer to show jumping, there are hardly any fields of sport which aren't covered on your ST. The competitive spirit soon starts to well up inside you as you take on a series of computer-controlled or human opponents in a test of your sporting prowess. If you like to watch the action, but control the strategy, there are plenty of games for you too – Domark's *Championship Manager '93* (£25.99) is just one example of a myriad of sports management games which are available. Of all the sports featured on your ST, football is by far the

most popular and most successful recreation of the real thing. Renegade's *Sensible Soccer* is the epitome of the great footy game with fast, smooth-scrolling action and slick bird's eye graphics – you can even create your own teams consisting of your favourite heroes and heroines. Who needs Graham Taylor when you've got games like this at your disposal?

17 MULTI-PLAYER GAMES

If computer-controlled opponents are too predictable for you, your ST makes a brilliant multi-player platform. After all, there's nothing quite so satisfying as seeing your mate's defence crumble under the onslaught of your superior game-playing skills.

You can enjoy multi-player games on your ST in a whole variety of ways – from simply plugging another joystick into the mouse port, to investing in a modem and playing long distance against an unseen human adversary.

Dyna Blaster – £39.99 from UBI Soft – is one of the best multi-player games there is. Thanks to a special adaptor which plugs into your ST's serial port, up to five human players can play at once in

a furious battle of wit, skill and destructive ability. It's the unpredictability of your human opponents' moves which makes this – and any other multi-player game – such a thrill.

18 RACING GAMES

Whether you're a slow lane plodder or a hyped-up speed freak, there's little to beat the thrill of the chase on a racing circuit packed



Feel the wind in your hair and the splot of flies on your forehead in *Vroom*, one of the best racing games you can get for your ST.

with high performance vehicles. Jammed into a bucket seat and hurtling round a winding track at 250 mph is not an experience to be taken lightly and you need all your skills as a games player to stay in and win a race against your equally-skilled opponents.

It's not just cars, either. Motorbike sims like *No Second Prize* – £25.99 from Thalion – offer you the even more precarious thrills of two-wheel racing.

UBI Soft's *Vroom* (£25.99) is the ultimate ST driving simulation. It's incredibly fast with very realistic scrolling backdrops, brilliant

sound effects and spectacular explosions. With six circuits for you to complete against some stiff opposition, *Vroom* remains one of your ST's greatest game-playing moments.

19 ROLE-PLAYING GAMES (RPGs)

RPGs are the ST equivalent to all those mysterious *Dungeons* and *Dragons* board games your friends

spend hours playing in dark, secluded rooms. Almost entirely populated with goblins, elves and trolls, the RPG is a mystical world full of evil intent where you and a band of fellow travellers set out to unravel some

great mystery. Modern RPGs tend to steer away from the more train-spottery elements – like hit tables and spell points – and concentrate on the gameplay itself, making for some pretty damn realistic and absorbing adventures.

Ishar 2: Messengers of Doom – £29.99 from Daze – is the superb sequel to one of the ST's best RPGs. You lead a band of four other adventurers around six different islands uncovering all kinds of evil deeds and killing off resilient enemies. Dramatic locations – including a treacherous mountain sequence, a tree city and a lizard-man-infested swamp – help to evoke a real sense of atmosphere and involvement in the fate of the game's protagonists.

20 PUZZLE GAMES

When you think of puzzles you invariably think of those crappy word search books grannies spend hours filling in, don't you? Well, don't be put off, there's a lot more to puzzle games on your ST –



A fun day out at the beach with your Lemmings friends.

everything from brain-expanding lateral thinking teasers like *Pushover* – £25.99 from Ocean – with all those dominoes to sort out, or *Tetris* – £19.99 from Infogrames – where you have to rearrange oddly-shaped blocks against the clock. Puzzle games are always far trickier than they first appear and they're always very frustrating.

Lemmings 2 – £29.99 from Psygnosis – is the startlingly brilliant successor to one of the most successful puzzle-'em-ups ever. 12 tribes of little rodents pile out of every pore and proceed to get themselves into all kinds of life-threatening situations. Only you can solve each hazard-filled maze against the clock and guide the little chaps to safety. Frustration factor 10/10. Addiction rating: overwhelming.



An intrepid band of adventurers come under assault from a woolly mammoth in the superb *Ishar 2: Messengers of Doom*.

BIGGER, BETTER, FASTER

► **Most STs start their lives with 0.5MBytes of RAM and a single floppy drive.**

Enough to get you going on most basic games and applications, but you can do so much more if you upgrade and enhance your ST's capabilities. Take a look at this...

21 MEMORY

Upgrade your ST to at least 1MByte of memory and you can reap the benefits of improved games and the capability to work on larger and more complex files in desktop publishing, word processing, art and graphics, spreadsheets and databases.

If you have a 0.5MByte STFM or STE it's quite simple to upgrade your machine. Marpet Developments supply a brilliant, simple to fit upgrade board called the Xtra-RAM Deluxe for the STFM which enables you to increase memory using SIMMs boards, just like the ones used in the STE. The board costs £59.99 with 0.5MByte of SIMMs included. You can add larger SIMMs later to upgrade to 2MBytes or 4MBytes.

Marpet also supply SIMMs for the STE that simply plug in (adaptors are included for STEs with SIPP connections), prices are £24.99 for 0.5MBytes, £89.99 for 2MBytes and £159.99 for 4MBytes.

22 HARD DRIVES

Using a single floppy drive can be a real pain if you are trying to do serious work on your ST, and even the addition of an extra floppy drive doesn't completely solve storage problems when it comes to large graphics and DTP files.

The answer is to get yourself a hard drive – and no, they're not as expensive as you might think. You can get a FAST 52MByte drive with disk cache (for faster disk access) for £349.99 from the First Computer Centre, or for an extra £50 you can get a massive 130MByte hard drive. Alternatively, if you have a second-hand SCSI drive, they can supply a hard drive case which is supplied complete

with FAST controller and the power supply unit for £199.99.

23 TOS 2.06



► Upgrade to TOS 2.06 with Analogic's board which enables you to switch between both versions whenever you want.

It's now possible to add the latest version of the ST operating system, TOS 2.06, to your STFM or STE while retaining your old OS to maintain complete compatibility with games and software. TOS 2.06 offers enhanced file management and GEM functions, making your ST more efficient to use.

There are three boards available at the moment providing this upgrade, two for the STE and one for the STFM. Compo Software have a board for both machines, the STE board requires a little soldering and costs £69.99, the STFM board is slightly more difficult to fit, requiring you to solder a socket to the 68000 processor. The STFM board costs £69.99 and provides a socket for accelerator boards and PC emulators. Both Compo upgrades can be switched between the two TOS versions by software.

Analogic Computing supply a solderless STE TOS upgrade board for £59.95, this board uses a hardware switch to flip between the different TOS versions and is remarkably easy to fit.

24 ACCELERATOR BOARDS

While your ST's 8MHz 68000 processor is perfectly adequate for most tasks, it's rather slow when running the more powerful applications where complicated calcula-

tions and screen updates can turn out to be very slow.

You can accelerate your machine to a cool 16MHz with an ICD AdSpeed board for the STFM or the STE from the First Computer Centre. These boards are relatively easy to fit, the STE board just plugs in, and they won't drain your bank balance too much. The STFM board is £139.99 and the STE board costs £159.99.

25 GET A NEW MACHINE

Of course, if you're really into upgrading then the best thing to do is get a machine with a higher spec than the one you've got. If you have an STFM then you have a couple of choices, an STE or a Falcon030. The STE has better sound and graphic capabilities than the STFM, but apart from some sampling hardware and software nothing has been written to take advantage of the STE's extra hardware – which is really sad. The Falcon030 is the upgrade path to

follow. The hardware advantages are numerous – you're getting a radically new generation of sound and graphics processing capability based around the innovative inclusion of the Motorola DSP 56001 processor in the machine.

Get the Falcon030, it's the ultimate ST upgrade. Prices for Falcons vary, but you should be able to get the 4MByte/65MByte HD version for £969.99 from most major Atari retailers. HiSoft, Compo, Titan Designs and First Computer Centre all stock the Falcon030. Call them for more details.

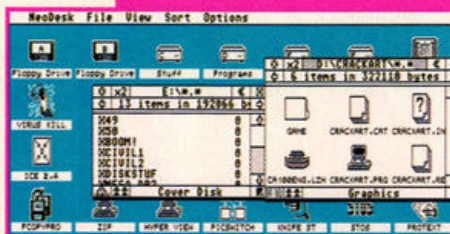
► The Falcon's insides – enough to make anyone blush, really.



► If you can afford it, the Falcon is the ultimate ST upgrade – you'll be shocked at what it can do.

ORGANISE

31 MAKE YOUR ST YOURS!



► Make your ST stand out from the crowds with a replacement Desktop like Neodesk 3.

When you first get your ST with that awful green background and clunky icons you know something's got to be done. You can start off gently by just

installing something like a clock cartridge – make sure you get one with a throughport like the *Forget-Me-Clock 2* (£17.99 from First Computer Centre), sort it out with a replacement Desktop like *Neodesk 3* (£28 from Gasteiner) which has hundreds of make-your-life-easier features like the ability to run programs from the Desktop. Alternatively, you can always upgrade your ST to TOS 2.06 which improves all aspects of your ST's performance – have a look at *STF 47* for details of how to install your own upgrade board.

32 WORD PROCESSORS

Forget loads of scribbles on paper all over the place, create

DO IT YOURSELF

50 ideas

Creating your own programs isn't as difficult as you might imagine and your ST is blessed with a large number of languages, these are they...

26 DIY

Ever been crying out for a utility or application and not been able to find it anywhere? If you read the text files that accompany many PD utilities you'll find that it's often impetuosity that spurred the author on to write the program in the first place. With a little programming knowledge and a spot of patience you could put together the program you've always wanted. Once you've learnt a programming language you enter a new phase of using your ST as you are no longer bound by other people's programs, you can do it yourself.

27 STOS

If you are looking for a simple but proficient language to write a game then the obvious choice is STOS - featured on Cover Disk 37. It's a full blown version of BASIC



One of the many programs that make STOS such an ideal tool for game creation is the Sprite Editor.

with a large range of special graphics and sound commands to make creating games easier. Something as tricky as a sprite moving over a scrolling background to music can be done with a small set of commands. STOS won't write games for you but it has a drawerful of tools to make it about as painless as it's going to get. If you are new to programming this is an ideal place to start.

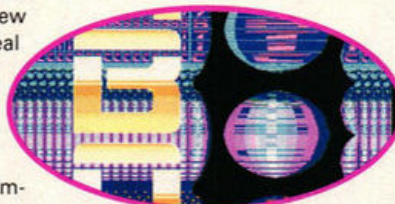
28 GAME CREATORS

If you really can't face programming but still want to be a games author then you can always cheat a little and use a dedicated game creation package. These are geared

towards creating one type of program. They lack the flexibility of a full programming language and the results are easily identifiable but you get to concentrate on the game itself rather than getting bogged down in the code to control it all. Creating games suddenly comes within everybody's reach.

29 DEMOS

Programming is fun - you have to take up the challenge of getting your ST to do as it's told. You don't necessarily want to create a complete game, you just want to experiment and show off new



You won't see effects like this anywhere else but in the demo scene as programmers try to out-do each other and push the ST as far as it can go.

effects. This is where demos come in. They serve no purpose other than to impress and entertain. Writing demos is an ideal way to hone your programming skills and develop sections of code before tackling bigger projects. The Public Domain is littered with incredible examples - just load them and watch your ST amaze you.

30 THE TECHNICAL EDGE

Although the range of programming languages available for the ST is large, the assembly language stands out as the fastest and most powerful. Its commands are the closest to the machine code your ST understands, it gives the quickest access to the hardware and hence the most efficient. Although the basic set of instructions is small it isn't easy to learn.

To get around it you need to jump into the world of stacks and pointers. The professional's choice is Devpac 3 - £79.95 from HiSoft. It's comprehensive and well supported. Nearly all commercial games are written with Devpac.

YOUR LIFE

all your notes, lists, letters and the rest with a word processor - then you can store everything in a series of files and know exactly where everything is at any one time. STF's favourite word processor is Protext from Arnor but for one that's easier to use try First Word Plus - £55 available from Gasteiner.

33 INFORMATION AT YOUR FINGERTIPS

You need a database to sort out everything you've got if you collect anything from stamps to software. Records hold each piece of information in fields that you've defined, enabling you to perform searches for particu-

lar topics - such as a list of all the utilities that have appeared on STF Cover Disks. Far easier with your ST than using a card index or even just searching through all those disks scudding around on the floor. Try the user-friendly Protext-compatible Prodata v1.2 - £59.99 from First Computer Centre.

34 ARE YOU BROKE YET?

So, how are your finances? You could manage them a lot better with a spreadsheet. Enter all your various facts and figures and apply your chosen formulae to them - magically, the calculations are made and you can see at a glance how much cash you're going to be left with at

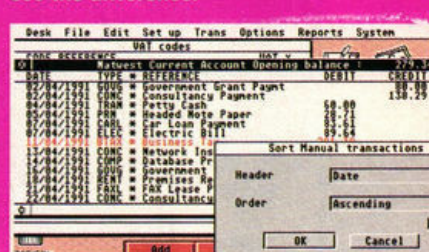
the end of the year assuming the mortgage rate stays at the same level. If the mortgage rate changes, you can simply alter the parameters of the formula and reapply it. Doing this by hand taking into account all your incomings and outgoings is an absolute nightmare - spreadsheets are undoubtedly very powerful and incredibly useful. Try out LDW Power for £114.95 from Silica Systems.

35 DAY BY DAY BUDGETTING

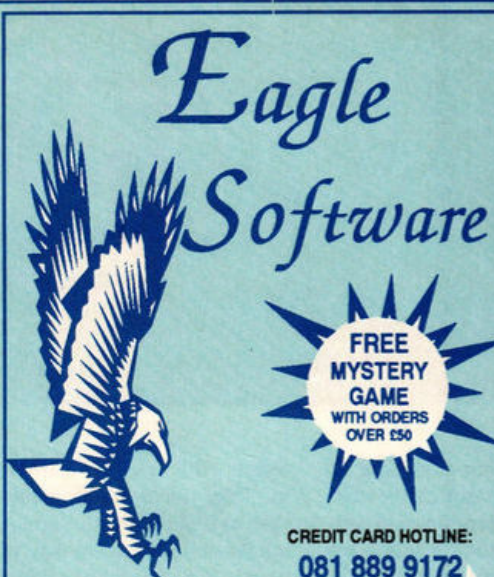
To keep an eye on what you're spending your money you need an accounts package - they combine the best features of spreadsheets and databases watching out especially for any cash flow

difficulties you might have and to ensure that you're going to have enough money to get by until the end of each month. That's the theory at least.

Home Accounts 2 is by far the best program and only costs £54.95 from Digita. Try it and see the difference.



Home Accounts 2 is all you'll ever need to sort out your day to day out-goings and your income.



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50 ideas

► **Keep the ST world alive and kicking by getting involved in it as fully as you possibly can...**

36 GO ON-LINE

Get yourself a modem and some comms software like *Van-term* or *Freeze Dried Terminal* from the Public Domain and hook yourself up to a whole world full of other computer users. You can log on to a whole range of different Bulletin Boards (BBS) from the smaller local ST-specific ones to the huge international boards like CompuServe and Cix where you can have chats with the top men at Atari, find out loads of interesting bits of information about, well, anything really.

There are BBSs that cover virtually everything from travel services, to shopping, to education and to sex of all descriptions. Once you've linked up to a BBS you can download pieces of software – for example, the *ST FORMAT* BBS (☎ 0225 465977) enables you to download all the programs from past Cover Disks. Of course, if you want to play fair you should be uploading programs that you've created or found from other BBSs around the world on your travels. You can link up to your mates with a null modem lead and play brilliant multi-player games like *Vroom*. Then again you could set up your own BBS – we gave away the software we use on *STF's* BBS with issue 42 – turn to page 59 to order your copy if you missed it.

37 PUBLIC DOMAIN

Most commercial software is so expensive these days that most of us can't afford to buy all the programs we'd like. The alternative is to look in the Public Domain – there's a huge range of programs

from incredibly useful little utilities to games and from demos of commercial programs to demos that programmers have written to show off. There are also educational programs, some of the first programs for the Falcon and a whole host of other bits and pieces. The best thing about this lot is that it all comes at real bargain prices – it's free, in fact – you just have to pay for the cost of the disk from the libraries and a bit more to cover their running costs. Choose

■ **Fill up your disk boxes with loads of useless demos from the Public Domain.**

whatever takes your fancy from the regular PD section in *STF*, pick a library from our directory – on page 96 – and away you go. To put back what you can get out of the Public Domain, release your own programmed gems to libraries, set up your own library and make sure you pay your Shareware fees – while some programmers can earn plenty from the registrations of their games, others hear nothing, putting them off releasing more stuff into the PD, and then everybody loses out.

38 GO TO SHOWS

Shows are the best places to meet influential

■ **Go to shows and take part - ask questions about everything you want to know about.**



people in the ST industry – apart from by personal appointment, of course. There are usually loads of them there together – you can go and chat to them about what they reckon the best programs are to use for a particular purpose, see the latest releases hot off the press – quite literally. You can also find out more from Atari's representatives in the UK – at the last International Computer Show, for example, Atari's Darryl Still and Alistair Bodin held a question and answer session about the Falcon.

You can talk to manufacturers about their latest programs, see what they've got coming up and tell them what you think should be in the next upgraded versions. If you go to the more specialised shows like the MIDI and Electronic Music Show, you get to see everything related to a particular field – bliss if you're music-mad.

39 JOIN A USER GROUP

Joining a user group is one of the best ways to get to know other people who share the same interest in STs as you do. Some are run from somebody's home. They are largely magazine based and include specialist interests like the Falcon Owners Group or the Christian User Group who, for a small fee, give you the latest information and gossip that's going on in that hemisphere. There are also more general newsletters such as *STEN* – the *ST Enthusiast's Newsletter*, although they have been known to print misleading information on occasions, particularly regarding certain members of the *ST FORMAT* team (Thanks, guys, but the Ed's not

■ **You can get all the latest releases earlier than anybody else if you go to computer or music shows - you should go, it's fun.**

Inside Info # 64

Inside Info is compatible on STfm/STe & Falcon030



■ **ACE - the Atari Computer Enthusiasts' newsletter on disk and in the Public Domain.**

about to start a new job editing *Joystick Monthly*). Of course (gratuitous plug time), subscribing to *ST FORMAT* is an excellent way to keep up to date with what's going on in the ST world – all the details you need are on page 60.

There are also some groups who meet regularly, get together to exchange information and who sometimes have guest speakers. Send in the names and addresses of all the user groups you know and we'll put a directory together.

40 Write to ST FORMAT



ST FORMAT reaches over 60,000 dedicated ST users, we've got scores of contacts, and an unsurpassed amount of ST knowledge at our fingertips. So, if you want to make a point known to all those other people, whatever it's about, get in touch

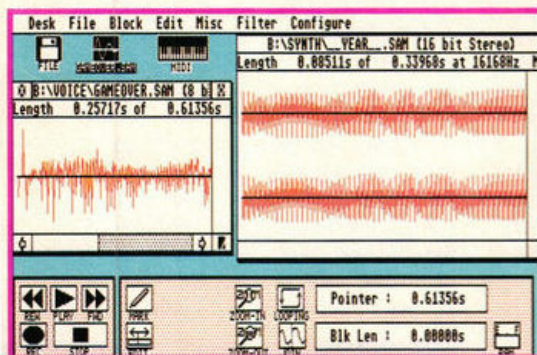
with us. Feedback's the place for all your wingers, comments, observations and points of discussion, *ST Answers* is the column where you can send in your technical questions and tips, *Captain Blunder* deals with any game problems you might have, *Gamebusters* provides you with solutions and cheats to your favourite games and the *Pixel Painting* section gives you the chance to exhibit your best artwork. To make the magazine better and more precisely what you want we need your submissions, your ideas, your hints and tips – if we don't know what you want we can only guess. Send your scribbles to *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW – and don't forget to specify which bit of the mag it's for.

SOUNDS LIKE MUSIC

► **Your ST is not just a pretty face, it can make some groovy noises too. From the sound effects you get in an arcade game to controlling an entire musical studio your ST is in there making noise**

41 SAMPLING

The best way to get realistic sound out of your ST is to use a sampler which converts any sound source like a CD player or micro-



► **Master of the samplers is the Replay range from Microdeal which starts from the basic 8-bit samplers, through the stereo and right up to CD quality 16-bit efforts.**

phone into digital information. Once you've captured your sound you can save and edit it, adding all types of effects and then replay it, or use it in your own programs. Your ST can handle 8-bit samples while the STE can use stereo ones, the number of bits has a direct effect on the sample quality.

For the real business you can use Replay 16 - £129.95 from Microdeal - to achieve those crystal clear 16-bit samples. From sound effects in your games and utilities to working on a serious piece of music, sampling is the only way to get your ST sounding better than it ever has.

42 AUTOMATIC MUSIC

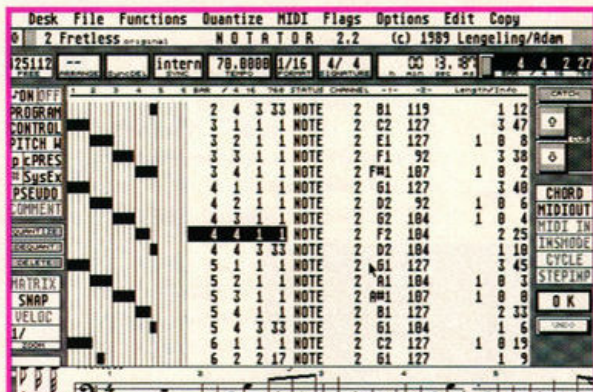
Next time you hear a piece of vaguely familiar music just remem-

ber you might be listening to something that hasn't been composed by a human at all. From a basic set of instructions on melody and rhythm your ST can come up with some quite passable music of its own. You can even use fractal maths to provide the random elements your ST needs.

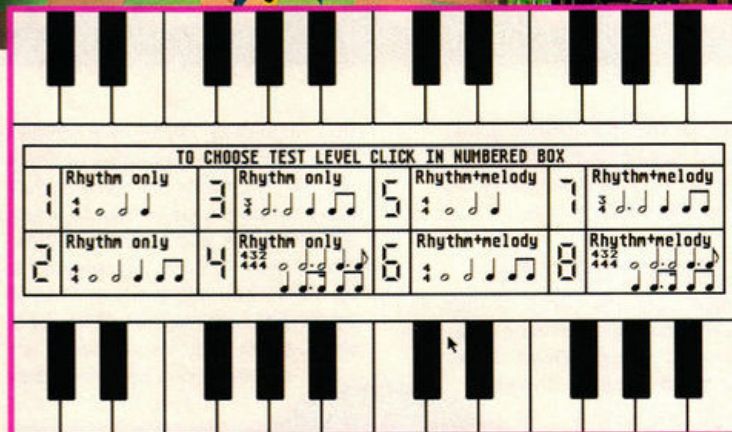
Your ST can generate the building blocks for a song or provide incidental music. It's an ideal way to learn about song construction and improvisation. It'll never replace the hours of searching for just the right chord change but it shows what your ST is capable of doing.

43 MIDI

On the side of your ST are two MIDI sockets - Musical Instrument Digital Interface - these enable your ST to talk to and take control over any MIDI instrument. Including these as standard has taken your ST into almost every recording studio and on to become a major player in music technology. The MIDI data is a stream of digital information about notes and sounds and can be edited like any other data, meaning your ST can act as a recorder and editor of your MIDI instrument using a sequencer program. You can perform endless non-destructive



ive editing. You can edit bum notes, transpose, add effects, quantise and do all sorts of hitherto impossible things. If you are into music you really want to be into MIDI too.



► **Getting into step with Rhythm Trainer - £45 from Music Software Express. It takes you through 160 questions which should bring you into step.**

44 LEARNING THE NOTES

Music has rules. If you're going to produce soaring pieces of music you need a grasp of the basic theories behind it all - this can be a daunting task. But, don't panic, your ST can act as an interactive teacher to make the process almost painless.

The interactive music lessons can take you from basic music notation right through to advanced

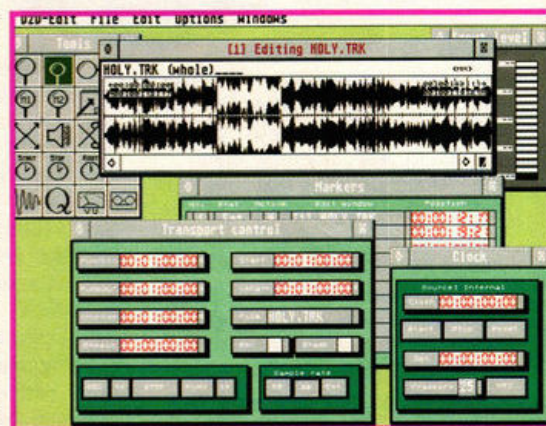
composition. Connected to a MIDI keyboard your ST can play the lessons to you and monitor your own playing. It

► **One of the most powerful and comprehensive sequencers available is Notator SL - £329 from Sound Technology - giving an unprecedented level of control over your MIDI instrument.**

is totally possible to learn music theory - the hard way - from a book but nothing beats a good teacher and your ST makes an invaluable teaching aid making the whole thing much more digestible.

45 DIRECT TO HARD DRIVE

A significant revolution is taking place in music studios. Instead of using magnetic tape to record music, everything is done digitally. Initially, a very expensive business,



► **One of the Falcon's strengths is the incredible sound hardware, running a program like 4T/FX - £299 from D2D Systems - turns your Falcon into a direct to hard drive recorder.**

it's now easily within reach with the launch of the Falcon. The hardware is already built-in - all you need to do is hook up the sound source and run some software and your Falcon becomes a CD quality multi-track digital recorder. Basically, it's a high quality sampler that saves to a hard drive as it goes along rather than to memory. The size of your hard drive is the only limit to the length of the recording. You can bounce tracks around and cut and paste sections endlessly without losing quality. You can also run tracks through the DSP chip to add a range of effects like echo, reverb and chorus.

PUBLISH IT!

50 ideas

From creating basic or professional-looking documents to sending the film to the printers, your ST turns out to be the perfect tool for the job

46 CREATING SNAZZY LETTERS

Word processors are invaluable tools for creating brilliant looking documents and the best ones also enable you to import graphics, change the fonts and fiddle around with the paragraph layouts. Why not liven your correspondence up with pictures, different forms of text and fiddle around with the headings, making them bold, italic

I have never trusted them.
My brother Colin was involved in an odd situation when his car popped through a hole in the space-time continuum while he was on way to work. He was astonished, of course, but he soon adjusted to life in an alternate reality. Apparently he spent the equivalent of 30 years in the parallel world and became regarded as a God by the simple

Inject some life into your documents with some great fonts in *Write On* - on STF Cover Disk 33.

and underlined. One of the best programs that gives you the chance to do this is *Write On*. We gave it away on Cover Disk 33 or you can still get it from Compo for £49. It enables you to use a variety of keyboard shortcuts - and you can set up your own macros if there are other things you frequently want to do.

47 NEWSLETTERS AND FANZINES

Your ST's perfect for creating brilliant newsletters for everything from your ST user group to your local hang-gliding society. All you need is a decent DTP program - something that enables you to import text and pictures and lay out the pages within a series of frames. You're also going to need to get the text to run on if you've got too much of it and fiddle around with the pictures so they



Desktop publishing on a tight budget with *East Text Professional* from zzSoft. Hand over your £40 and start producing your own magazine.

look great when you print them out. If you haven't got the funds to splash out on a really huge and professionally priced program, you can't go far wrong with *Easy Text*

"Why not liven your correspondence up with pictures and different forms of text"

Professional. It only costs £40 from zzSoft and you can do all the things that you'd be able to do with any of the high end programs. The quality of the output's pretty good even on a basic dot matrix printer. You can put all your gossip together, make it look brilliant, print it out, photo-

copy however many you need - and get distributing!

48 COLOUR PRINTING

If you've got a colour DTP program such as *Calamus SL* and a colour printer you can print in glorious technicolour. Colour printers aren't necessarily costly - you can get a reasonable quality 9-pin dot matrix from around £250 up to over three times that for an inkjet or laser printer which gives you far superior output. If you need more than one copy of the document you can take it to a quickprint shop in the high street who can do colour laser prints. If you just want to print out pictures from *Degas* or *Neochrome* to a mono Deskjet printer then you need a utility like *HP Chrome* from the Public Domain which can print multiple passes on the paper using different coloured inks.

49 CREATING COLOUR DOCUMENTS

Whether you want to create stunning coloured party invitations or

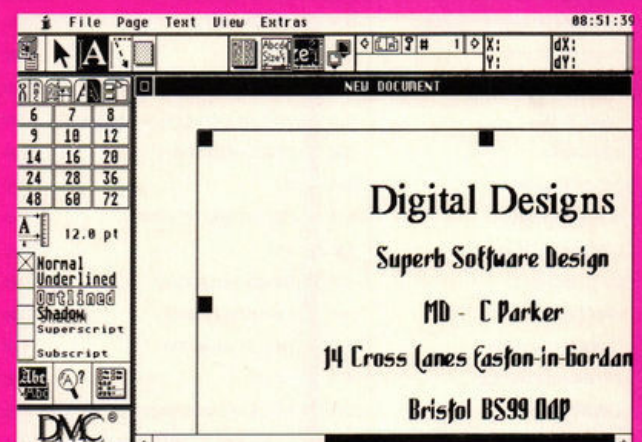
colour magazines you're going to have to be prepared to fork out for extra RAM and a decent DTP program like *Pagestream 2* - £169 from Silica - which can handle four colour separations. All colours on film are made up from four colours - cyan (blue), yellow, magenta and black, or CMYK. When you import graphics into your page layouts varying proportions of the four colours are used - 100M gives a sort of shocking pink whereas 100M100Y gives a classic red. When you've created your pages do a test printout to check that everything is in place and looks as you want it to. You should also check that any colour pictures you've imported have separated into CMYK. Send your file to a bureau that supports the program you use and they'll send you the film. Again, check the film, making sure that all the colours are on the correct plates and then you can send the film to the printers. And, there you go, you've done it!

● Phone numbers for all companies mentioned can be found in *Essential Contacts* on page 105. Information on STF back issues is on page 59.

50 CREATING BUSINESS CARDS

Black and white designs can be incredibly effective if you use them imaginatively to create your business cards - you might even be commissioned to make some for other people (if you're lucky). A program like *Calamus v2* from JCA Europe is your best bet along with lots of memory - just follow these easy steps...

- 1 Create a blank box measuring the standard business card size of 90mm by 55mm.
- 2 Make a text frame to go across the top of the box for the main heading and enter the title.
- 3 Make a second text box for the other information. Enter the words at a smaller point size.
- 4 Include a relevant and simple logo if you like but watch out for any possible infringements of copyright.
- 5 Group the frames, duplicate the cards butting them together and create crop marks 5mm from the edges for the print shop to see where to cut them.
- 6 Ungroup the frames and delete the original boxes. Run a test print before sending your film away for a final bromide or film to an outputting bureau.



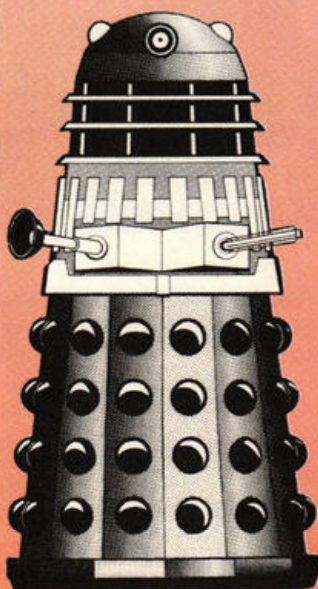
Create your very own personalised business cards with *Calamus* or any other good desktop publishing package. Don't forget to check that your telephone number is correct before you send them to be printed - you wouldn't want 300 cards with the wrong number, would you?

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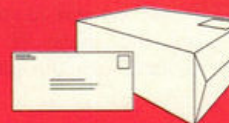
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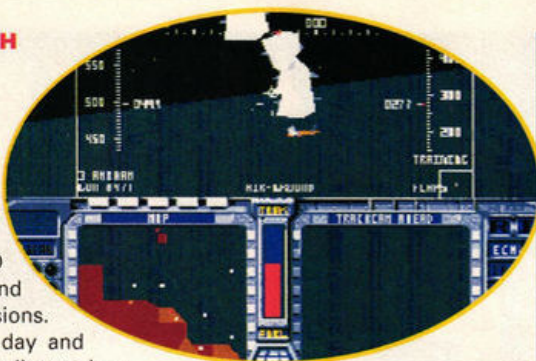
50 games

[illegible]

1 F-19 STEALTH FIGHTER

US Gold/Kixx XL
£16.99

Initially overwhelming, this emerges as a flight sim filled to the brim with playability, slick 3D vector graphics and Gadaffi-bustin' missions. You get to fly both day and night-time raids in all weathers and the game comes complete with maps and a manual the size



of a Scooby sandwich.

STF Rating: 96%

2 STARGLIDER 2

US Gold/Kixx £9.99

One of the best space adventures ever, *Starglider 2* sends you on a



voyage through a 3D universe in search of an enemy space station. As you explore the 15 different worlds you encounter all kinds of aliens and pirates as well as your heavily-armoured opponents. Despite its age, this game still thrills with its rather classy vector-filled graphics and seat-of-the-pants shoot-'em-up action.

STF Rating: 95%

3 RAINBOW ISLANDS

Ocean/Hit Squad
£7.99

Bub and Bob return in their second cutesy platform adventure. Primary colours, lovable baddies and rainbows abound in this sugarily addictive romp through seven different nursery-land worlds. Luckily, there are plenty of bonus objects for you to collect, before that final confrontation with the big Doh monster. It looks a little dated now, but *Rainbow Islands* remains



furious, fun and completely and maddeningly addictive.

STF Rating: 93%

4 MIDWINTER 2: FLAMES OF FREEDOM

US Gold/Kixx XL
£16.99

Marvellous adventure game packed with wonderful 3D vector graphics and nail-biting fight sequences. Virtually every ST game genre – from shoot-'em-up to strategy – pops up somewhere and there are so many different elements in the gameplay



you can't help but keep coming back to it again and again.

STF Rating: 92%

5 BATMAN

Ocean/Hit Squad £7.99

Based on Michael Keaton's dark cinematic portrayal, *Batman* is



really three ST games in one – a racing sim, a platform game and a brain-teasing puzzle-thon. You guide Batman across five different levels, knocking out the bad guys with the ultimate aim of defeating the evil Joker. With excellent graphics and intuitive gameplay *Batman* proves to be one of Ocean's better film licences.

STF Rating: 91%

6 CARRIER COMMAND

US Gold/Kixx
£9.99

Pit your wits against a gang of ruthless terrorists in this excellent 3D flight sim. With a choice of Arcade or Strategy modes, *Carrier Command* offers both a great deal of depth to its gameplay and an opportunity for a good old-fashioned blast. Equally as good as many more



recent and sophisticated games in the same genre.

STF Rating: 91%

HEY – YOU! WATCH OUT OR ELSE YOU'RE GOING TO MISS ALL THESE

19 DIZZY'S EXCELLENT ADVENTURES

Codemasters £24.99

More platforming fun in this five game compilation featuring *Kwik Snax*, *Spellbound Dizzy*, *Dizzy – Prince of the Yolkfolk*, *Panic Dizzy* and *Bubble Dizzy*.

STF Rating: 82%

20 ARCADE FRUIT MACHINE

Zeppelin £7.99

Steer clear of the arcades and save pots of money with this simple and maddeningly addictive fruit machine simulator.

STF Rating: 82%

21 LOOM

US Gold/Kixx XL £14.99

Atmospheric precursor to *Monkey Island* revolving around the graphic adventures of our hero Bobbin Threadbare. However, the

game's a bit on the short side for serious adventuring.

STF Rating: 81%

22 CRACKDOWN

US Gold/Kixx £7.99

Tough shoot-'em-up which is better on the ST than in its original coin-op form. Rope in a pal for the excellent two-player game.

STF Rating: 81%

23 NINJA REMIX

US Gold/Kixx £9.99

A "fixed" version of the *Last Ninja 2* beat-'em-up, this game is marred by some sloppy joystick controls, but still manages to come out fighting.

STF Rating: 81%

24 CALIFORNIA GAMES

US Gold/Kixx £7.99

Footbag, surfing, roller-skating, flying disk, BMX racing and half-

pipe skateboarding are all on offer here in this unusual, but satisfying sports compilation.

STF Rating: 81%

25 THE DUEL: TEST DRIVE 2

Ocean/Hit Squad £7.99

Good graphics and excellent sound effects makes this racing game an exciting battle of wits against the clock or an opponent.

STF Rating: 81%

26 FLIMBO'S QUEST

US Gold/Kixx £9.99

Smooth parallax scrolling, a cutesy hero and fast, furious gameplay makes this platform game a delight to play.

STF Rating: 81%

27 IMPOSSIBLE MISSION 2

US Gold/Kixx £7.99

A cross between an arcade game and a puzzle game, this finds you

wandering around a motley collection of maze-filled rooms. A dated, but still extremely absorbing challenge.

STF Rating: 80%

28 KWIK SNAX

Codemasters £9.99

Dizzy returns to rescue his pals and indulge in more platform-hopping and baddie-zapping adventures. Lots of colourful graphics and addictive gameplay.

STF Rating: 79%

30 MIG-29 FULCRUM

Ocean/Hit Squad

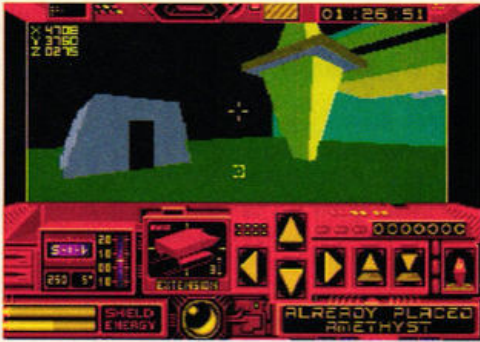
£12.99

View the Cold War from the opposite perspective in this Micro-prose-beating Russkie flight sim. Five missions of pre-Glasnost mayhem. Absolutely superb, don't miss it.

STF Rating: 78%

7 DRILLER US Gold/ Kixx £7.99

Do you suffer from too much gas? The 18 sectors of Mitral do and it's your job to plant drilling rigs in each one during this 3D vector arcade game. As you fly around from planet to planet you soon notice the fluid animation and groovy sound effects which all help to make the

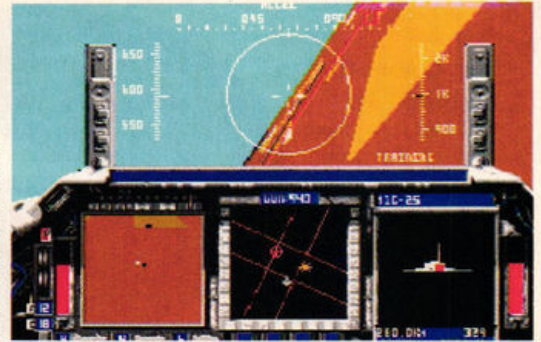


gameplay such an invigorating and addictive experience.

STF Rating: 91%

10 F-15 STRIKE EAGLE 2 US Gold/Kixx XL £16.99

A worthy successor to *F-19*, this flight sim features simplified controls making it a dream to play. There are six different theatres of war for you to explore – including the obligatory Middle East scenarios. Tons of on-screen action means it's not as techie – or



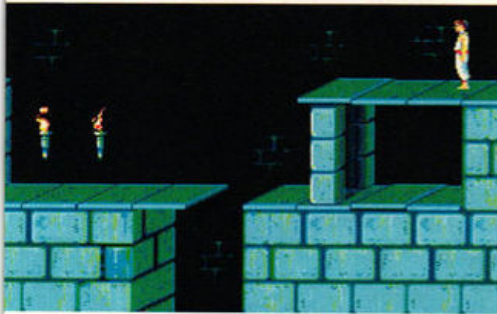
off-putting – as some other more serious flight sims.

STF Rating: 90%

8 PRINCE OF PERSIA Ocean/Hit Squad £7.99

Brilliant and at the time innovative animation and fiendish puzzles has turned this platform game into a birrova classic. The plot – in which you have to wander around the treacherous corridors of a castle in search of an imprisoned princess – is a bit of a yawn, but there's ample here to keep you interested.

STF Rating: 90%



11 POPULOUS AND PROMISED LANDS Ocean/Hit Squad £12.99



Bullfrog's epic god game chronicles the trials and tribulations of an entire race as it tries to colonise a series of lands, with you as their spiritual mentor. Brilliant graphics and extremely absorbing gameplay makes this one of the best budget buys you can get for your ST. The *Promised Lands* data disk offers you even more worlds to conquer.

STF Rating: 87%

9 RICK DANGEROUS US Gold/Kixx £7.99

Graphically, it looks a little primitive now, but this game still rates as one of the best – and most fiendishly difficult – platform games you can get for your ST. There are all kinds of different obstacles for Rick to overcome as you guide him across four levels

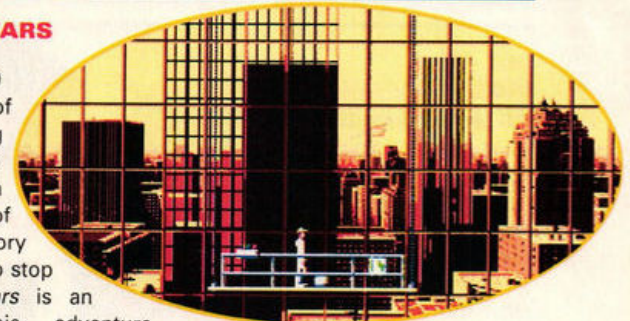


of baddie-bashing mayhem. Brilliantly brain-melting.

STF Rating: 90%

12 FUTURE WARS US Gold/ Kixx XL £12.99

A nasty bunch of aliens is travelling through time to plant bombs in crucial moments of the Earth's history and it's your job to stop them. *Future Wars* is an absorbing graphic adventure which tests your problem solving powers to the full with its tricky puzzle elements. A classic game



which set the standards for others to follow.

STF Rating: 87%

OTHER GAMES WHICH CONVENIENTLY ADD UP TO 50 OF THE THINGS

30 NEW ZEALAND STORY Ocean/Hit Squad £7.99

One of the original cutesy platformers, this one places you in control of a Kiwi in search of his kidnapped friend.

STF Rating: 78%

31 DIZZY, PRINCE OF THE YOLKFOLK

Codemasters £9.99

Dizzy's girlfriend is in trouble so Dizzy has to traipse across more levels of tricky platforms and irate meanies to get her back.

STF Rating: 78%

32 BIGNOSE THE CAVEMAN

Codemasters £9.99

Another Dizzy stablemate but this time you get a prehistoric ramble bopping cute dinosaurs and end-of-level meanies.

STF Rating: 78%

33 THE IMMORTAL Ocean/Hit Squad

£12.99

An isometric role-playing game which takes place over seven labyrinthine levels. Well-animated sprites and atmospheric backgrounds makes this a taut, exciting adventure packed with unwelcome pitfalls, complicated puzzles and bloodthirsty baddies. Great stuff.

STF Rating: 77%

34 MANCHESTER UNITED EUROPE

Krisalis/Buzz £9.99

Jerky animation and poor sound effects mar an otherwise competent footy sim. However, it's possible to do some pretty nifty shots with the joystick controls – who needs a real football and a pitch anyway?

STF Rating: 77%

35 CRYSTALS OF ARBOREA

Daze/Games Worth Playing £9.99

The first instalment in the *Ishar* saga, *Crystals of Arborea* has a familiar graphical feel and develops into an absorbing and atmospheric role-playing adventure.

STF Rating: 77%

36 BOSTON BOMB CLUB Daze/Games Worth Playing £9.99

Guide bombs across 30 levels of explosive fun in this frustratingly good puzzle game. Plenty of tasty graphics and absorbing gameplay.

STF Rating: 76%

37 IK+

Ocean/Hit Squad £7.99
Well-animated oriental beat-'em-up from Archer Maclean with plenty of humorous touches and

good sound effects. Unfortunately, the joystick controls are a bit hit and miss which tends to mar the playability.

STF Rating: 76%

38 CAPTAIN DYNAMO Codemasters £9.99

Retired superhero comes back and saves the world in this vertically-scrolling platform game. More cute, well-animated graphics with a lovable hero. It's darn addictive too.

STF Rating: 76%

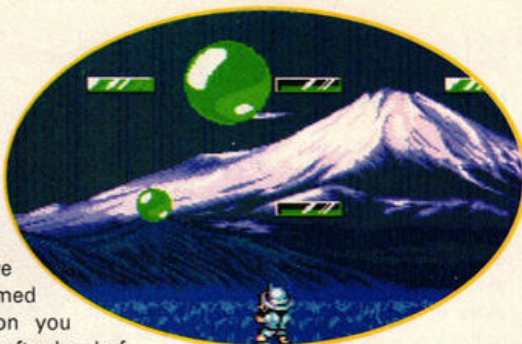
39 ADDAMS FAMILY Ocean/Hit Squad £9.99

The sprites don't really look anything like their movie counterparts, but this is a rather good platform game with plenty of rooms and baddies to work your way around.

STF Rating: 74%

13 PANG
Ocean/Hit
Squad £7.99

You and a pal have to stop the world from being overtaken by bouncing bubbles in this unusual and addictive bubble game. Armed only with a harpoon you plough through level after level of obstacles, ladders and platforms with one aim - to rid each beautifully drawn level of the offending



spheres. Tough, tense and extremely peculiar.

STF Rating: 86%

14 GAUNTLET 2
US Gold/Kixx £7.99



Simultaneous multi-player action for you and up to three pals in this excellent arcade journey through a monster-filled labyrinth. Eight-way scrolling in overhead perspective and gut-tensioning speech and sound samples add up to a game-playing treat you just can't put down. A virtually perfect coin-op conversion.

STF Rating: 86%

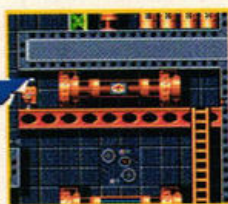
15 RICK DANGEROUS 2
US Gold/Kixx £9.99

More addictive platforming fun with tricky Ricky, but this time there are even more challenges, puzzles and obstacles for you to overcome. The maddening and addictive game-play is eased by the



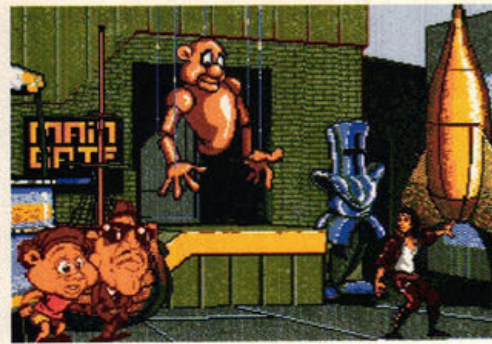
knowledge that you can skip to any one of the five levels from the main menu screen.

STF Rating: 86%



16 MOONWALKER
US Gold/Kixx
£7.99

Wacko Jacko takes on the ubiquitous Mr Big in this surprisingly good four level arcade game. Michael goes a-hunting for his rabbit suit, turns into a car and gets mobbed by obsessive fans before a final confrontation with the fat bloke with the bad drugs. Also features superb intro sequences which

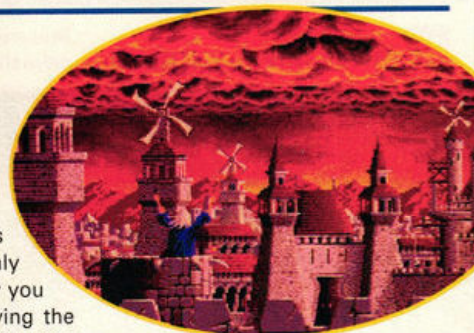


have been digitised from video. Phew! Rock 'n' roll, eh?

STF Rating: 84%

17 STORM MASTER
Daze/Games
Worth Playing £12.99

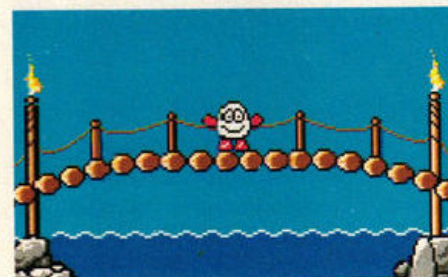
It's not often you're asked to control the world with your wind, but *Storm Master* manages to conjure up a hurricane with its god-game antics. Highly atmospheric graphics draw you into a complex plot involving the rival populations of Eolia and Sharkaania who wage constant war on each other. A well-structured mix of arcade and strategy



elements, it all proves to be extremely playable.

STF Rating: 84%

18 TREASURE ISLAND DIZZY
Codemasters £4.99



Dizzy - Codemasters' egg-shaped hero - is virtually synonymous with cracking ST budget games. Here he is in one of his earliest adventures leaping and rolling from platform to platform in search of buried treasure. Cutely animated baddies and colourful backgrounds are the trademarks of this and every other Dizzy game. Great fun.

STF Rating: 82%

THE REST OF THE BEST OF THE REST (CONTINUED AFTER THAT BREAK)

40 SMASH TV
Ocean/Hit Squad £7.99

All quiz shows should be like this - there's plenty of bad-mannered gun-totin' in this *Killing Game Show* clone, but it ultimately fails to grab the imagination.

STF Rating: 74%

41 CLASSIC 4
Impressions/Energize
£7.99

Two versions each of *Space Invaders*, *Rock Storm*, *Draxians* and *Megapede* makes this arcade collection a budget must.

STF Rating: 73%

42 FANTASY WORLD DIZZY
Codemasters £9.99

More of the same from Codemasters - this time you've got to rescue Daisy by trawling across lots of platforms and using objects in a certain sequence.

STF Rating: 72%

43 BUBBLE BOBBLE
Ocean/Hit Squad £7.99

8-bit graphics and sluggish joystick controls mean that this platformer is beginning to show its considerable age. However, the underlying concept's pretty sound and it's as addictive now as it ever was. The excellent *Parasol Stars* followed, bringing the concept up to date.

STF Rating: 71%

44 ZAK MCKRACKEN AND THE ALIEN MINDBENDERS
US Gold/Kixx XL £12.99

Early graphic adventure from Lucasfilm brimming with their own peculiar brand of humour. You have to play a journalist who goes looking for two-heading squirrels but ends up saving the world. Looking a little dated, but it's still excellent fun to play.

STF Rating: 71%

45 LED STORM
US Gold/Kixx £7.99

LED is a vertically-scrolling racing game through nine obstacle-packed levels. The graphics are unspectacular, but are made up for by the fast action gameplay.

STF Rating: 71%

46 HILL STREET BLUES
Krisalis/Buzz £9.99

It's your job to keep Chicago's spiralling crime rate under control in this reasonably enjoyable and rather complex adventure version of the top-rated TV cop show.

STF Rating: 71%

47 LINEKER COLLECTION
US Gold/Kixx £19.99

A bearable four game compilation featuring *International Soccer Challenge*, *Footballer of the Year*, *Italy 1990* and, of course, *Gary Lineker's Hot Shot*.

STF Rating: 71%

48 CALIFORNIA GAMES 2
US Gold/Kixx £9.99

Five more West Coast sports - including snowboarding - which make a refreshing change from all that running and jumping around malarkey.

STF Rating: 70%

49 SUPERSKI 2
Daze/Games Worth
Playing £9.99

All the fun of *Ski Sunday* - but without the hymns - in this piste-pummelling sports sim. There are six different events and it's all great fun, if a little undemanding.

STF Rating: 68%

50 PIRATES!
US Gold/Kixx XL £12.99

Moderately addictive trading adventure which relies just as much on your fighting skills as on strategic planning.

STF Rating: 68%

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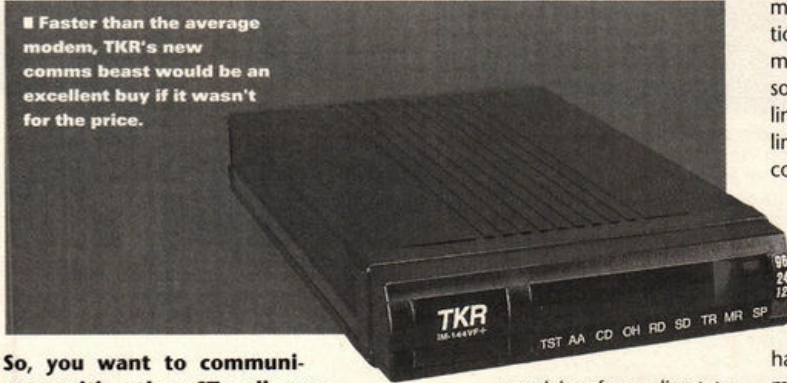


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TKR FAX MODEM

■ Faster than the average modem, TKR's new comms beast would be an excellent buy if it wasn't for the price.



So, you want to communicate with other STs all over the world, you would love to use information from CompuServe and most of all (ready for the plug?), you're desperate to get in touch with the STF BBS.

The problem is, you know that if you get yourself a modem your phone bill will rocket. The way round this is to get a faster modem than the usual 2,400 baud devices. The latest 9,600 baud modems can achieve throughput speeds of 14,400 baud by using built-in hardware data compression routines. These modems can also be used for transmitting and

receiving faxes direct to your ST if you have the appropriate software. The downside to all this is the cost, a fax modem is likely to cost you around three times as much as a standard 2,400 baud modem – what you save on your bills, you end up spending on the actual machine.

The TKR IM-144VF+ (catchy name, that) fax modem from System Solutions is perfect for both transmitting faxes and for normal comms work. It comes in a sleek matt black case with the usual row of incomprehensible acronyms on the front panel designed to tell you exactly what the

machine is up to when it's in operation. The back panel has all the usual modem connections – a 25-way D socket to link to your ST, a line in and line out for connection to the phone lines and a power socket. The only control of any kind is a power switch.

Setting up the modem is easy. Connect all the leads to your phone line, the power and your ST – boot up the system and run your favourite comms package.

We use STalker 3 for our tests, and have very few problems getting the modem up and running. The main problem with all modems that use data and error correction routines is setting the right configuration. You can always use trial and error and hope that everything works out, but the best way to set everything up is to use the manual.

Many modems get very hot when left switched on for a long time. The TKR modem never reaches a temperature that could be described as hot even when left switched on for 48 hours.

Modem manuals are traditionally complete gibberish to most of us,

but the TKR manual is an exception. While it contains all the complex technical details you would expect for a fax modem, it is laid out in a reasonably simple to follow way with most items explained in plain English.

This is an excellent piece of kit and is worth serious consideration if you use modems a great deal for work or pleasure.

CLIVE PARKER

TKR Fax Modem

£279.99 System Solutions
☎ 0753 832212

Highs

- Reasonably easy to set up.
- Doesn't get hot.
- Reliable.

Lows

- Pretty damn expensive.

What else?

- Supra V32bis Fax Modem, £269.99
- First Computer Centre, ☎ 0532 319444

TKR TELE OFFICE

If you want to use the faxing facilities on fax modems like the TKR model in the review above, you need some good software.

To complement their fax modem, TKR have come up with *Tele Office*, a comprehensive fax program for all STs with at least 1MByte of RAM and a high res mono monitor or running a mono emulator. To run *Tele Office* successfully you need to install GDOS – or an equivalent – but don't worry if you don't have a copy, it's included in the package.

The software is provided on three double-sided disks – the main program disk, a GDOS disk and a disk of fax drivers for popular software packages like *Calamus*. These drivers re-direct the print output from the program so that the page or document can be transmitted as a fax.

Installing *Tele Office* is a nightmare. While transferring the files to your hard drive or backing up the main program disk to floppy is easy enough, actually configuring the program for use is a long and complicated process. There is a series of instructions in the manual which are a bit ambiguous. To cap it all, if you make a mistake during installation you have to copy the main files from

the master disk and start all over again. This is because the main program and Desk Accessory are modified during the installation process. Always install *Tele Office* on your hard drive or on a backup floppy, 'cos you must not modify the master disk.

Faxing lyrical

Once installed, the program turns out to be quite good. You have to create your text in ASCII format in your favourite word processor, it's then imported into *Tele Office* and converted into a fax file. The program also imports pictures in IMG format which you can include in faxes, so you can use an image file as a logo or header for your faxes.

There is a handy option in the configuration menu where you can assign text files and image files for

you to include as part of every fax you send as headers or footers. Another good feature is the ability to call your text editor or graphics program to edit pictures and text from within *Tele Office*.

Special features abound in *Tele Office* – there's a comprehensive address book included for fax transmissions, faxes can be automatically sent at pre-determined times and the program can be set to auto-receive mode. You can even send the same fax to every number in your phone list. Faxes are not automatically shown full size on-screen, they are shown as a small preview of the whole page – they can be viewed full size but the conversion is a slow process. To send a fax just click on the telephone icon when viewing it within *Tele Office* or from within DTP

or graphics programs using the special drivers – all fax transmissions are controlled by the *Tele Office* fax driver Accessory. All in all, *Tele Office* is a competent, but not brilliant, fax program.

CLIVE PARKER

Tele Office

£79.95 (£39.99 with fax modem) from System Solutions ☎ 0753 832212. Hard drive installable.

Highs

- Icon driven.
- Access to external editing programs.
- Good preview functions.
- Fax drivers for DTP programs.

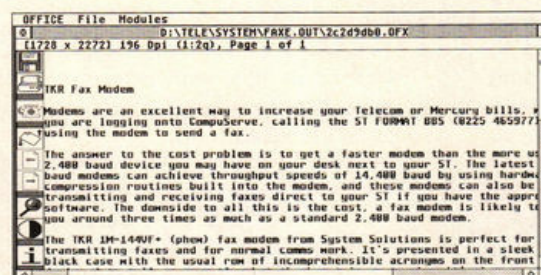
Lows

- Difficult to install.
- Slow display updates.
- Can't import Degas high resolution pictures.

What else?

- Straight Fax £34.99, from Joppa Software, now available through First Computer Centre ☎ 0532 319444

■ *Tele Office* can display and send faxes at a high resolution of 196dpi (dots per inch), although it takes ages to convert from the preview image.



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(lifetime warranty)

(100% certified error free)

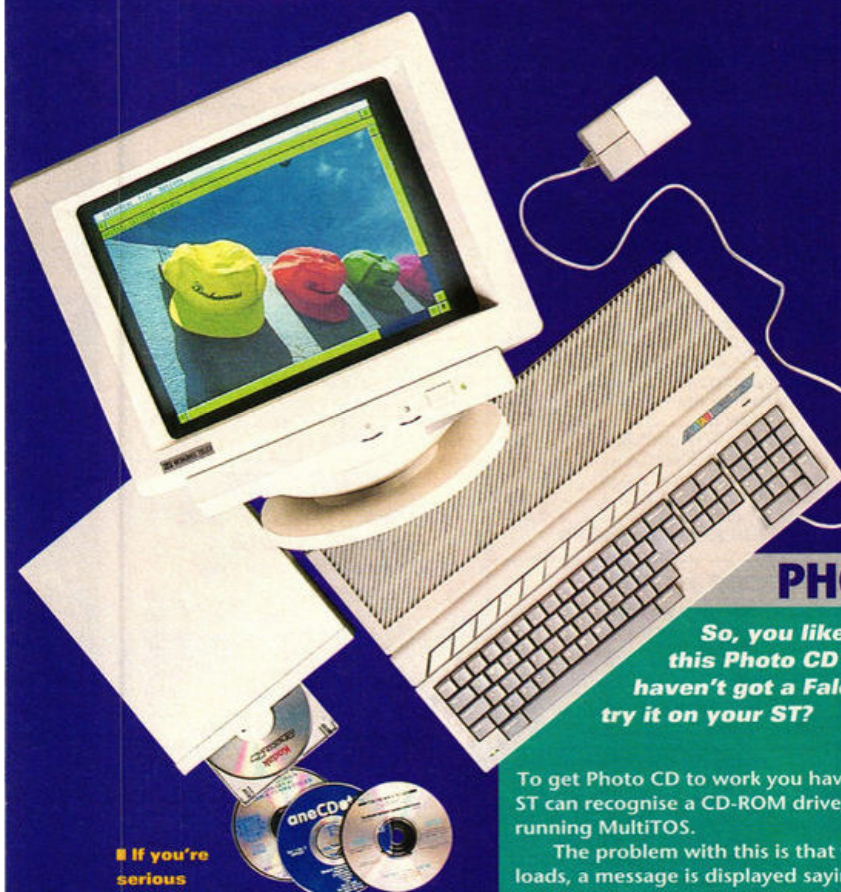
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SEP 93

CD-ROM TAKES OFF

Laser technology makes another huge step in its bid for supremacy by moving towards the Falcon. Clive Parker takes a look at what CD-ROM is all about and what it can do for you



■ If you're serious about using your Falcon as a graphics workstation, this is what your setup should look like. All you need is a CD-ROM drive, a VGA colour monitor and your Falcon.



■ Your Falcon can display Photo CD pictures in all resolutions. Choose true colour (top surfers) for the best definition. But if you're working in other applications at the same time you can always stick to 256 colours (left).



matter of time before it made it on to the Falcon.

In the beginning...

The compact disc revolution started in 1983 when Philips launched the audio CD. Instead of using the traditional analog recording methods, the music is stored

After beating vinyl into submission in the music markets, compact disc technology is making a huge impact in the home computer and games console world and is making its debut on the Falcon.

Just take a look around the shops – everywhere CD-ROM is screaming out at you. The recent launch of Sega's Mega-CD has made more people aware of the huge potential that CD-ROM can offer. PC compatibles, Macs and Amigas have all benefitted from laser technology and it was only a

"One CD takes up to 550MBytes of data - that's equivalent to approximately 760 floppy disks!"

digitally, in exactly the same binary form as computer data.

In fact, the advantages of storing computer information in CD

■ If you're serious about photography, Photo CD is a very safe way of storing all your best shots - being read only memory the files cannot get corrupted by nasty viruses.

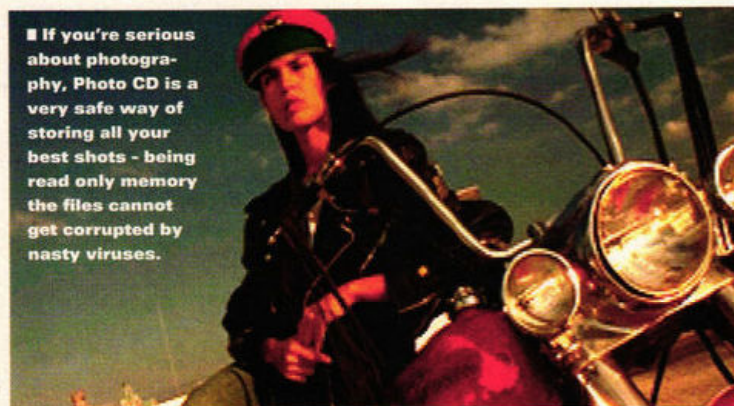


PHOTO CD AND YOUR ST

So, you like the sound of this Photo CD thingy but you haven't got a Falcon - why not try it on your ST?

To get Photo CD to work you have to make sure your ST can recognise a CD-ROM drive, so you need to be running MultiTOS.

The problem with this is that when MultiTOS loads, a message is displayed saying that the driver only works with the Falcon or a TT.

To get past this you need to use the ICD CD-ROM drivers, supplied with the ICD Professional HD Utilities, and change the CONFIG.SYS file (right).

The Photo CD software works perfectly on the ST, and can read pictures from the Kodak CD without

problems. As a bonus, your ST can read picture files from a selection of PC CD-ROM discs – many PC discs have up to 50MBytes of picture files in GIF, TGA, PCX or BMP formats. These file formats can be easily loaded into your ST or Falcon using programs like True Paint or GEMview.

To take full advantage of the Photo CD imagery with your ST you really need to have a colour graphics card. Although it is possible to view Photo CD images in standard ST resolutions, there is a dramatic loss of quality.

● This is the configuration needed by MetaDOS to enable your ST to read the Cumana CD-ROM.

*BOS, \METADOS\ICDCDROM.BOS, B:12 (Logical device B, SCSI 4)

*DOS, \METADOS\ISO9660F.DOS, Z:B (Drive Z, Logical device B)

■ Just close your eyes and think of all the things you could do with your Falcon. Hmm.



format are quite appealing. For a start, CDs are less easily damaged than floppy disks and are supposed to last for ages.

More important than the practicalities though, is the actual storage space itself. One CD takes up to 550MBytes of data – that's equivalent to approximately 760 floppy disks! This is CD-ROM's main selling point. The games that are now released benefit from CD sound and digitised video images, the educational CDs can contain entire encyclopaedias or history books and with Photo CD you can even store all your holiday snaps – in fact, anything which requires huge amounts of storage space is lapped up by CD-ROM.

Before you run off and order yourself a CD-ROM drive, there are a few disadvantages you should take into account. For a start, the ROM bit stands for Read Only Memory, and this means that you can't actually save anything to the disc itself. Also, you are entirely dependent on the software houses to release Falcon-specific programs – even though you can read other discs and pinch files from them (like pictures or samples from PC PD libraries) you can't run the applications because they aren't written for your machine. On top of all that, there's the cost to

C'MON EVERYBODY, SAY CHEESE!

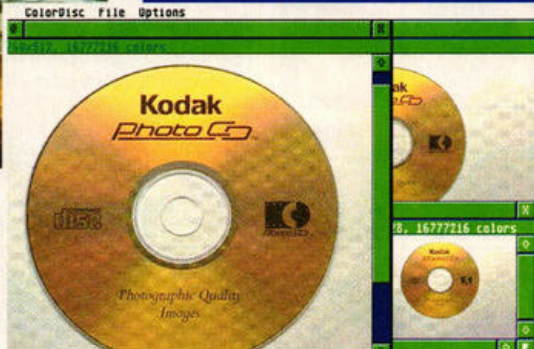
It's all very well talking about using your Falcon as a photo album, but how do the pictures actually get on to the CD?

As far as you're concerned, it's quite a simple operation. When you've finished your roll of film, you just take it down to your local Boots store and they send

it off to the Kodak labs who go about processing and transferring the pictures to a Photo CD.

It costs 50 pence per picture for the process of transferring pictures from a new film, £12.99 for up to 28 snaps and £16.99 for 29 pictures or more. Pictures can be added to an existing Photo CD disc or installed on a new disc for an extra £4.99. Images can be created from standard colour film, transparency film, colour negatives and up to 100 pictures can be stored on a single Photo CD.

Photo CDs can be made to order from your favourite pictures or slides, although this option is more expensive because each image is transferred individually. High quality image storage, display and processing is now available to everyone at a reasonable price.



■ Look out for this logo, you're going to be seeing more and more of it in the future.

consider – a CD-ROM drive for your Falcon can cost anything from £200 to way over £700.

Photo CD

The first thing you want to look for in a CD-ROM drive is if it's Photo CD compatible. Photo CD is a brilliant new way to store and display your holiday (or other) snaps as high quality photographic images.

"The Falcon has the potential to be a brilliant graphics workstation without additional hardware"

Instead of getting the usual box of slides or pack of prints back from your local chemist's you get a gold compact disc with your pictures stored on it.

To view your snaps you can either put the disc into a Kodak Photo CD player, switch the TV to the correct channel and view the



■ Bath Abbey through the STF camera lens and displayed on the Falcon.

pictures on-screen, or you can put the disc into a CD-ROM drive and view your pics with the help of your Falcon and some special software. Each picture is stored in 16.7 million colours in five different resolutions. The highest resolution is designed for the high definition TVs that will be on sale in a few years, all the other resolutions can be viewed on standard TVs.

The Falcon and Photo CD

There is already a Photo CD program under development for the Falcon called *Color Disc PCD* (Photo CD) which enables the Falcon to read data from multi-session CD-ROM drives – these are the kind required for Photo CD. The pre-release version of the software enables pictures to be loaded and viewed from a Photo CD disk in four of the five stored sizes, the largest resolution version of each picture takes up 16MBytes of space

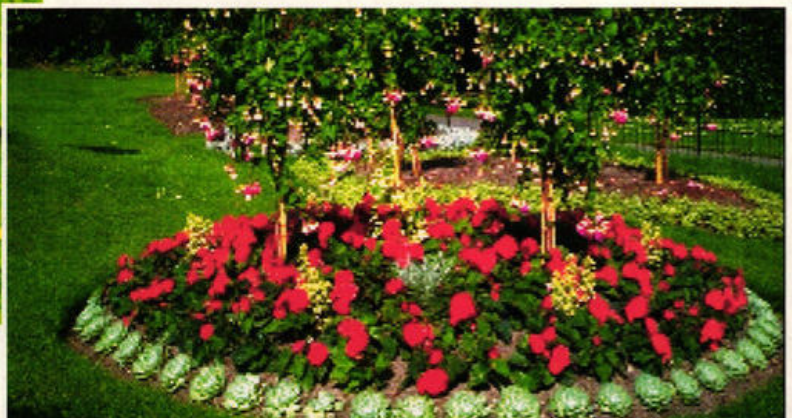
when decompacted. The software is supplied with a CD-ROM driver which you put in the MultiTOS folder on your Falcon or TT – this means you've got to run MultiTOS in order to use the *Color Disc PCD* software. MultiTOS is not supplied with a CD-ROM driver as standard, an oversight which Atari should possibly look into.

And finally...

With the addition of a CD-ROM drive to your Falcon and VGA monitor you have a powerful graphics system ready to use. Much has been made of the Falcon's sound capabilities with the graphics side of the machine seemingly overlooked, yet the Falcon has the potential to be a brilliant graphics workstation without any additional graphics hardware required. Hopefully there will be more attention paid to the Falcon in the more mainstream computer press.



■ So, what's the difference between these two pictures? Well, the ridiculously cute one of the kid is one of Kodak's promotional pictures, whereas the one with all those lovely red flowers is part of a set we took and processed through Boots. Pretty, isn't it?





Don't worry, *Color Disc PCD* is a lot more exciting than its title screen lets on. If you like mucking about with pictures, this one's for you.

COLOR DISC PCD

To get a better idea of how the Falcon is going to cope with CD-ROM drives and Photo CD we got our hands on an unfinished version of *Color Disc PCD*, the Falcon-specific Photo CD software.

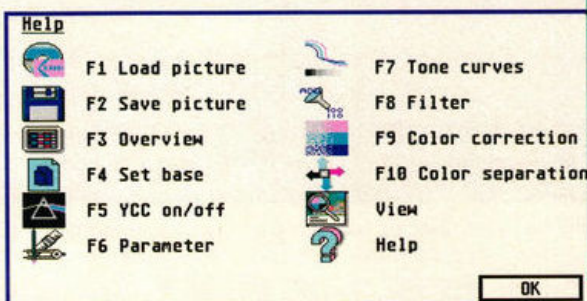
The full version of the program can save pictures in three formats that can be loaded into DTP and graphics applications; TGA, TIFF and EFS. This means that the expensive method of reproducing

transparencies on the pages of a magazine can be bypassed. The images can now be copied directly from a Photo CD and saved in a file format suitable for the DTP package.

There is a host of options available – you can alter the colour balance, set the display size, select normal or reversed images and alter the basic parameters of the program.

Watch this space for the definitive review of the software.

Select the Help menu and this is what you get – a brief explanation of all the icons in the toolbox. Dead useful, that.



Don't you just love being in control?

So, you want to know what it can do? Here are those icons explained



- 1 **Load picture** – load Photo CD image from disc.
- 2 **Save picture** – save the TIFF, TGA or EFS image to your hard drive.
- 3 **Overview** – prints all pictures on disk to the screen enabling you to scroll through them.
- 4 **Set base** – all images are stored in five sizes, or bases. This option enables you to choose which size to display.
- 5 **YCC on/off** – switches between normal and negative images.
- 6 **Parameter** – general program parameters.
- 7 **Tone curves** – switch between gamma and linear tone curves.
- 8 **Filter** – sharpen, soften, mirror and rotate image.
- 9 **Colour correction** – adjust levels of cyan, magenta and yellow to get the best results.
- 10 **Colour separation** – switch between RGB and CMYK colour separation.
- 11 **View** – displays the picture you have selected.
- 12 **Help** – displays the Help menu.
- 13 **This option** – not enabled in the preview version.
- 14 **New options** – the toolbox is yet to be finished.

CD-ROM DRIVES

There's a whole range of CD-ROM drives on the market with prices starting at around £200 and shooting past the £700 mark. If you're looking for one to use with your Falcon, make sure it's Photo CD compatible, if not you won't be able to run *Color Disc PCD*. Expect

to pay £450 for a quality drive with this option included.

If you can afford it, you can always take a look at Cumana's latest 600 Series. They're fully Photo CD compatible, and because the drive uses a standard SCSI interface, you can connect it directly to your Falcon using a SCSI1 to SCSI2 lead. The drive is about the same

size of a small audio CD player and comes complete with a headphone socket and phono outputs for playing audio CDs. The headphone

"You're better off sitting back and watching the prices of CD-ROM drives dropping"

socket on the front of the drive has a volume control next to it, apart from this the only other controls are the power switch and the eject button. The caddy is a small protective tray that is completely removed from the drive, the CD is placed in the caddy which is then

inserted into the drive. Along with the phono sockets are two standard 50-way Centronics SCSI sockets and a SCSI ID switcher. The switcher is set to ID four – this is the normal setting for removable media SCSI devices. The drive is completely silent when in use, pictures and text files load quickly and without problems into a variety of graphics programs.

Cumana's Series 600 is a very expensive option, and you're better off sitting back and watching the prices of multi-session CD-ROM drives dropping quickly. If, on the other hand, you're looking at investing pretty quickly, check out the adverts in PC magazines like *PC Format* or *PC Plus* to get an idea of prices and what's on offer.

● Cumana Series 600, £715.57, call ☎ 0483 503121 for details.



■ Cumana's 600 Series is their first set of multi-session, Photo CD capable CD-ROM drives.

WHAT'S MULTI-SESSION?

Until recently CD-ROM drives have been single session devices, meaning they can only find a single directory on a CD-ROM data disc. This is not normally a problem because a standard CD-ROM disc only has data written to it once when it is manufactured. Because Photo CDs have more data added to them at a

later date, additional directories are added to the disc so that the new images can be found. Multi-session drives are able to find the extra directories and are therefore able to display the pictures. Unfortunately, this makes multi-session drives slightly more expensive than standard CD-ROM drives.

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12" MONO SCREEN
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OPTIONAL FALCON ADAPTOR - SEE BELOW
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CASE COLOUR COMPLEMENTS ST HOUSING
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14" MONO SCREEN
FOR USE IN HIGH-RESOLUTION MODE ON ST-FM OR ST-E
OPTIONAL FALCON ADAPTOR - SEE BELOW
640 X 400 RESOLUTION
CASE COLOUR COMPLEMENTS ST HOUSING
EASY ACCESS TO CONTROLS FOR VOLUME, BRIGHTNESS AND CONTRAST
INCLUDES TILT & SWIVEL BASE

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



■ Pictures like this take a little working out but the results are incredible. This is the work of Mike Miller who works with POV professionally.

If you missed issue 49, turn to page 59 to order your copy now

PERSISTENCE OF

This month Chris Lloyd delves further into the mysteries of the ultimate graphics program

On last month's Cover Disk was the most powerful raytracing package available on almost any computer format, the *POV Raytracer* is capable of producing some truly extraordinary results. It uses a system of script files which hold the information on a scene. Getting to grips with these is the secret of getting really impressive results.

We started last month with three simple balls on a flat plane with a sky. We can quite easily improve on that. *POV* has a vast range of realistic textures to play with. Load up a text editor and type in the listing below, remembering to save it out as pure ASCII text. Unfortunately last month a gremlin crept in and changed around the X and Y axes on our diagram. The X axis is the horizontal one while the Y axis is the vertical one.

This section sets up the camera position ten units above the axes and 200 units into the screen,

looking up and into the distance. The `include` statement enables you to use anything defined in the `COLOURS.INC` file which is a large range of predefined colours. This saves hassles working out the RGB components of colours.

```
#include "colors.inc"
camera {
    location <0.0 10.0 200.0>
    direction <0.0 0.0 - 1.0>
    up <0.0 1.0 0.0>
    right <1.333333 0.0 0.0>
    look_at <0.0 130.0 - 1
    300.0>}
```

Now you can add the floor and give it a texture. In this case one of the built-in textures, waves. The 1.0 on the Y axis puts the plane at right angles to it and the - 10.0 lowers it by ten units. The waves are given a size, colour, frequency and scale. Try fiddling about for a while with these to change the appearance of the plane.



■ The final result of our tutorial is this gorgeous sunset. The sheer power of the *POV* texture commands means simple shapes can be given a very impressive look.

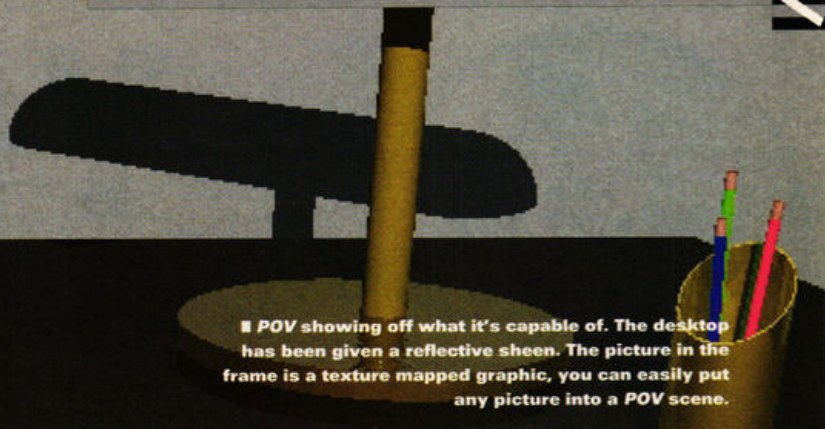
```
object {
    plane { <0.0 1.0 0.0> - 1
    10.0 }
    texture {
        colour red 1.0 green 0.3
        waves 0.05
        frequency 5000.0
        scale <3000.0 3000.0 1
        3000.0>
        reflection 1.0}
}
```

We need to add a floor beneath the

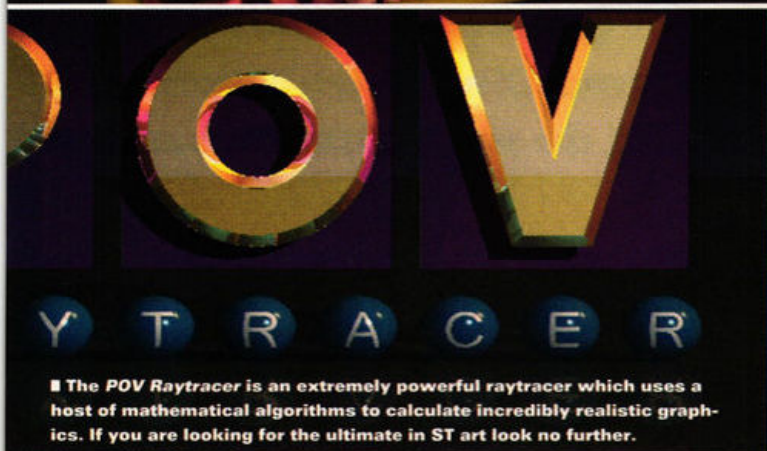
sea so that it can catch any errant rays of light that escape the wave's texture.

```
object {
    plane { <0.0 1.0 0.0> - 1
    11.0 }
    texture {
        colour red 1.0 green 0.3
        ambient 1.0
        diffuse 0.0}
}
```

Now it's time to do the sky, this is a huge sphere encompassing the whole scene. It's given a colour gradient using a colour map. These



■ POV showing off what it's capable of. The desktop has been given a reflective sheen. The picture in the frame is a texture mapped graphic, you can easily put any picture into a POV scene.



These final commands add an orange sun to create the scene of a beautiful glowing orange sunset over the sea.

```
object {
  union {
    sphere { <0 0 0> 40
      texture {
        colour red 1.0 green 0.6
      }
    }
  }
  alpha 0.35
  ambient 1.0
  diffuse 0.0
}
light_source { <0 0 0>
  colour White }
```

The Shapes file is full of quadratic equations defining a basic set of shapes including cylinders, cones and ellipses. The Textures files contain a host of textures which include stones, skies, woods, metals and various predefined surface types including glass and mirrors. It's not necessary to know all the ins and outs of how the textures are defined.

For example to create a column you can start by using the predefined shape.

```
object {
```

VISION PERSISTS

are a series of colours that a texture works between. The numbers in front of the colours indicate the proportion of the colour map each colour takes. The ambient light stops the cloud we're going to add from casting shadows on the sky and making it darker.

```
object {
  sphere { <0.0 0.0 0.0>
    400.0 }
  texture {
    gradient <0.0 1.0 0.0>
    colour_map { [0.0 0.8]
      colour red 1.0 green 0.3
      blue 0.0

      colour red 0.7 green 0.7
      blue 1.0

      [0.8 1.0 colour red 0.7
      green 0.7 blue 1.0

      colour red 0.7 green 0.7
      blue 1.0]}
    scale <400.0 400.0 400.0>
    ambient 0.7
    diffuse 0.0 }
}
```

Now for some clouds in your sky. These are created on a second large sphere, inside the sky one,

using the turbulence texture which mixes up the colours from a colour map. Here the alpha value makes transparent sections in the sphere letting the sky show through.

```
object {
  sphere { <0.0 0.0 0.0>
    259.0 }
  texture {
    bozo
    turbulence 0.5
    colour_map {
      [0.0 0.6 colour red 1.0
      green 1.0 blue 1.0 alpha 1.0
      colour red 1.0 green 1.0
      blue 1.0 alpha 1.0]
      [0.6 0.8 colour red 1.0
      green 1.0 blue 1.0 alpha 1.0
      colour red 1.0 green 1.0
      blue 1.0]
      [0.8 1.001 colour red
      1.0 green 1.0 blue 1.0
      colour red 0.8 green 0.8
      blue 0.8]}
    scale <100.0 20.0 100.0>
    rotate <0 20 0>
    ambient 0.7
    diffuse 0.0 }
}
```

Last but by no means least, you need some light on the scene.

```
}
translate <0 60 -300>
}
```

This example shows how a simple series of shapes can create impressive results. The whole thing consists of three spheres and a plane. You could try altering the colour values to make a more realistic scene. You could also alter the parameters of the wave and turbulence textures to brew up a storm.

One of the basic philosophies behind POV is that there is a small but highly flexible number of built-in textures and shapes. You can build up an enormous number of objects by combining them. These can be held in the include files. The Cover Disk version comes with the three basic include files, colours, shapes and textures.

It's a good idea to print these out so you can refer to them. Each contains a series of declare statements. Following each is the keyword. This is the word you use in your POV script. Following the equals sign are the parameters attached to that keyword.

The Colours include file holds a full list of greys, all the basic colours and dozens of variations.

```
quadratic{
  Cylinder_Y
  translate <0.0 0.0 0.0>
  texture{
    Jade
  }
```

This creates an infinitely tall cylinder, the `translate` command is used to move it about. The texture statement contains the `jade` text. To change the size of your objects you use the `scale` command, the command `scale <2.0 2.0 2.0>` would double an object in every axis. You can apply scaling to textures, many patterns look quite different – especially when magnified or shrunk.

With plenty of practise you can create original and beautiful graphics, although there will be problems. POV is very fussy about its script files, if it finds a letter or bracket out of place it simply won't work. You can spend absolutely ages tracking down small errors in your script files.

We won't kid you that it's easy to get beyond the scenes with spheres and planes – because it isn't. But once you've mastered it, the realm of fantastic graphics awaits you. **stf**

50 techie terms

YOUR ST

There are easier ways to get to know the insides of your ST than taking a mallet to it - glance over these hand-picked terms Clive Parker reckons you could do with knowing about

When you open up your ST and have a look inside, what do you see? A green circuit board with loads of chips and resistors and stuff. Hmm. But apart from that, do you actually know what each little silicon chip does? You may laugh, but it's really useful to actually know this sort of information - after all, the more you know about how your ST works the better you can understand its capabilities. We've hand picked 50 ST techie terms which, if you know what they mean, should make your ST life a lot easier. So, here goes...

if this is the case, you haven't got the option to access the Desk Accessories from these programs.

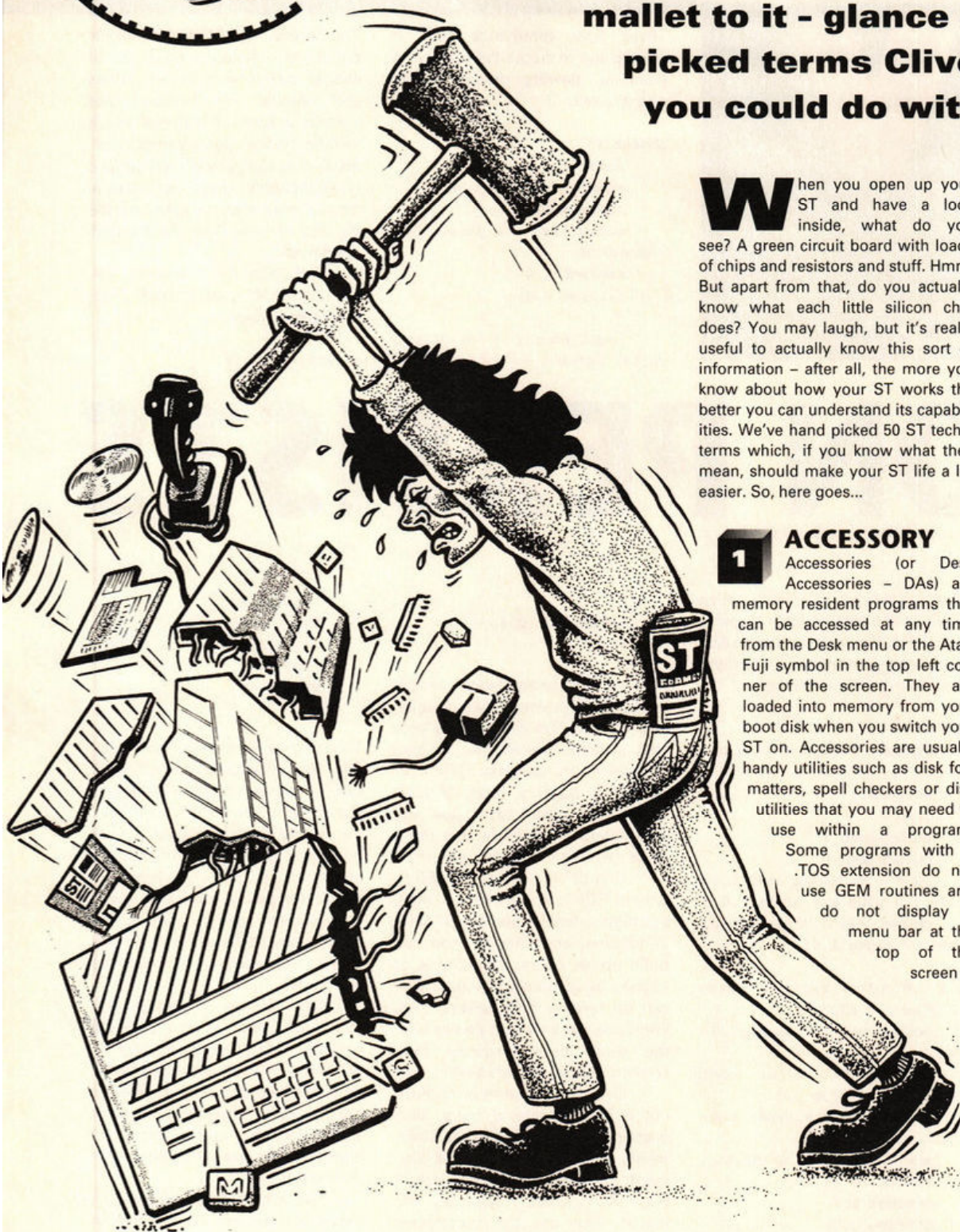
2 ACIA
Asynchronous Communications Interface Adaptor - there are two of these chips in your ST. The ACIA contains the components required to operate a serial interface and can also be used for error recognising and data formatting. One ACIA is used to communicate with the keyboard, mouse and joystick ports and the other controls the MIDI interface.

1 ACCESSORY
Accessories (or Desk Accessories - DAs) are memory resident programs that can be accessed at any time from the Desk menu or the Atari Fuji symbol in the top left corner of the screen. They are loaded into memory from your boot disk when you switch your ST on. Accessories are usually handy utilities such as disk formatters, spell checkers or disk utilities that you may need to use within a program. Some programs with a .TOS extension do not use GEM routines and do not display a menu bar at the top of the screen -

3 ACSI
Atari Computer System Interface - a cut-down version of the standard SCSI interface, the ACSI socket on the back of the ST is where you connect hard drives and Atari laser printers. The port is normally called the DMA port (Direct Memory Access) and provides a fast, direct path for transferring information to and from your ST.

4 AES
Application Environment Services - part of GEM, the AES uses the basic graphics and input primitives supplied by the VDI (Virtual Device Interface) to provide the interface you see on-screen - the windows, icons and menus.

5 ALERT BOX
Alert boxes appear on-screen to supply you with an important message or a warning about the program you are using at the time. There are four types of alert box; the "Stop" alert warns you that you're about to erase data if you continue doing what you are; the "Attention" alert box brings important things to your notice; the "Question" alert box offers you choices such as "do you really want to quit?" - and the "Information" alert gives you some, er, information. Amazing.



REVEALED!

6 APPLICATION

This is just another name for a program. The more powerful programs like *Calamus SL* or *DA's Vector* are called applications because they are used for business purposes. Games aren't applications.

7 ASCII

American Standard Code for Information Exchange – the standard code for data exchange between different machines, used mainly for text files. All word processors have an option for saving files in ASCII format – this means the file is saved as text only.

8 ASSIGN.SYS

This is an ASCII script file used with GDOS (Graphical Device Operating System) to inform the program exactly what fonts to load, where to find them, what screen drivers to load and which printer to install. A clumsy and difficult system to set up, the replacement system SpeedoGDOS (see our review on page 64) looks much easier to cope with.

9 AUTO FOLDER

This is a special folder on your boot disk – or in the boot partition of your hard drive – which loads and runs memory resident programs when your ST is turned on. Similar to Desk Accessories, Auto folder programs are normally additions to or replacements for parts of the main operating system – like replacement file selectors, GDOS, NVDI, DataLite, CrazySounds and MultiTOS. Unfortunately, however, Auto folder programs cannot use any GEM routines because they run before GEM is loaded.

10 BASIC

Beginners All-purpose Symbolic Instruction Code – a programming language that uses instructions and commands very similar to standard English, making it a relatively simple language to master compared to other programming languages.

11 BAUD

Referred to as baud rate, this is the term used to describe the amount of data being transmitted by a modem to another computer. A rate of 2,400 baud indicates that 2,400 bits per second are being transmitted.

12 BIT

Abbreviation for Binary digit, a bit is a single piece of information and can have a value of either 1 or 0.

13 BIOS

Basic Input Output System – the BIOS is the software interface between GEMDOS and the hardware of your ST. The BIOS controls all of the input and output functions, including screen output, printer output, keyboard input, serial functions, MIDI functions and disk input and output.

14 BLITTER

The BLITTER chip found in some STfMs and in all STes is used to move the data around in your memory in large chunks rather than a byte at a time. This means that blocks of data can be moved about very quickly and is ideal for updating the screen in games or in graphics applications. The BLITTER is so called because it performs BLock Image Transfers of data.

15 BYTE

A byte is the term given to a group of eight bits of data and can represent any number between nought and 255 in binary format for example 0=00000000 and 255=11111111. All memory is referred to by the number of bytes of information it can hold; a kilobyte (k) is equal to 1,024 bytes and a megabyte (MByte) is equal to 1,024 kilobytes.

16 CACHE

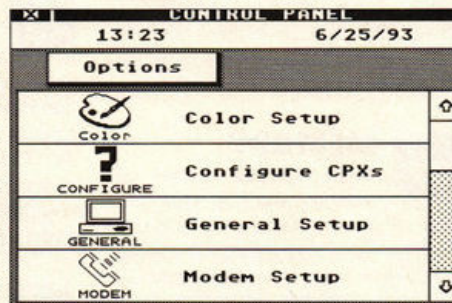
A special area of memory set aside to store most often used commands or data, the cache can be either in the main RAM (Random Access Memory) or built into a processor or hard drive.

17 CD-ROM

Compact Disc Read Only Memory – a CD-ROM disc is very similar to the audio compact discs except that computer data rather than audio data is stored on it. The disc acts as a huge storage area for data – up to 650MBytes – which can be read from the disc and then copied to a floppy disk or your hard drive. The data cannot be altered in any way, so CD-ROM is an ideal medium for databases of pictures, encyclopedias and font libraries.

SpeedoGDOS uses Bitstream fonts, these are available on a CD-ROM disc.

18 CONTROL PANEL



■ This is the new style XControl panel used with TOS 2.06, and on the TT and Falcon030. It can be used on all STs and is available from all Public Domain libraries – check out our directory on page 96.

19 CO-PROCESSOR

This is an extra chip added to your ST to cope with processor intensive applications like CAD (Computer Aided Design) programs. Because your ST is not designed with a co-processor socket built-in, few ST programs actually need one. The DSP chip in the Falcon is a type of co-processor, and the Falcon also has a co-processor socket.

20 CPU

The Central Processing Unit is the very heart of your ST – the Motorola 68000 microprocessor is the chip that controls all of the other hardware in the ST.

21 DESKTOP

Besides being the top of your table where you keep the ST, your ST's Desktop is the display you see on your screen when you turn on your machine. The display is supposed to represent an office desk environment with filing cabinets representing the floppy drives and the trash can representing, er, a wastepaper basket.

22 DIALOG BOX

A window which asks you to make a choice or to select a certain option. To exit most dialog boxes you have to click on OK or Cancel.

■ This dialog box enables you to switch between the ST's different resolutions.

23 DISK DIRECTORY

The disk directory is an area of the floppy disk or hard drive where a list of all the files on the disk is stored – it's this directory that is displayed in a window on the Desktop when you open a drive window.

24 DMA

Direct Memory Access – oversees the floppy disk controller, the hard drive or any other DMA devices connected. The DMA is connected to the CPU's data bus to speed up the data transfer.

25 EMULATION

Emulation is the term given to one computer running software designed for another operating system. Emulators for the ST consist of software alone or a mixture of hardware and software enabling your machine to run Spectrum, ZX80, PC and Macintosh software.

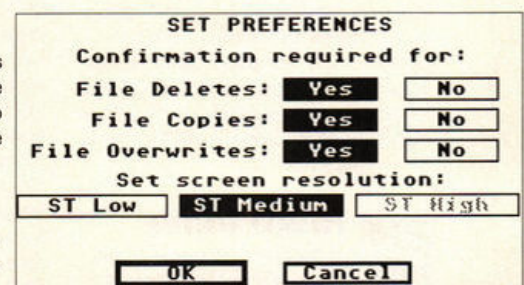
The Spectrum and ZX80 emulators are Public Domain or Shareware and can be obtained from most PD libraries. There are several PC emulators that you can get for the ST, these are normally fitted internally and require some soldering. Spectre GCR is a Mac emulator that simply plugs into the cartridge and floppy disk ports – and makes your ST run faster than the Mac Plus it emulates.

26 EPROM

Erasable Programmable Read Only Memory – a special type of ROM chip that can have software written to it using a special device called an EPROM burner. EPROMs can be erased at a later date and have new information written to them. If you have a switchable TOS board in your ST then the TOS 2.06 chips are EPROMs.

27 FAT

File Allocation Table – an area of a floppy disk or hard drive that holds information about

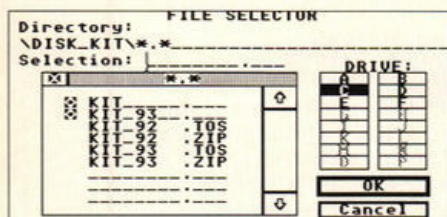


the files, where the file starts and how long it is. If the FATs get corrupted you may lose the data on the disk.

28 FAST RAM

Fast RAM is a term used to describe RAM chips with an access speed which is faster than 80ns (nano seconds), this is not really relevant to the ST because the system only accesses RAM at 150ns with up to 1MByte of RAM installed or at 120ns with 2MBytes or more installed.

29 FILE SELECTOR



Using the buttons on the right you can select files to be loaded or saved from the fileselector.

30 FLOPPY DISK CONTROLLER

This chip controls access to the floppy disk drive – the Western Digital WD 1772. Newer machines like the Mega STE, TT and Falcon have a new controller chip, the Ajax chip, enabling them to read from and write to high density (HD) disks.

31 GDOS

A poorly implemented font standard for the ST, GDOS (Graphical Device Operating System) is badly written, slow, and difficult to install. Because it uses bitmapped fonts the printer output is abysmal. GDOS has now been replaced by SpeedoGDOS which uses outline fonts from the Bitstream library – there are over 1,000 fonts available.

32 GEM/GEMDOS

Graphics Environment Manager – part of the operating system and is responsible for the generation of windows, icons, menus and the pointer (WIMP) functions.

33 GLUE CHIP

The most important of the four custom chips in your ST, the Glue chip holds the system together, linking and controlling the custom chips and sending timing signals to other hardware such as the sound chip (2MHz) and the MIDI and keyboard interfaces (500Hz). The Glue also generates sync signals for monitor operations.

34 HARD DRIVE

A specially magnetised aluminium disk that revolves at

high speeds in a vacuum. Because the hard drive can be more densely magnetised than a floppy disk it is able to hold much more data.

35 HIGH DENSITY

A high density (HD) floppy disk which has a denser coating of magnetic material, it can hold twice as much data as a double-density disk.

36 ICON

A small picture used either on the Desktop to indicate a disk drive, hard drive or the trash can. Using TOS 2.06 or higher, different icons can be designed and assigned to individual files.

37 MEMORY

There are two types of memory used in your ST. RAM (Random Access Memory) is used for temporary storage of operating system, program and file data. All information held in RAM disappears when the power is turned off.

The other type of memory is ROM (Read Only Memory), your ST's operating system, TOS, and GEM are stored in ROM and transferred to RAM when you turn on your ST. You cannot alter data stored in ROM.

38 MFP 68901

Multi-Function Peripheral 68901 – controls the timing and the movement of various types of data and contains several individual devices – these include an 8-bit parallel port, four universal timers and a serial interface.

The data direction of every port bit is individually programmable – port bits can be used for interrupt input and the chip can use up to 16 interrupt sources.

39 MIPS

Millions of Instructions Per Second – this is used to describe how many instructions the main processor or a co-processor chip can process.

40 MMU

The famous Memory Management Unit is one of the four Atari custom chips in your ST, and performs three functions. Its main function is to give your ST a memory address range of 4MBytes.

The MMU also works with the Video Shifter to produce the video signal, the screen image is held in RAM and the Shifter moves the info. The MMU has an integrated counter for addressing memory using the DMA.

41 MODEM

Acronym which stands for Modulator/DEModulator – a handy device used to connect your ST to the phone lines and convert data into a form that can be transmitted to another computer.

Modems are used by businesses to link their offices to a central computer, by bulletin board services (BBSs) like the ST FORMAT BBS (0225 465977) to provide information and chat services and also by fax machines in order to transmit images.

42 MODULATOR

A widget inside all STs (after the STF) to convert the video signal to an RF (radio frequency) signal used by TVs so you can use your machine with a standard TV. The modulator also provides a composite video signal suitable for composite monitors and TVs with direct video inputs.

43 OSCILLATOR

This is a device that outputs high frequency pulses to provide sync signals for the ST's hardware. The ST's oscillator has a frequency of 32MHz which is then reduced by the custom chip set in order to provide suitable operating frequencies for the various devices. It's also sometimes known as the frequency clock.

44 PARTITION

Most hard drives have a very large capacity. To make things easier to organise you can split your drive into a selection of different "logical" drives called partitions – your ST enables you to assign a letter to each of these partitions which are then treated as separate drives by the operating system.

45 SCSI

Small Computer System Interface – a standard interface set up to enable computers talk to other devices like hard drives, laser printers, CD-ROMs and optical drives.

46 VIDEO SHIFTER

This chip converts the image held in video RAM into signals to be displayed on a monitor.

48 WRITE PROTECT

All 3.5 inch floppy disks have a little square hole in them at the bottom left corner. On the back of the disk is a little black tab that can be slid back and forth to either open or close the hole. This is the write-protect tab. If the hole is open (write-protected) you can read the disk but no data can be saved or deleted from the disk, if the hole is closed (write-enabled) then you can read, write and delete data from the disk as normal. Master disks should be kept write-protected to avoid any accidents.

49 XBIOS

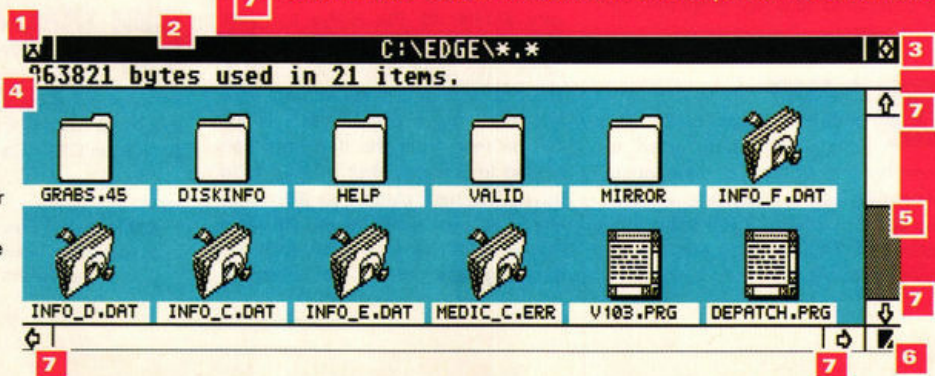
This stands for eXtended BIOS and is the part of TOS used to control the hardware features of your ST – these include the BLITTER, the Video Shifter, the keyboard, sound, disk drives and the DMA.

50 YM-2149

Sound chip used in the ST made by Yamaha. The chip consists of three programmable tone generators and a white noise generator, also programmable. Because of design and money saving shortcuts, the sound chip also controls the parallel printer port with its built-in bi-directional parallel ports. **stf**

47 WINDOW

- 1 Close box – closes the window.
- 2 Move bar – grab this to move the window, also has the window name displayed.
- 3 Full box – expands window to fill the screen.
- 4 Info bar – displays information about the window.
- 5 Scroll bar – use this to scroll through the contents of the window.
- 6 Size box – click here and drag to re-size the window.
- 7 Scroll arrows – scrolls window in smaller steps than the scroll bars.



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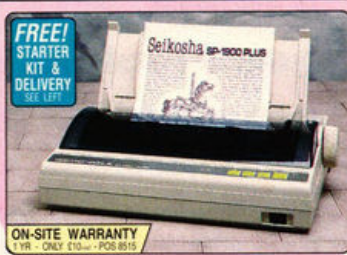
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- Epson and IBM Emulation
- Friction Feed and Push Tractor
- Paper Parking Standard
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STARTER KIT £25
TOTAL VALUE: £210
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SILICA PRICE: £139
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24-PIN 80 COLUMN 240CPS



- Seikosha SL-90
- 24-Pin Dot Matrix
- 80 Column
- 240cps SD, 192cps D, 84cps LQ
- 20K Buffer + 2 Fonts
- Optional Font ROM
- Parallel Interface
- Graphics Resolution: 360 x 360dpi
- Epson LQ850 Emulation
- Built-In Semi-Automatic Cut Sheet Feeder - Paper Parking, Auto Paper Load - Optional Automatic CSF
- FREE Silica Printer Starter Kit

PRINTER RRP £199
STARTER KIT £25
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SAVING: £65
SILICA PRICE: £159
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ON-SITE WARRANTY 1 YR - ONLY £10.00 + POS 8515

240 CPS
80 COLUMN
PRINTER RRP £249
STARTER KIT £25
TOTAL VALUE: £274
SAVING: £85
SILICA PRICE: £189
+ VAT = £222.08 (PRI 830)

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- Flexible paper handling: Standard paper cassette - 100 sheets, Optional 2nd bin - 300 sheets
- Quiet Operation 46dB(A)
- Compact Design with Straight Paper Path
- Cable required: CAB 7500 for PC - £9.95 or CAB 7614 for ST/Amiga - £12.95

PRINTER RRP £899
TOTAL VALUE: £899
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SILICA PRICE: £499
+ VAT = £586.33 (LAS 6004)

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KICK WITH YOUR STICKS

You must have a joystick. There's just no way that you can do without it, if you want to dip into all those brilliant games available for your ST then you definitely need one. Some more serious games use the

mouse but all the buzzy arcade games use a waggler.

There are dozens of joysticks available in a diverse range of designs, shapes and colours. Personal preference plays a big part in your choice. You're either into

What you need is a joystick, matey! If not, you're going to look pretty silly trying to play a game, aren't you? So, take a good look at the wagglers that are on offer here...

hand held jobbies or you prefer your joystick stuck to the table. Beware though, because even the best suckers have a tendency to come unglued usually at a vital moment – sending your character smashing into a wall. More controlled players may find them a boon, the rest of you probably end up holding the stick in your hands.

There are two types of switches in today's joysticks – Leaf-springs and Microswitches. Leaf-springs joysticks are simple, although they lack a positive on/off feel and they are also more prone to failure. Microswitches are little switches with a positive clicking on/off action.

Autofire is a definite boon, if you press and hold the Fire button the stick fires in rapid succession. Although you can often press the Fire button faster for short periods of time it really helps with some games. One handy hint if your ST is playing up, it might well be that you've left the autofire switch on

your joystick switched on. Most gameplayers have their favourite styles and designs, we've rounded up a few of the more popular models and thrashed about playing arcade games with them.

And here's what we thought of them all...

1 TURBO 2 PRICE: £9.99

FROM: QUICKSHOT

CONTACT: ☎ 081 3651993

The Turbo 2 has a classic joystick shape. And it's red! If you're into flight sims with war elements, this little stick is just the job. You lick the suckers and then stick it to your desk – and provided you're not in too aggressive a mood it doesn't move too much.

The Turbo is all micro-switched and has autofire. It's a very positive clicky waggler with two lovely big Fire buttons on the top of the stick. The Turbo 2 is a solid and trusty performer.

STF Rating: 79%



2 NAVIGATOR

PRICE: £15.99

FROM: KONIX

CONTACT: ☎ 0495 350101

A hand-held affair with autofire and microswitches which comes in dark grey, the hot shot red and blue or the limited edition, rather attractive light grey. Hmm. It's not built for you if you have big hands because you might find it uncomfortable. It looks and feels a bit cheap, but it's up to the job without being particularly brilliant. The shape is quite unusual and you might find it fits your hand perfectly, then again you might find it damn weird.

STF Rating: 64%

3 APACHE

PRICE: £7.99

FROM: QUICKSHOT

CONTACT: ☎ 081 3651993

Another slick stick from Quickshot. This one's dark grey, and has a very large end to the stick where they put the Fire buttons. It doesn't have as many finger positionings carved in as the Turbo 2 and the Python. It lacks microswitches, so you're never really quite sure which position it's in. The handle is comfortable and the stick feels very classy. The suckers are good at their job of sucking and sticking and you can be quite energetic with the stick without actually losing control.

Sadly, there's no autofire, but it's still a handy tool.

STF Rating: 76%

4 COMPETITION PRO 5000

PRICE: £13.99

CONTACT: ☎ 0457 876705

This one's been around for a while and is a solid player. It looks like the Zipstick but has a red lollipop bit and Fire buttons as opposed to the yellow ones. The stick has a short travel which you love or hate – this makes the waggler feel like it's very stiff and you end up pushing and pulling much too hard. The Fire buttons are a bit weedy but the Competition Pro is an old faithful.

STF Rating: 71%

5 SURESHOT STANDARD

PRICE: £10.99

FROM: POWER PLAY

CONTACT: ☎ 0457 876705

A red stick with four finger grips plunges into a narrow transparent plastic base unit with the Fire button at the far end. It's quite a small joystick with a microswitched handle and a leafspring Fire button in a pretty funky clear case. It's suitable for hand-held or desktop use even though it lacks the suction cups. It feels a bit tacky but it's responsive.

STF Rating: 68%

6 SPEEDKING

PRICE: £10.99

£12.99 WITH AUTOFIRE

FROM: KONIX

CONTACT: ☎ 0495 350101

A microswitched red and black joystick available with or without auto

fire. It looks and initially feels comfortable but turns out to be a pain to hold for long periods and feels tacky. The model with autofire has what seems to be A and B Fire buttons, but turns out to only have one which is a tad confusing and possibly misleading. Avoid unless you like your hands to ache.

STF Rating: 52%

7 ZIPSTICK

PRICE: £14.99

FROM: POWER PLAY

CONTACT: ☎ 0457 876705

A snazzier version of the Competition Pro and one of the most popular joysticks going. Built in a solid black casing with two Fire buttons – for left and right handed people. Inside there's a microswitch mechanism and the whole thing feels very solid.

On the bottom right corner there's an autofire button but there's no indication of which is the on position and which is off – so you've got to guess that one. When it's on, the autofire is very fast. The stick itself is shaped like a small lollipop, but it feels very sturdy. The Zipstick is one of the best joysticks all round.

STF Rating: 84%

8 ATARI JOYPAD

PRICE: £TBA

FROM: ATARI

CONTACT: ☎ 0753 533344

The latest thing from Atari designed for the Falcon and the

forthcoming Jaguar and, in theory, the STE. The Joypad has a whopping 17 buttons as well as the cross shaped direction button chap. There's a pause button, option button, three Fire buttons and 12 buttons that look like a telephone keypad.

The only game we've seen that uses it is Jeff Minter's *Llamazap*. It's well designed and fits in your hands very comfortably. Having so many controls feels quite strange at first. *Llamazap* uses the numerical buttons to select power-up options. It's good considering it's the only choice.

9 MAVERICK 1

CONTACT: £15.99

FROM: QUICKSHOT

CONTACT: ☎ 081 3651993

A monster on a stick. This one's got a wide flat base with a small red bobble stick on the left half. The other half has two Fire buttons, A and B, a Player One/Two switch and the autofire button. There are two leads which plug into both ports and you can switch between Player One and Two as and when you want. Not such a brilliant advantage though, because two-player games need two joysticks and in games where you take turns both players use joystick one.

Despite the mass of buttons it doesn't have anything extra over the Python. It's not microswitched either. The control stick feels good and is very comfortable, the large base makes it very stable and the whole thing is reminiscent of arcade controls.

STF Rating: 80%

PYTHON 1

PRICE: £10.99

FROM: QUICKSHOT

CONTACT: ☎ 081 3651993

(not photographed)

A very sexy joystick this. It looks almost like a proper combat aircraft stick with finger positioning and two Fire buttons, one under your thumb and the other under your index finger. Its six foot cable gives you the option to sit further away from your television or monitor or just pace up and down in front of it.

It's comfortable and feels very solid. It has autofire and positive feeling microswitches. The base is reasonably wide but the suckers aren't very sucky. Good stick, especially at this price.

STF Rating: 83%

Now you can now look forward to a whole new generation of games with many more controls and options. Smart. **stf**



ST ANSWERS



Wow! Have we got a treat for you. Here are 50 problems – yes, that's the big five zero – answered by the ever knowledgeable ST Answers team. Just sit back and enjoy...

THE STF ADDRESS

Send all your ST related problems to ST Answers, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW. Please don't forget to indicate the type of problem on the envelope.

BEGINNERS



You've just bought your ST, and you're not quite sure what to do next – don't worry, just look for this icon.

COMMS



You want to talk with all the STs around the world, but you need some help? Check this icon out.

DISKS



They're fragile and need to be taken care of, if not they eat all your data. For more details, look for this icon.

GRAPHICS



Do you ever wonder what Picasso could have done with an ST? If you do, this is the place to look for some advice.

HARD DRIVES



Hard drives, eh? Can't live with them, can't live without them. If you need to sort out your bytcrunching beast look here.

PRINTERS



How do you go about stopping a printer that's decided to make a meal out of your document? Find out more here.

PROGRAMMING



Are you into assembly, STOS, GFA Basic or any other language? There's lots for you to have a look at here.

SOUND



You need help in making your ST sound like Van Halen's guitar? No problem – check out this little icon for more info.

ST PROBLEMS



You've got a problem, but you're not quite sure what kind of problem – check out this icon for general ST queries.

DIY hard drive



I want to buy a hard drive for my 1040 STF, but I also want it to be compatible with the Falcon – as I am planning to buy one in the near future. I want the cheapest and largest I can afford.

In the adverts which appear in ST FORMAT it looks like you can get hard drive kits for about £150 and then add a bare hard drive of your own to it – do I need a Link as well? Do I use SCSI or IDE drives?

Howard Angel, Harrogate

stf: A hard drive kit comes complete with an internal host adaptor to convert SCSI signals to the DMA signals that your ST can understand – so you don't need to buy a Link.

When you use the drive with a Falcon, however, you can bypass the host adaptor and link the SCSI connection directly to the Falcon's SCSI2 port. If you want to buy an IDE (Intelligent Drive Electronics) drive it can only be used with the Falcon and fitted internally, you cannot get a host adaptor to link an IDE drive to your ST. Only 2.5 inch IDE drives can be used with the Falcon, these are generally more expensive than the equivalent 3.5 inch drive.

Rubriks cubed



I have installed Rubriks from ST FORMAT Cover Disk 42 on my boot disk, but it causes some programs to crash with two bombs. I have problems with Knife ST and STD-CAT – they both crash on exiting to the Desktop. Both programs work fine if I don't install Rubriks, what's the problem?

Trystan Negua, Truro

stf: We tried out Rubriks with both pieces of software you are having trouble with and everything worked fine. The problem probably lies with Rubriks clashing with some other Auto program or Desk Accessory you use on your boot disk. The way around this is to try deselecting them one by one and rebooting with Rubriks to check when the problem occurs.

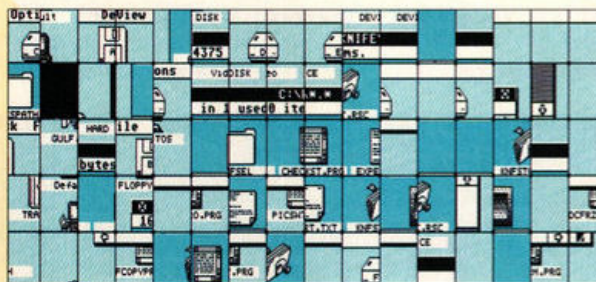
Single-sided



I have bought an STFM with a single-sided disk drive. The problem is that most of my new games don't work. I'm thinking of buying a double-sided drive and I'd like to know which would be the most useful for me to get – an internal or external drive?

Joe Noun, London

stf: The single-sided drive is the cause of your problems because all new games are released on double-sided disks. For game-playing purposes an internal drive would be the most useful for you because most games boot from the internal drive. Fitting a new internal drive is probably the easiest upgrade you can do, all it involves is a straight swap of the drives and a little case cutting to



Mess up your screen with Rubriks, the excellent screen saver from STF Cover Disk 42.



ASSEMBLY POINTERS

There's no need denying it, assembly isn't an easy programming language to learn. So, if you're stuck on something, Tony Wagstaff can always help

Half tone

Could you please tell me what the half tone RAM registers of the BLITTER chip are used for?

M Tomlinson, Humberside

stf: The half tone RAM acts on the source data, the HOP register (see listing below) determining the effect. A value of zero in the HOP sets all the source bits to one – a value of one sets the source to the values contained in the half tone RAM. These

are used in sequence. Unless bit 5 – the smudge bit – of the line number is set, the low four bits of the line number specify exactly which of the 16 half tones opens the sequence, otherwise the first four bits of the source are used.

If the HOP register contains two, the source is unchanged, while a value of three ANDs the half tone RAM with the source – the sequence is derived in the same way as above.

Blitter chip locations

FFFF8A00 – FFFF8A1E
16 half tone RAM registers (one word each) used for special effects
FFFF8A20 source x increment
FFFF8A22 source y increment
FFFF8A24 source address

FFFF8A28 left endmask
FFFF8A2A middle endmask
FFFF8A2C right endmask
FFFF8A2E destination x increment
FFFF8A30 destination y increment
FFFF8A32 destination address
FFFF8A36 destination width
FFFF8A38 destination height
FFFF8A3A half tone operation (HOP)
FFFF8A3B logical operation
FFFF8A3C
bits 0-3 line number
bit 5 smudge
bit 6 hog
bit 7 busy
FFFF8A3D
bits 0-3 skew
bit 6 NFSR
bit 7 FXSR

accommodate the disk eject button of the new drive. Replacement drives are supplied with fitting instructions – Power Computing (☎ 0234 843388) can supply a replacement PC7201 drive for £39.95.

Garbled images



My Spectrum 512 disk from ST FORMAT Cover Disk 38 does not load properly, when I boot the disk, vertical red lines appear before I even get to the Desktop. When I run Spectrum 512 the colour bars run diagonally across the screen and pictures are a mess. What's the problem?
Jeff Thomson, Ohio

stf: The problem is that the display rate of your TV does not match the picture generated by Spectrum 512, some TVs just cannot cope with Spectrum 512's output. To use Spectrum 512 you're going to have to get a new TV or a monitor.

VGA modes



In ST FORMAT 48 you stated that in the Falcon's 640x480 mode VGA monitors can only display 256 colours on-screen. What is the highest resolution that 65,000 colours can be displayed at on a VGA monitor, and can the Atari SC1435 or an SVGA monitor show 65,000 colours at 640x480 pixels? How bad is the flickering in interlace mode on the SC1435? Should I get an Atari monitor or an SVGA monitor?

Mark Elliot, Newark

stf: The highest resolution capable of displaying 65,000 colours on a VGA monitor is 320x480, and the highest resolution possible on the SC1435 in interlace mode is 640x400

with 65,000 colours. Interlace mode is very flickery at the Desktop, but less noticeable when viewing graphics. There's no doubt, your best option is to buy an SVGA monitor.

Printer drivers



I am unable to change the internal fonts on my HP-510 Deskjet from within Timework's Word Writer 2 so I'm stuck with the default Courier font – is there a Desk Accessory that enables me to access the printer from within Word Writer?
M Stollor, Lanarkshire

stf: The Desk Accessory you are after is called Twin Peaks and does exactly what you want. It's on disk PTR.17 from the ST Club (☎ 0602 410241) and enables up to eight functions to be assigned. You can also load and save definitions to disk. ST Club disks are £1.45 each.

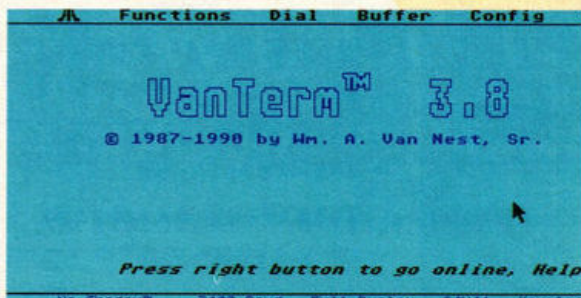
Modematics



I have bought a modem and I want to know what is the best comms program to use it with.

John Best, Cleethorpes

stf: Vanterm is probably the easiest comms software to use if you are new to modems, Freeze Dried Terminal



■ Vanterm is still going strong after several years, it's easy to use and can connect you to other comms freaks all around the world.

Multiple monitor



Can I connect my STFM and my Super NES to a Philips CM8833 monitor at the same time? Does

the monitor actually have stereo sound capabilities?

Ben Bowen, Rhondda

stf: You can connect both your STFM and your Super NES to the Philips CM8833 if one is connected to the RGB input and the other to the composite video input. Meedmore (☎ 051 521 2202) can supply you with the leads that you need, or make them to order. The STFM to Philips lead, part no K2307, costs £15.

The Super NES to Philips composite video lead can be made to order and also costs £15. Another solution would be a switchbox of some kind, Meedmore will be happy to quote you a price. The CM8833 Mk2 monitor is stereo.

Double vision



I have an STFM and I am thinking of getting a Mega STE, will my Atari SC1435 monitor work with the Mega STE?

A Murray, Powys

Getting in step

I want to set my disk drive step rates to 3ms for drive A and 6ms for B, but I can't get the floprate macro on Cover Disk 45 to work. The system variable seekrate at address \$440 doesn't seem to work either.

Matthew Wievel, Dorset

stf: Floprate only became available with TOS 1.4. If you have an earlier version, you need to use the seekrate variable. Unfortunately, you cannot set different rates for different drives using seekrate, a TOS upgrade is the only solution. To call the floprate macro:-

Floprate #rate,#dev

where dev equ 0 for drive A, 1 for B, and rate equ 0 for 6ms, 1 for 12ms, 2 for 2ms and 3 for 3ms, or -1 to inquire what the current rate is.

TOS reference

Could you please recommend a book which lists and explains all the TOS macros?

George Powis, Brighton

stf: Compute's Technical Reference Guide Atari ST Volume Three: TOS lists most TOS calls. You might find, however, that it is a little dated. Your best bet is to take a look at the manual that is supplied with Devpac 3 because it has a much more up to date reference.

Big screen

Is it possible to re-configure the screen so that the screen lines are not stored successively in memory? For instance, I want the first 160 bytes to represent the top screen line, followed by the 320 bytes that are "invisible," then the next 160 bytes for the second line, and so on.

Geoffrey French, Norfolk

stf: It is possible provided you're working on an STE. The linewidth register at address \$FFFF820F should contain the number of words to skip from the end of one line to the next, in your case 160 (320 bytes).

You can use this in conjunction with the hscroll register, at

\$FFFF8265 to achieve fast scrolling, which is most probably what you want to do.

The hscroll register contains the bit offset of the first screen pixel, changing this enables you to scroll by up to 15 pixels. However the end of line address is rounded up to the nearest 16 pixels before adding the linewidth value, so unless hscroll is zero, linewidth needs to be adjusted accordingly.

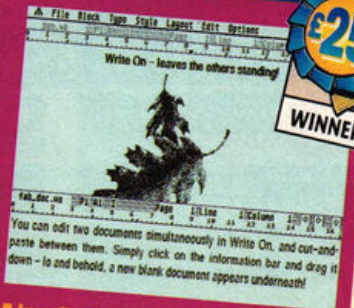
Subtract four, two or one for low, medium and high resolutions respectively, when hscroll is non-zero. The high, medium and low bytes, extended to word lengths, of the screen base address are placed in \$FFFF8201, \$FFFF8203 and \$FFFF820D.



WRITE ON... AND ON...

You can install Write On to run from a RAMdisk in a similar way to the Timeworks method explained in ST FORMAT 46. You have to install Write On from scratch. Install your RAMdisk and then run the Write On installation program that comes with it. When asked which drive to install to, select hard drive and enter the RAMdisk drive letter.

After Write On is fully installed to the RAMdisk, copy all the files from the RAMdisk to a blank floppy disk and then configure your Maxidisk/COPY.TTP setup to copy the files into the RAMdisk at boot-up. Write On now runs at lightning speed.



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stf: The Atari SC1435 monitor works with all STs – and that includes the Mega STE.

Compression problems



My Brother HJ1001 printer combined with Write On gives strange results – when I print pictures that I have created with Hyperpaint, they come out compressed horizontally, why is this?

Ken Norman, London

stf: You are having problems because you are creating your pictures in medium resolution, while Write On treats all IMG files as if they have been created in high resolution. Use a mono emulator like Sebra – from Cover Disk 40 – to create your graphics and import them into Write On.

Double switching



Is there a switcher or cable which could enable me to connect a Gravis Mousestick to both joystick ports at the same time? This would save wear and tear on the joystick ports.

John D Chamberlin, London

stf: There is no such device available, but why not get a normal joystick and mouseport extension cable? They only cost around £5 and you can get them from most good computer stores like Tandy.

Dead mouse



I have a problem with my ST mouse. Sometimes the buttons don't work and the mouse pointer stops completely. There is nothing wrong with the ports because I tried a friend's mouse and it works fine.

Graham Smea, Dublin

stf: The problem here lies with the mouse cable itself, the conductors break after repeated movement. The answer is to throw it away and get a new mouse, many companies supply replacement mice and Gasteiner Technologies (☎ 081 365 1151) can provide original Atari mice for £8.

SCSI too



I own a Falcon and have been unable to find a SCSI1 to SCSI2 lead to connect my Apple hard drive with 50-way Centronic D connector, where can I get this lead?

Peter Bradley, Stockport

stf: Meedmore have SCSI1 to SCSI2 leads in stock, part no K4216. The price is around the £25 mark, call



STOS STUFF

Are you stuck, stalling, or just getting stale? Billy Allan stands around and studiously starts answering your sticky STOS stinkers. Phew!

An author writes

In the June issue of ST FORMAT you stated that the text viewer and intro screen of the Slug 2092 game were written in assembly. This, however, is not the case. The intro screen uses a remapped PI3 picture which is then SKOP'ed onto the screen.

The text viewer then works out the text onto the screens and copies them up and down the screen. I would appreciate it if you could set the record straight. The full source code for the game is available for a £5 fee.

Mark Terry, Romsey

stf: The part of the intro screen we were referring to when we said it was written in assembly was in fact the scrolling rasters, not the rest of the program. I hope that anyone who wants to see exactly how you did it will take up your offer and buy the source code from you.

You can't come in

I have written an address program, but I want to have a password system where the program

resets if the password is not entered within a certain time. Can you help?

D Erglis, Brynna

stf: This listing ought to help. It waits until either the correct password is entered or the time limit expires or they get the password wrong. The REMmed line resets your ST if you re-enable it.

```
20 PW$="Password" : CL=1
25 timer=0
30 print "Enter password:"
40 G$=inkey$ : if G$="" ↵
    then goto 70
50 if G$<>mid$(PW$,CL,1) ↵
    then print : print↵
    "Incorrect!" : wait ↵
    key : goto 80
60 inc CL
65 print G$;
66 if CL>len(PW$) then ↵
    print : print ↵
    "Correct!" : end
70 if timer<10*50 ↵
    then goto 40
80 remloke$70,leek($4)
```

Compiler query

I have written several small programs which I have saved as standalone programs. The thing is, I need to copy the whole STOS folder around, which takes up a large amount of disk space. Does

the Compiler generate one file for its programs? Also, do I need to send a copy of my programs to every PD library to get them distributed?

David Sykes, Halifax

stf: The Compiler turns your BASIC file into one program file. These can then be packed with packers such as Ice or SpeedPacker and quite often end up at around 30K to 40K long. If you want to release your programs to PD, then it's as well to send them to as many libraries as you can, but if your program proves popular it's bound to make its way around without your help.

Falcon STOS news

It now seems very likely that a version of AMOS professional (the Amiga version of STOS) will be coming out for the Falcon. Europress say they are not handling it, but it is rumoured that Jawx (the original programmers of STOS) are producing it on their own. STOS itself works alright on the Falcon, provided you have the patch programs which have appeared on previous Cover Disks. The key repeat speed goes a bit haywire and another couple of very minor bugs appear. It runs under MultiTOS, but does not exit properly. This also goes for compiled STOS programs.

Meedmore for current prices and more information on ☎ 051 521 2202.

Sticky solution



In ST FORMAT 46 it was suggested that isopropyl alcohol could be used to remove disk labels, a rather messy procedure. An easier method is to leave the disk on top of the ST just above the power supply for about 10 minutes, the glue softens and the label simply peels away.

G Longley, Manchester

stf: Thanks for that useful tip, G.

Ker-aashh!



I have a problem with the video chip of my ST (I think), when it gets hot it crashes and the screen gets corrupted. I have taken it to be fixed locally but nothing seemed to have changed.

Geoffrey Harrison, Stalybridge

stf: You should send your machine to a repair centre that specialises in STs like Analogic Computers (☎ 081

546 9575). There is a standard charge of £60 and they also arrange courier collection and delivery.

Llamatron blues



I am having a problem with the 1MByte version of Llamatron when running from my Gasteiner M*^% drive. The game crashes after I reach Level Seven, yet the 512K version works fine. The 1MByte version also crashes when I run it from floppy with the hard drive running. Llamasoft were unable to give me any advice. Any ideas? I have a 1040 STFM running TOS 1.2.

Colon Watson, Dundee

stf: Your problem comes from TOS 1.2 as it causes trouble when used with a hard drive. Upgrade to TOS 1.4 or install a TOS switcher from Compo Software (☎ 0480 891819), their STFM model costs £59.99.

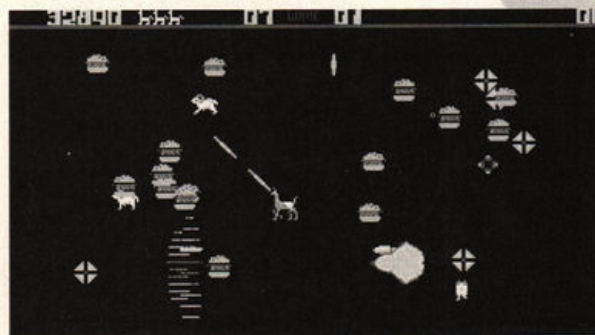
Size matters



I find that the editing software supplied with my scanner is too limited, I need to be able to edit and adjust the size of a printed image. What do you suggest?

George Merriman, Nottingham

stf: The ideal program for you is called Multiprint, from the ST Club. It



■ That laser-spitting llama's back for some more burger-bashing mayhem – just make sure your ST's running TOS 1.4 (or higher).

enables your output to be configured and sized to your exact needs, the last version now has a fast print option. Multiprint costs £9.95, call the ST Club on 0602 410241 for details.

GFA drafting



Can I still get the GFA Draft Plus 3 manual?
Colm Concannon,
Co Galway

stf: The GFA Draft Plus 3 manual is still available from GFA Data Media for £25, call them on 0734 794941 or send a cheque to GFA Data Media (UK) Ltd, Box 121, Wokingham, Berkshire RG11 1FA.

Key to the problem



My STFM keyboard is starting to wear out, not the mechanical bit, just the small rubber bits under each key. I contacted Atari but the best they could do was offer a replacement keyboard for £100. Is there anywhere I can get the parts?
Roger Pyle, Redruth

stf: System Solutions have just the thing, a packet of little rubber disc-shaped thingies called Key Clicks. The full set costs £29.95, contact System Solutions on 0753 842212.

Falcon compatible



Are all hard drives for the STFM compatible with the new Atari Falcon? I have a 52MByte Protar drive and I would like to know before I buy a Falcon.
S Corcoran, Eire

stf: If your Protar drive is one of the newer ones then it has a SCSI connector that can be directly connected to the Falcon's SCSI2 port. Generally, Atari compatible drives that use a standard DMA lead cannot be connected to the Falcon.

Last July, Atari said that they would be supplying an adaptor lead to connect DMA drives to the Falcon, but the promised lead has still not materialised. We wait in anticipation.

High quality



I intend to buy a high quality colour monitor shortly, I currently own a 520 STFM but I want to buy a Falcon in the new year. Is there a monitor compatible with both machines, and if so, how much is it?
Bruce McKie, Stranraer

stf: It depends on whether you wish to use your STFM in low and medium resolutions or in high resolution. If you wish to use your STFM for colour work then the Philips CM8833 Mk2 is compatible with both machines, being able to show all but the very highest Falcon resolutions and being able to display true colour.

If you are not worried about the ST's colour modes then get a colour VGA or SVGA monitor along with an ST to VGA adaptor from First Computer Centre, this displays the STFM high resolution mode.

If you can afford the extra then get an SVGA monitor, a normal VGA monitor is fine for the Falcon, but if you are going to use the Screenblaster Overscan board to give you higher resolutions then SVGA is best. First Computer Centre (0532 319444) sell the Philips CM8833 Mk2 for £224.99 and the VGA adaptor for £19.99. Any PC mail order house can supply a colour SVGA or VGA monitor, prices range from £150 to £250 depending on what you buy. Get yourself a copy of PC Plus magazine, they have plenty of adverts featuring VGA monitors.

Speedy Gonzales



I have bought a 68010 processor to replace the 68000 in my ST to accelerate it, I was told that it was a direct replacement for the old processor and runs at 8MHz rather than 10MHz. Do I have to change any other components when I install it in my ST?
Trevor Rogansky, Skelmersdale

stf: You can replace the old 68000 with a 68010, the two processors are 99% compatible with each other, although you may have problems with the occasional piece of soft-



GFA WORKSHOP

Is your GFA Basic getting rusty? Are your programs suffering from it? Do yourself a favour and tune in to Mac Marsden's workshop

Resourceful

I have been using the Resource Construction Kit, supplied with GFA Basic 3, to make dialog boxes, but I am having huge problems with the icons. Where can I obtain a program that makes suitable icons and icon masks that can be loaded directly into the Resource Construction Kit?
Michael McTernan, S Yorkshire

ware falling over. Unfortunately, it is not going to increase the speed of your ST, the 68010 may be rated at 10MHz but the speed of operation is governed by the ST's clock which runs the main processor at 8MHz. The best way to increase the speed of your machine is to buy an accelerator board - System Solutions have a wide range of boards available for most STs starting at around the £130 mark, give them a call on 0753 832212 for the latest prices.

Sample and hold



I have bought the Lynex sampling system for my ST and I would like more technical details about it and how to upgrade my software and hardware. Can you supply me with the phone number of Lynett Systems Ltd so that I can contact them directly?
Roberto F Rodes, Alicante, Spain

stf: Lynett Systems Ltd can be contacted on (+44) 223 420525.

Malloc usage



The GFA Basic v3.5 MALLOC command (or GEMDOS 72) does not allocate memory above 32767 bytes - if you want more memory space available then use the following code:

```
no_bytes%=100000 ! This can be
any value you wish
DIM space1(no_bytes%) !
Reserve memory
stadr%=V:space1(0) ! Get the start
of the reserved memory.
If OPTION BASE is one
then replace (0) with (1)
```

Now you can load or put whatever you want in the reserved memory area using the start address in stadr%, remember not to overflow the reserved memory because this

stf: In ST FORMAT 48 we gave you the DESKICON.TOS which contains two programs Makelcon and Iconjugl that help create and manipulate desk icons - these programs should solve your troubles.

Picture this

How can I load a Degas Elite file in GFA Basic and check if it is compressed or not?

K Eaton, Liverpool

stf: The following listing loads in and displays an uncompressed Degas Picture. Remember that a

crashes the ST. To clear your ST's reserved memory just use the following code:

```
ERASE space1()
```

You can use any variable names you like, but remember that the dimensioned array must have the 1 character.

Itai K Ndoro, Harare, Zimbabwe

Memory mania



In the June issue of ST FORMAT there appears to be an advert for 8MByte memory upgrades, or was I dreaming? Wouldn't this expansion be very bulky, slow and expensive? If not then I would be interested in this upgrade because I am quite heavily into using my ST for sampling, and the more memory, the better. Can I install one in my STE?

Leon Harris, West Sussex

stf: Marpet Developments have developed the 8MByte upgrade board for the Mega ST, STFM and STE. The only problem is that you need to have a 4MByte machine and you must have TOS 2.06 installed if you want to use this upgrade.

The STE version is quite small and plugs into the 68000 processor socket, the board itself has two SIMMs sockets which can be used for two 4MByte SIMMs or two 1MByte SIMMs, so you can upgrade to 6MBytes first and then buy the 4MByte SIMMs later. The boards cost £399 with SIMMs installed or £109.99 without memory. Call Marpet on 0423 712600.

Will it, won't it?



When is the Falcon going to be on sale in the shops in its consumer casing?

Jason Humber,
Isle of Wight



I CAN DO IT!

If you have the icon programs from Cover Disk 48 and you are still saving for your TOS switcher, then here's a little tip. Get a copy of Teradesk - the PD replacement Desktop - and change the ICONS.RSC file to ICONS.RSX.

Now copy the DESKICON.RSC file from Cover Disk 48 to your Teradesk program disk and rename it to

ICONS.RSC. Reboot your ST running Teradesk and all those icons are now installed.

M J Hooton, Cleveland

stf: Thanks for the tip. Teradesk is available from any of the PD libraries in our PD directory (page 96) or you can download it from the STF BBS, 0225 465977.

normal file is 32066K long and the compressed file could be anything up to 32066K. The file extensions are different - .PI* for an uncompressed file and .PC* for a compressed file. So if you are loading through a fileselector you can choose which file type you wish to select.

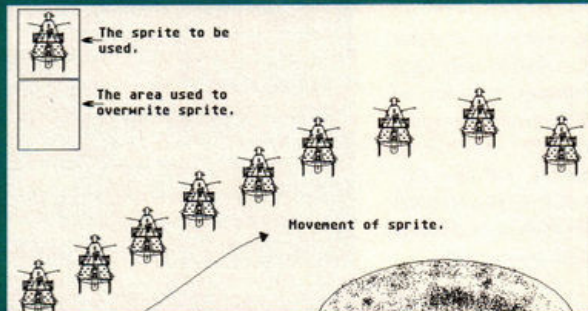
```
OPEN "i", #1, "YOUR FILENAME.
HERE" ! open file
col$=INPUT$(34, #1) !
get colours
screen$=INPUT$(32000, #1) !
get picture
CLOSE #1 ! close file
SPUT screen$ ! display picture
```

```
VOID XBIOS(6, L:
VARPTR(col$)+2) !
set colours
```

Moving sprites

How can I create a sprite in GFA Basic and move it on the screen?
Paul Orr, County Durham

stf: The commands you need are GET and PUT. As you see from the picture (right), the sprite is in the top left corner of the display. You can get it by using GET topx, topx, botx, boty, a\$. You also need an area the same size to overwrite the sprite



■ This shows you the original sprite and the proposed movement for it.

which follows the same procedure, but use say b\$ this time. At this point load in your background. Next, work out the direction and speed of the movement. To use the sprite use

the command PUT x%, y%, a\$, then after a short delay cover the sprite with the blank by using the PUT x%, y%, b\$. Repeat in a loop altering the x and y coordinates as required.

stf: The Falcon is on sale now, although not in the large electrical outlets like Dixons. Atari have set up a dealer network to provide expert help and backup to Falcon owners rather than sell them through the chain stores. Different people at Atari tell us different things about the casing, so we're not sure. Get in touch with Atari on ☎ 0753 533344 to find out where your nearest dealer is.

A Star is drawn

I have a new Star LC24-200 colour printer and I cannot obtain colour screen dumps. Can you tell me the best software to use with this printer, it must be able to load a wide range of printer formats.

J Whitlock, Bedford

stf: You have just described Imagecopy 2, an excellent program distributed by the ST Club. It can load, display and print all of the usual Atari picture formats and can also cope with GIF, TIFF, IFF, XIMG, MacPaint, OS/2 Bitmap, PCX, Targa and Windows Bitmap (BMP). Imagecopy 2 is priced at £19.95 from the ST Club, call ☎ 0602 410241.

Which printer?

I want a printer to show off the capabilities of the Atari Falcon. How good are inkjet printers?

Anthony Lowe, Redcar

■ Load, display and print a wide range of picture formats with Imagecopy 2, from the ST Club. If you want to find out more about this great image utility, check out the full review in ST FORMAT 49.



stf: An inkjet printer is a good idea, it can give you near laser quality at a fraction of the price. If you want a mono printer then the Canon BJ-200 is an excellent choice, it uses Epson LQ drivers so all software will work with it. If you want a colour printer for graphics work then go for the Deskjet 550C coupled with something like Imagecopy 2. First Computer Centre can supply the Canon BJ-200 for £347.99 and the Deskjet 550C for £539.99, call them on ☎ 0532 319444. Imagecopy 2 costs £19.95 from the ST Club, ☎ 0602 410241.

DC revisited

In ST FORMAT 47 Duncan Taylor asked where he could get DC Utilities - well, Freaks PDL in Bristol have all the DC utilities and, as a bonus, they create custom PD disks for you for £2.50 per disk. Freaks are at 29 Leap Valley Crescent, Downend, Bristol, BS16 6TQ. There are a lot of good PD libraries that never get the credit they deserve.

Neville Wilson, Birmingham

stf: Thanks for the info on Freaks.

Until the blitter end

After using the Spectrum emulator reviewed in ST FORMAT 31 on my STE, I noticed that I could no longer control my BLITTER from the Desktop menu. Games have slowed down and STE demos no

longer work, and showing text from the Desktop results in a ghosting effect. Using HiSoft's Check ST program from ST FORMAT Cover Disk 42 informs me that my machine doesn't have a BLITTER. How can the Spectrum emulator destroy the BLITTER in my STE?

Anthony Brearly, Ibstock

stf: It hasn't, you have a hardware problem that occurred at about the same time as you used the Spectrum

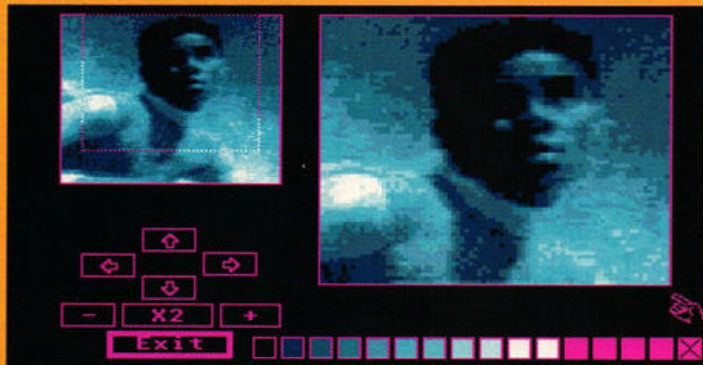
emulator, pure coincidence. Ladbroke Computing International have an excellent repair service with a minimum charge of £35.25, give them a call on ☎ 0772 203166.

Nimbus obscureus

Are the programs Sage Accounts, Payroll and Wordstar available for the ST? We use them on our RM Nimbus computer at school



Hyperactive



■ Hyperpaint 2 is the official Atari paint package for your ST and is totally GDOS compatible. But can it read clipart files?

I have just got a 1040 STE and I want to know if I can use Hyperpaint 2 to work on clipart pictures, I cannot afford Calamus.

James Sumone, Derby

stf: With Hyperpaint 2 you can load in pictures in several different formats

including IMG, Degas and Neochrome - so, you should be able to see most of the clipart available from PD libraries. The problem, however, is that most clipart is designed for high resolution screens, so you need a mono monitor or mono emulator to load the high resolution pictures.



■ Well, it turns out you can load in a whole range of different file formats into Hyperpaint 2 - this one, for example, is a Neochrome picture.

but I have not seen them advertised in the pages of *ST FORMAT*.

Duncan Laird, Powys

stf: No, these programs are not available in *ST* versions although there are *ST* programs to cover all these subjects. Alternatively, you could get a PC emulator for your *ST* to enable you to run PC software (the RM Nimbus is a PC), First Computer Centre (0532 319444) has a range of PC emulators with prices starting at £95.99.

Talk to me



The TT and Mega STE have Appletalk compatible LAN (Local Area Network) sockets, is there any software available which enables me to connect my TT to an Apple network so I can access the laser printer and the Apple Macs?

Philip Bath, Surrey

stf: No, the software used in *ST* networks is not compatible with Appletalk.

It's a washout



I have a Ferguson TX 3MC01D0 monitor TV which I am trying to use with my *ST*. I can get a picture, but the screen is washed out and adjusting the brightness doesn't help. What's up?

J E Lowe, Manchester

stf: The signals from your *ST* are not entirely compatible with the Ferguson TX range of monitor TVs. Meedmore have the correct lead part number K2040 costing £16, call Meedmore on 051 521 2202.

I can't do it!



I have been using the Makelcon program from Cover Disk 48 but I have been unable to display the icons on-screen either on the Desktop or in any of the windows. I have an STE.

E G Mitcham, Solihull

stf: The DESKICON.RCS files created by the Icon Juggler program can only be read by a machine that is using TOS 2.06 – your *STE* has either TOS 1.6 or 1.62 and is unable to change the Desktop icons to user defined ones. To use these icons in your *STE* you have to install a TOS switcher, the Analogic Computers board costs £59.95 and is easy to install. Analogic are on 081 546 9575. Check out the I Can Do It! box-out on page 56 for another solution.



MUSIC AND MIDI

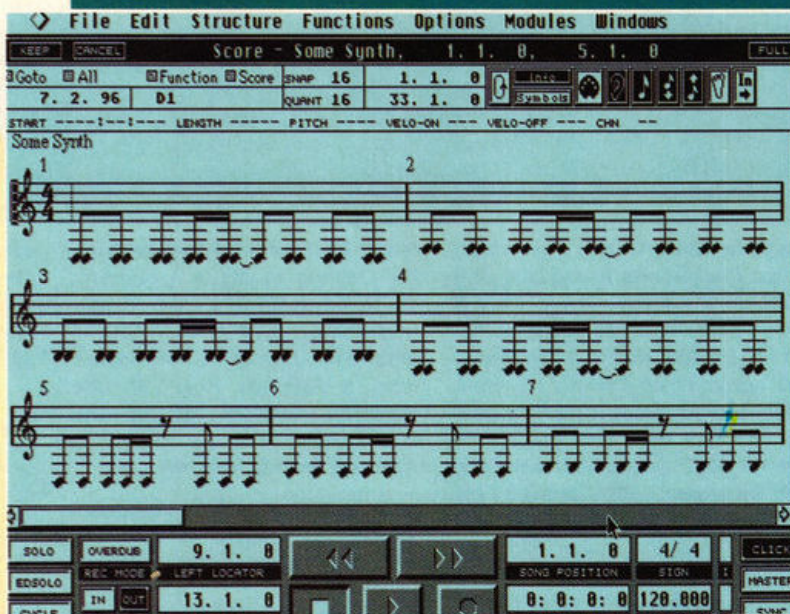
Dude, rave, respect... and all that. Oh, and here's Andy Curtis to sort out all your music and MIDI queries

Back to Cu-basics

I use Cubase 2 with my 1040STE – with 2MBytes of RAM – and a few sound modules. I am having diffi-

Sync or swim

I am using the Yamaha MT3X four-track portable studio and trying to get it to synchronise with Dr T's Realtime sequencer using a Tascam MTS-30 MIDI Tape Synchroniser. I've plugged it all together but all I ever get is a plain tone through the system.



Probably one of the best sequencers in the world, Cubase is as popular with professional musicians as Notator. It's incredibly easy to use and arranging your songs has never been easier. So, what's the problem?

culty when I need to transpose a part to a different key – when I do, it always reverts to its old pitch when the next section comes along. Do you know of a more permanent way of altering the pitch of a part in Cubase?

I cannot believe that such an excellent program like Steinberg's Cubase does not have a better facility for transposing.

William Hartford, Coventry

stf: The problem here is that you are only transposing the part instead of transposing the whole track. If you highlight the track you wish to work on in the track list and then press <CTRL> and <I> the Track Control menu appears.

All the changes you make here affect the whole track and not just the currently edited part. As Cubase tracks can be made up from many parts, this should achieve the effect you desire.

Oh dear



I have a 1040 STE and every time I put a disk in the drive it says, "Drive A is not responding – please check the drive or insert a disk." What's wrong?

Rick Szabo, Essex

stf: You've either got a broken disk drive or your drive controller chip is faulty, the only thing you can do is get it repaired. Call WTS Electronics on 0582 491949, they have an excellent repair service and can also arrange collection of your *ST*. They have a minimum charge of £49.95,

this package is reliable and practical to use?

Mark Peterson, Cambridge

stf: The usefulness of any software depends very much upon the specific needs of the individual. On Stage holds up to 32 MIDI files in memory and can be used on stage without a monitor. If that's what you need, it's well worth the money.

Getting settings

I am currently using Cubase with the Roland Sound Canvas and I would like to know if it's possible to save my songs so that when re-loaded the Sound Canvas automatically sets up correctly for my song. At present, many of the voices have to be reset manually for each song.

Sandy Doe, Glasgow

stf: The important thing to remember here is setting up the program changes numbers within your sequences. Each track has a MIDI program number associated with it. If you set the number to "1" you should hear a piano sound. This is because the sound module changes its voice as you change the program number. If you set program numbers for all the instruments in the track list and then save the arrangement you find that when it is re-loaded all your settings have been restored.

PD MIDI

Do you know where I could obtain some MIDI files from? I have a 1040STE, Steinberg Pro 24 connected to a Technics KN800. I tried to load the MIDI song file which was on *STF* Cover Disk 46 but the program crashed. Do any of the PD Libraries have MIDI song files?

Juan Fernandez, Kettering

stf: Loads of PD libraries have a MIDI file section. Try contacting a few and see what is on offer – check out page 96 for our PD Directory. If you have a modem there are large MIDI file areas on many BBSs. Version 3 of Pro 24 does load MIDI files with no problem so I suggest you get hold of a few more and try them out.

Confidence on stage

I am interested in using MIDI files with the On Stage software from Hands On MIDI. Can you tell me if

but be warned, if your disk drive has to be replaced it may cost a bit more.

● If you have a question to ask our team of experts or have a useful tip you want to share with us, send it to *ST Answers*, *ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW.

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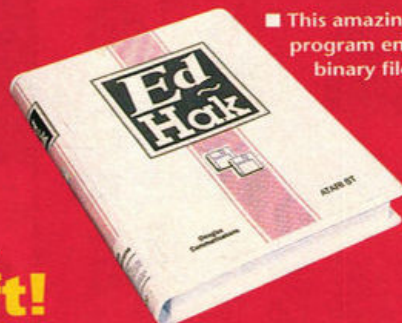
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BUBBLEJET PRINTER

Sleek and stylish, the BJ-230 is the latest Canon bubblejet printer. Clive Parker took one of the first glimpses of it

Just look at that output! Now you too can print out meaningful words and tranquil pictures and the BJ-230 can give them the quality they deserve.



Canon's new bubblejet is the first true desktop wide carriage printer available for small business or home use. It is a stretched-out version of the BJ-200 we reviewed in *ST FORMAT* 46, though it's longer it uses all the features we found so good on the A4 model.

Because of its extra width it can pass A4 paper through in landscape mode as well as in standard portrait orientation. This is not as wide as a standard 13.6 inch wide carriage printer, but "reduction mode" squeezes the information from a 136 column page so that it fits on an A4 page in landscape mode. This enables a 136 column by 66 line spreadsheet

to be printed out on a standard sheet of A4 paper, and because the BJ-230 has a high output resolution of 360dpi it is perfectly legible.

It's a classic

The printer uses the vertical design pioneered by Canon with the BJ-10, up to 100 sheets of paper sit in a feeder at the back of the machine and feed through down through the printer and out the front, falling either onto a desk or onto a wire support. There's no tray to catch the paper after it has fed through the printer, if you use the wire paper catcher it becomes obvious that it is an afterthought because it is easy for

It's long, beautifully shaped and produces fantastic output. The BJ-230 is another winner from Canon.



pages to fall onto the floor. A retractable arm like that on the BJ-200 would have made a much better impression and been more effective.

It's easy to get at the innards of the printer to change ink cartridges and switch to envelopes or heavy gauge paper, and all the other controls are just as convenient. A small flap on the top left of the printer contains 12 dip switches, these are used to set up the printer so that you can use Canon BJ-10 or Epson LQ emulations, set the paper length and choose the typeface and language.

In Epson mode the printer has a more than adequate eight built-in fonts so you can create interesting looking documents even if you only use plain ASCII files, whereas in BJ-10 mode only Courier and Prestige fonts are available.

Canon's design of their bubblejet range has been revolutionary in the printer world, the BJ-230 is no exception with the minimum number of controls to do the job. The top of the printer boasts just four buttons to control all functions, the power switch is a straight on/off operation. Each button provides its own function, off line, form feed/line feed and print mode. Pressed in pairs they provide envelope printing, two-thirds reduction for A4 landscape printing and switch to cleaning mode.

After ten minutes with the manual you should be able to get the printer up and running - it really is that easy to use.

Bubbling along

Bubblejet printers are a compromise between the quality and expense of a laser printer, while the bubblejet can produce laser quality output, it is

much more economical to run than a laser. The trade-off, however, is in speed; bubblejets are just not as fast as lasers yet, but you can produce some brilliant output with one that's combined with a modest ST setup.

Verdict

The BJ-230 is an excellent printer and produces output to the same high standard as earlier bubblejets. Canon's attention to detail ensures the printer can be used straight out of the box with the minimum of controls to get used to, so, if you need a wide carriage inkjet then you look no further than this printer. **stf**

PRINTING OUT

If you have either of the word processors *Write On* or *Protext*, you'll find they are supplied with Epson LQ 360 dpi printer drivers and work perfectly with the BJ-230.

As always, all software provided with Epson drivers can be used immediately with the Canon printers by adjusting the relevant dip switch, and because all serious software has Epson printer drivers you should be able to print from any application. You can also use any GDOS application with the BJ-230 using the drivers supplied with SpeedoGDOS.

Using the printer with graphics programs, we found

that the quality of output depends on the software generating the image. Programs like *Pad 2* and *Degas Elite* generated banding in large solid blocks of ink, yet the same image printed via *Calamus* reproduced the images without noticeable banding.

Text output from word processors was excellent, sharp and well defined. Text generated by *Calamus* tended to be a bit blurry which was caused by the ink soaking into the paper. This problem is fairly common when you're using coarser quality paper so try using a finer paper if you want much better results.

Canon BJ-230 A3 bubblejet printer

£468.83, Canon UK
☎ 081 773 3173

Highs

■ Quiet, efficient, runs with practically all software, easy to set up and use.

Lows

■ Ink can soak into paper and blur images, still rather wide for the average desktop.

What else?

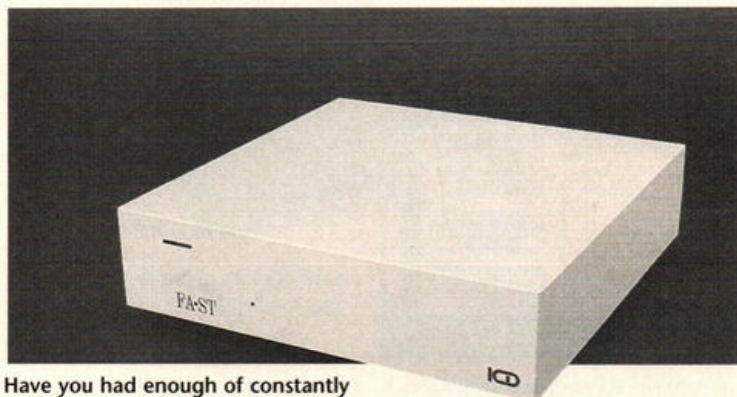
■ HP Deskjet range, Hewlett Packard ☎ 0344 369369.

Mono Deskjet 510, £329, Deskjet 500C (colour), £459, Deskjet 500C (colour), £669.

■ Epson Stylus 800 Inkjet, £445.33, Epson UK Ltd ☎ 0442 61144.

ST
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85

ICD FAST HARD DRIVE



Have you had enough of constantly swapping disks when you're working on your ST? It doesn't have to be that way, you know. With hard drive prices coming down, it's a great time to go shopping for one. Take a look at this one for starters, it's worth it.

The ICD drive is typical of its breed. A large, almost square steel case houses the hard drive, power supply and host adaptor. At first it might seem odd that ICD use such a large case till you realise that it's a great monitor stand and the extra room can be used to add another

mechanism to the drive to increase your storage capacity. In contrast, many new drives are housed in small compact cases and stand on one edge to take up the least space.

As usual ICD use top quality Quantum mechanisms – in this case the LP52S 52MBytes drive – and the ICD host adaptor is provided with a read/write cache to speed disk access. The drive is quiet, cool and fast, with an average access rate of around 20ms with the cache running, this is equivalent to a data transfer rate of

well over 1,200K per second. Because the Quantum drives stay so cool there is no need for an internal fan. The only noise from the drive is a gentle clicking that occurs on booting and at regular intervals while the drive "refreshes" itself; all new SCSI drives perform this periodic refresh cycle.

Setting the drive up is simple. Connect the DMA lead to your ST's DMA port and the DMA In on the drive and boot up the system. The drive is already formatted with a driver installed so it should boot immediately without problems. If you are daisy-chaining to another drive, or to a Mega STE or TT, then you must change the device ID to 1 so that both drives can boot correctly.

If there are any problems with the drive then a version of ICD's AdSCSI utility software is provided to enable you to configure the drive exactly as you prefer.

While this is not the latest version of the utilities, v6.0.3 as opposed to v6.0.8, it is an excellent suite giving you the chance to customise every aspect of your drive. The ICD handbook is also supplied. The drive

has the minimum of controls and interfaces, DMA In and Out, a SCSI connection to link a SCSI device to the system, the power switch and the drive ID button. The front of the drive is smooth and unbroken except for the power and drive activity LEDs.

Verdict

For sheer speed and efficiency the FAST drive cannot be faulted, and while the cost of the initial 52MByte drive may seem a touch on the high side at £350, you can get a 130MByte drive for just another £50. If you want a hard drive for your ST setup then you can't get much better quality than this.

CLIVE PARKER

ICD FAST 52DC drive

£349.99 (130MByte version)
£399.99, 170MByte version
£419.99, 213MByte version
£479.99) First Computer
Centre ☎ 0532 637988

Highs

- Fast, quiet, efficient, ready formatted, no hassle installation.

Lows

- Rather large, quite expensive for 52MByte drive.

What else?

- 50MByte Seagate drive, £289 Gasteiner, ☎ 081 365 1151.

STEERING
83

MM-100 MONITOR

First Computer Centre are yet another company who have adapted the Trust MM-100 VGA monitor for use with your ST or STE. There's nothing wrong with that. It's a great monitor with an excellent display and the price is comparable with the other suppliers of this monitor.

Setting it up is easy; instead of an Atari 13-pin DIN plug replacing the standard VGA 15-pin D plug, First Computer have opted for an off-the-shelf adaptor lead so there's no provision for sound output. This is OK if you have an STE, Mega STE or TT, but no use if you have an STFM without a separate sound output.

The monitor is the classic tilt and swivel model with an almost perfectly flat glare-free FST screen with excellent contrast and sharpness. Controls on the front of the monitor are restricted to power, contrast and brightness. There is no need for any other controls on the front panel because the monitor is already set up for optimum performance. The back

of the monitor boasts a couple of controls you can adjust and a couple you can't easily get to. The H-Phase control adjusts the horizontal position of the screen image, while the V-Size knob adjusts the vertical size of the image. The controls that aren't so easy to get to are the Focus and Sub-Brightness – but these are pre-set and you should not alter them anyway.

The image is sharp and bright with very little reflection from lights or windows, and if you're planning to use it for long periods of time, it's quite

easy on the eye. Along with similar monitors there is a bar at the top and bottom of the screen when you adjust the vertical height so that the aspect ratio is correct – that's circles looking like circles and not ellipses.

Verdict

The Trust monitors are not quite as finely tuned as the official Atari models, but because you can't get an Atari monitor anyway there's no point

crying about it. The display is sharp enough for every purpose, and it certainly beats the hell out of using a mono emulator. If you want to get a mono monitor to use with your ST then there is no reason not to buy this one except for the lack of sound.

CLIVE PARKER

Trust MM-100 monitor

£129.99 First Computer
Centre ☎ 0532 319444

Highs

- Flat screen, good contrast, sharp picture, easy to set up.

Lows

- No sound.
- Wasted screen area because it's designed for 480 pixels vertical res.

What else?

- VGA monitor with speaker, £149, Gasteiner ☎ 081 365 1151.

STEERING
73

■ This is a familiar looking monitor specially adapted for people who like to live in a silent world.



SPEEDO GDOS

After many false starts Atari have come up with a replacement for their old and bug-ridden font system, GDOS. Clive Parker investigates



The new version of GDOS is called SpeedoGDOS and is licensed to use Bitstream outline fonts, a family of over 1,000 fonts previously only available for the Apple Mac and the PC.

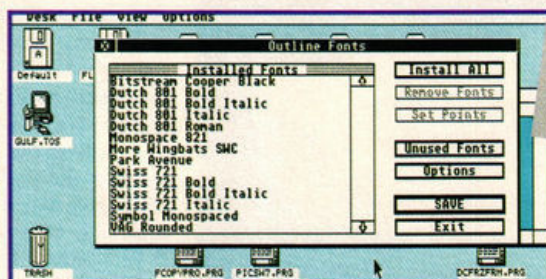
Outline fonts are completely different from bitmap fonts – bitmaps are stored as a series of blocks on a grid while outline fonts are stored as a mathematical description of each letter which can be reproduced at any size without any distortion.

What it's all about

The program is supplied with two Desk Accessories – *Outline Fonts* and *Printer Drivers* – which control the fonts and the printer drivers and enable you to customise your setup to suit your needs. Speedo itself is installed in memory by an Auto folder program when your ST boots up. If you have 1MByte or less of memory then the two utility programs are installed as Desktop programs rather than Accessories, this gives you more room to store fonts and run your other software.

When the program is up and running it sits in the background and waits for you to run some GDOS dependent software such as *Degas Elite*, *Pagestream* or *Easy Text Professional*. These programs can use SpeedoGDOS, its outline fonts and printer drivers in place of the original GDOS and bitmapped fonts. The *Outline Font* program is used to configure the program to your own needs, selecting the fonts and point sizes

■ The *Outline Font* utility enables you to choose the fonts you want to use. You can install all the fonts, or if you are a bit short of RAM you can choose the fonts installed.



suitable for your software. If you have newer software which is "SpeedoGDOS aware" then you only need to install a single font size; older programs have to have the different sizes individually installed. All options can be saved as defaults.

Use the printer driver utility to choose the printer driver installed for your system, the drivers provided cater for every need ranging from 9-pin FX-80 drivers to laser, inkjet and colour paintjet drivers.

Installation

Installing SpeedoGDOS and the 14 fonts provided with it takes up over 3MBytes of disk space on a hard drive. While SpeedoGDOS can be used with a double-sided disk drive, it is really designed to be used with a hard drive. SpeedoGDOS should now be supplied ready installed on all new Falcons along with MultiTOS, if you have an ST or TT system and GDOS dependent software then you can get SpeedoGDOS from HiSoft, the official UK suppliers.

SpeedoGDOS is supplied on three double-sided disks and uses its own installation program to install to

a hard drive setup, and it requires a minimum of 1MByte of RAM to run. If you add more fonts to the system later then you need even more hard drive space, you can always disable the fonts you don't want to use from the *Outline Fonts* Desk Accessory.

To install Speedo onto hard drive just run the install program on the master disk, the only query made is for the name of the directory where the printer drivers and fonts are to be stored, after that there are just two prompts to swap disks and that's it! Installation is complete.

Installing to floppy drive is a more complex process. You must create a boot disk and copy the relevant files to it, full instructions are provided in the SpeedoGDOS manual telling you which files to use where. With a floppy setup you are going to be restricted to the number of fonts that can be installed on one disk, each font takes up about 60K of disk space so make sure you leave at least 200K for the program files.

And finally

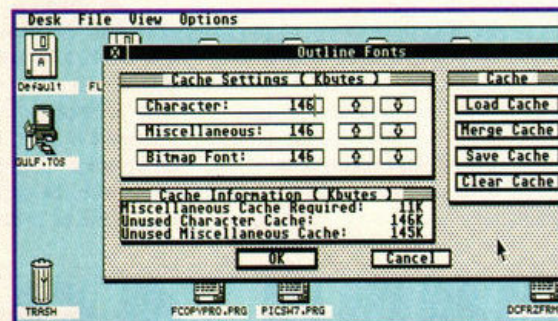
We tried SpeedoGDOS with several old GDOS programs including *Degas Elite*, *Timeworks* and *Hyperpaint 2*. The font selection options could find the outline fonts and use them immediately and printing was also a breeze – it looks as if SpeedoGDOS is the ultimate scaleable font technology for the ST and can bring



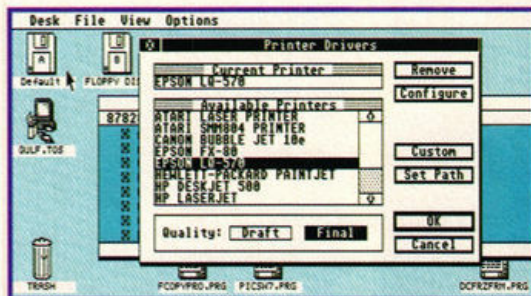
■ Underneath the smart packaging lurks a brilliant new font system. Only problem is you need 3MBytes of hard drive space if you include all the fonts.

a new breath of life to GDOS dependent applications and utilities.

SpeedoGDOS is a well written, well designed font system for the ST – it's the font management tool that was needed several years ago to boost Atari's flagging fortunes, perhaps it still has that ability. If you use GDOS programs then there is no doubt at all that you need SpeedoGDOS. Get it. **stf**



■ SpeedoGDOS uses three caches to store information about fonts, so when a letter is used on-screen by GDOS it doesn't have to be created every time but is retrieved from memory. The bigger the cache, the faster your machine operates. Other caches are used to store data and buffer information to further increase the speed of the system.



■ Speedo has major printer drivers that should cope with any output device, from the Epson FX-80 to the Hewlett Packard laser and inkjet printers.

■ *Hyperpaint 2* from Atari can make instant use of the new fonts, both on-screen and in hardcopy. The same can be said of any GDOS application, from the humblest PD program to powerful DTP software like *Timeworks 2*.

Atari finally get it done!
SpeedoGDOS is unleashed
with 1000 bitstream
fonts AVAILABLE NOW!

Speedo GDOS

£39.95 from HiSoft,
☎ 0525 718181.

Hard drive installation recommended, 1MByte RAM TOS 1.2 and above, at least TOS 1.4 recommended.

Highs

■ True font scaling for all GDOS compatible software, plenty of printer drivers, quick screen updates, easy to install and use

Lows

■ At least 1MByte RAM and a hard drive are required for effective use.

SCREENPLAY

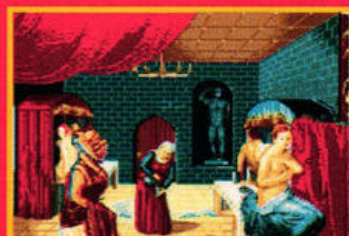
Plug in your ST. There are some mighty fine games winging their way to you this month

■ Rob Mead was born with joystick shaped palms, so there's no one better to tell you what's best and worst on the ST gaming scene. He's got a few handy tips too.



LEGENDS OF VALOUR

■ Is US Gold's latest dungeons 'n' dragons adventure a radical reworking of a tired genre or a bunch of fancy graphics looking for a plot? Turn to page 66 and find out.



THE PATRICIAN

■ A massive trading adventure which has already taken the German charts by storm arrives on your ST. Get wheeling and dealing on page 70.



NICKY 2

■ Discover hidden caverns and untold treasures in this cute and colourful platform game from France. Turn to page 76.

FIRE FORCE

■ There are plenty of adrenalin rushes in this arcade shoot-'em-up. Turn to page 80.



ANCIENT ARTS OF WAR IN THE SKIES

■ Microprose offer a refreshing change from all those flight sims with a surprisingly addictive arcade and strategy game set during World War One. Checks away on page 74



Hints, tips and cheats

Page after page of the latest games get pulled to pieces in *Gamebusters* on page 82, followed by some friendly words of advice from the irrepressible Captain Blunder on page 88

Gamebusters

■ More hints, tips and cheats for those mind-numbingly tricky ST games.

■ A potful of *Chaos Engine* level codes swiped from the game's programmers.

■ Another selection of god-taming tips for *Civilization*.

■ A cheatin' Red Nose for *Sleepwalker*.

■ The complete solution to *Dragons Lair 3*.

■ And heaps of pokes, cheats and tips for all your favourite games.

Your essential guide to Captain Blunder



Availability

The Cap'n puts his best foot forward to help you track down those elusive games.



Cheat

Need a bit of a helping hand to skip between levels or stay alive for longer?



General

All those other niggly bits and pieces that don't seem to fit anywhere else.



Techie

Your ST just sort of stops working when you're in the middle of playing a game.



Tip

A nudge in the right direction.



STF REVIEW POLICY – It is *ST FORMAT* policy to only review completely finished games – that is, games you could actually buy in the shops, never incomplete or demo versions. We won't be rushed into reviewing unfinished games to beat our "competitors." We assume all games run on 520 STFM's unless otherwise stated.

LEGENDS OF

Werewolves, giant spiders and gorgons are after your blood in this RPG. Rob Mead eats some garlic and ploughs into the fray

Aren't you just sick of role-playing games? All that staggering around dimly-lit dungeons, slashing baddies and rescuing princesses is enough to wear down even the hardest adventurer. Then there are all those hit tables and spells to worry about. Well, here's a dungeons 'n' dragons adventure which does away with all that and offers you some fun instead.

Legends of Valour drops you into the middle of a living, breathing metropolis where people go to work, visit the theatre and hang around in bars ripping each other's heads off. The major difference is that

Mitteldorf is a mythical city set on the island of Wolfbrood and it's entirely populated by characters from a Tolkien novel – elves, humans, goblins and trolls are just four of the species competing for space, fame and money in this city.

Leon the pig farmer

You play a humble pig-rearer (chortle) whose cousin Sven has run off to Mitteldorf in search of a fortune of his own. Unfortunately, no-one's

■ No-one's going to write your Legend of Valour - you just knocked at Death's door.

■ You're in big trouble now. The Militia's arrested you for suspicious behaviour and King Farley is about to pass sentence...

the low-life, you volunteer to set off for Mitteldorf in search of your missing cousin. You also have to find the three magic items which can help you "win" the game.

"Legends of Valour drops you into a metropolis where people hang around in bars ripping each other's heads off"

Your first priority when you arrive is to get yourself somewhere to stay. Mitteldorf is dotted with taverns and hostels offering food, drink and a bed – sleeping on the streets is not an option unless you

want to be arrested or savaged by a blood-hungry werewolf. Taverns are also good places for picking up information about the town's activities or for finding the work to keep you in bugburgers and ale. Running errands for people is actually one of the best ways of exploring the city – it's like being paid to be a tourist.

■ Funny how all the baddies are made out of little squares.



■ There are plenty of baddie-filled dungeons under the city streets. This one's filled with goblins who love to pinch your precious groats.



■ Mitteldorf's militia breaks as many rules as it enforces, so watch out, you don't want that sword too close

heard from Sven in quite a while and your family are beginning to get worried. As a brave adventurer with a taste for

ELFLING'S GUIDE TO MITTELDORF

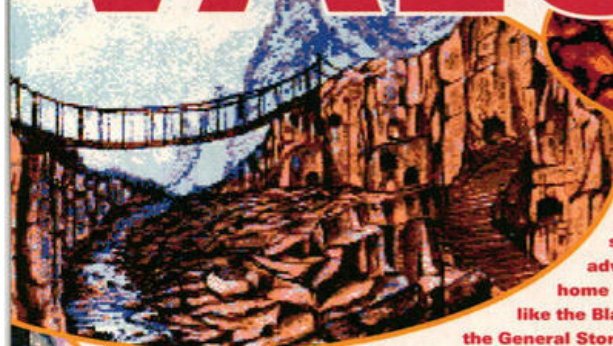
As a stranger in a very strange town you need to acquaint yourself with the local customs as soon as possible. Lucky we're here to help

- 1 Main screen**
This is where all the in-game action and fight sequences take place.
- 2 Change screen size**
Click here to toggle between the three different screen sizes – the smaller the screen the faster you can move around.
- 3 Messages**
Various helpful hints, messages and, of course, insults appear in this window.
- 4 Unique magic items**
There are three unique magic items that you've got to find in your travels around Mitteldorf. The objects are placed in one of these boxes as you discover them.

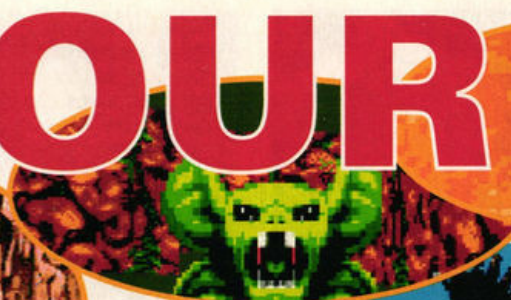
- 5 Examine**
Click here to examine an object which you've just discovered lying on the floor.
- 6 Floor window**
The people of Mitteldorf are always dropping their valuables – money, food, weapons, you name it – so keep your eyes peeled on this box and use their stupidity to your advantage.
- 7 System icon**
Calls up the Save/Load Game options and enables you to turn the Auto Combat and sound and music modes on and off. You can also change the default screen size and the level of graphical detail here.
- 8 Character status**
These vertical status bars indicate your character's relative strengths and weakness in seven different areas (follow from left to right) – general health, energy, combat injuries, charisma, hunger, thirst and sleep.

- 9 Timer bar**
Among other things, the timer bar tells you how much damage an opponent can take before he crumples to the floor.
- 10 Movement icons**
Enables you to control your character by clicking on the nine movement arrows rather than just by wiggling your ST's mouse around.
- 11 Rank**
Click here to check how your character's faring in the game – the more guilds and skills you have the higher your rank is going to be.
- 12 Action icons**
The top three arrows are used in combat and denote slash, hack and parry moves with a weapon or a variety of punches if you're unarmed. The middle row contains the map screen icon as well as magic and priest spells if you have them. The bottom row enables you to sleep, use an object or hail a passing stranger.

VALOUR



■ Home, sweet home - the place you start your adventure and home to useful items like the Blacksmith's and the General Store.



■ If you can't be bothered to run errands for money, you can always beg hapless passers-by for their small change.



■ An eagle flies over the mythical land of Wolfbrood, where a humble pig-rearer's life is about to be transformed.



As you wander around the city - completely forgetting about Sven if you have any sense - you discover all kinds of places. For a start there's a zoo near the Main Gate which is filled with all the nasties that populate Mitteldorf's dungeon levels - this is the only opportunity you're going to get to poke a Cyclops in the eye without being disembowelled first.

There are also plenty of temples, shops and houses to explore. The shops are useful for generating cash by trading in Mitteldorf's six commodities - ore, spices, pelts, gems, hide and tar. You simply buy as many as you can as cheaply as you can at one end of town and

flog them off for a profit at the other. All the extra money you make can be spent on extra weapons, potions, going to the theatre or a few life-enhancing weapons courses. The temples,

"This is the only opportunity you get to poke a Cyclops in the eye without being disembowelled first"

however, enable you to develop much needed magic and priest spells by becoming a member of a religious cult. They're also useful for diagnosing the many ailments and mishaps which can befall you on your travels and healers can offer a cure for a small fee.

Most importantly, you're going to have to track down Mitteldorf's five secret societies if you're to make any progress as an

adventurer - the Men at Arms, the Fellowship of Asegeir, the Brotherhood of Loki, the Mercenary or Thieves guilds all have a range of special skills on offer and even pay you a regular salary once you satisfy the initiation rites and become a member.

However, some guilds have an acrimonious attitude towards members of rival organisations and you could find yourself being barred from membership or cudgelled in the street for giving the wrong funny handshake. Still, it beats being a member of the Pig-Rearer's Fun Club though.

Scarey monsters

When you play *Legends of Valour* it's like taking part in a parallel universe. Shops open and close, it gets dark, people rip you off. You're

struck as you wander around by how realistic it all is. You don't even have to do any adventuring if you don't want to. The game's programmers - Dimension Creative Designs - originally intended it to be a real life simulation where you



■ Deadly werewolves stalk the streets of Mitteldorf in search of human prey - you could be their next victim.



■ Silent but deadly bats attack you remorselessly as you wander around



■ No, your knees aren't knocking, someone is knocking on your knees - a dwarf from one of the many ghettos in Mitteldorf.

13 Compass

Tells you which direction you're travelling in so you don't end up just wandering around aimlessly even if you don't have any sense of direction. You can also guide your character by clicking on the different compass points, or rotate him by holding down the left mouse button and moving the mouse in a circular motion.

14 Throw item held

Enables you to lob items at offending Mitteldorfans when close combat is likely to result in your own very grisly death. Make sure you throw something reasonably effective though or else you're going to end up looking pretty stupid.

15 Items held

Tells you which items you're holding.

16 Drop item held

You can only store six items in your backpack at once, so you need to do a bit of spring-cleaning occasionally.

17 Inventory

You can hold up to six different items in your backpack which is displayed here. If you want you can change what you're holding by clicking on the backpack item you wish to move.

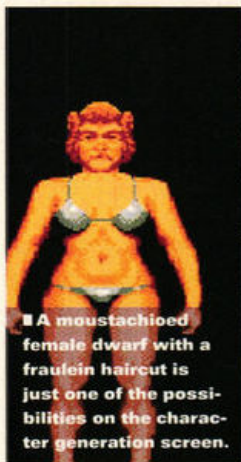
18 Pockets

Since trade is a very important part of day to day life in Mitteldorf, it's useful to carry the six major commodities - gems, spices, pigments, ore, hide and tar - around with you.



19 Money

Mitteldorf is an expensive place to live, so this tells you how many groats you have left. Looks like you're going to have to get a job...



■ A moustachioed female dwarf with a fraulein haircut is just one of the possibilities on the character generation screen.



STRENGTH	76	HUMAN
INTELLIGENCE	76	DWARF
HEALTH	93	ELF
SPEED	95	
INHERITANCE	279	
MALE		FEMALE

■ Temples are great places for picking up magical powers and healing the odd werewolf wound.



just wandered around doing whatever you fancied. There wasn't even going to be an ending. Thankfully, the game hasn't been too loused up by the inclusions of insignificant matters, like a plot, and you can spend your whole time staggering in and out of bars drinking copious amounts of gin – providing your vision and bank balance can stand it.

There are plenty of humorous touches too – the insults hurled at you by the other members of Mitteldorf range from the abusive “you look like a wimp” to the hilarious “you smell like a Satyr’s armpit” and you get to insult them back. It’s all highly reminiscent of *Monkey Island*. You can’t help laughing when you’re attacked by dwarves either, since they’re scarcely able to poke their heads over the top of the game screen.

Unfortunately, the game’s let down by some shoddy combat sequences. Instead of the sheer terror you get fighting mummies in *Dungeon Master*, you’re left hurling the odd punch or badly-aimed hack at your opponent – it’s all a bit arbitrary and not very convincing. To show you how low on the list of priorities fighting comes, you can even give your ST the chance to do it for you by activating the Auto Combat option. Hardly the stuff real adventure games are made of.

The only other major fault with the game lies in the sheer size

of it. The majority of the buildings you explore are completely deserted, except for an odd wooden table or the occasional visitor. Consequently, you don’t really feel there’s enough to get your teeth into and it’s a bit unsatisfying. If the programmers had halved the size of the city and filled the buildings with more activity, the experience could have been more intense – saying “It’s a real life sim, and in real life things are a bit boring” doesn’t really excuse things.

“You can spend the whole time staggering in and out of bars drinking copious amounts of gin”

You want to play games which take you away from real life, not just remind you of the mundanity of it.

Like most role-playing games, *Legends of Valour* is controlled entirely by your ST’s mouse and features a point-and-click icon system. This makes selecting objects and picking options a doddle, but



■ You started life as a larva, but now you’re a fully grown dragonfly in search of fame and fortune in Mitteldorf.



■ Pop into your local tavern for a tasty feast of zombie brains, Medusa bolognese and bugburgers washed down with a hearty jug of ale.

the mouse really comes into its own when you forget on-screen movement icons and steer yourself around the desk – if you’ve ever played racing sims like *Vroom* or *No Second Prize*, you know how well this method works – you just press the left mouse button to move forwards and move the mouse from side to side to vary your direction. Combine this with the ability to change the game screen size and you end up with a very fast and very smooth scrolling system, even if it does take a while to get used to.

Another radical departure comes with the use of 3D texture-mapped graphics. This means the walls and floors of Mitteldorf’s dwellings actually look like parts of real buildings, not bald blocks of colour – this is especially noticeable in some of the dungeons where the rocks look so real you can almost feel them grazing your skin as you bump into them. The quality of the graphics makes the whole game a virtual reality experience and you can’t help but be impressed by the constantly changing scenery and the sight of hundreds of in-game characters all moving about independently. It’s a shame the same can’t be said for the sound effects which consist of a few chip effects and the odd muffled yelp.

Verdict

Legends of Valour is not so much a role-playing game, more a virtual



■ When you’re not staggering around quaffing G and Ts you can take a peek through other people’s windows.

reality experience. There are no princesses to rescue or hit points to calculate – you just wade in there and explore the sprawling mass that is Mitteldorf. With hundreds of locations to wander round and visit and thousands of beings to meet, the game pulls you in deeper and deeper until you suddenly realise you’re hooked.

The combat sequences and sound effects are disappointing and you can find yourself wandering aimlessly around empty rooms, waiting for something exciting to happen – see, it’s more like life than you realise. *Legends of Valour* is an original variation on a well-worn theme, it’s a good game, but not quite a classic. **stf**



■ Welcome to Mitteldorf, home to murderers, muggers and thugs – people just like you, in fact.

Legends of Valour

£39.99 US Gold
021 625 3366
Three disks; 1MByte;
hard drive installable

Highs

■ Virtual Reality on your ST. A wild goose chase with lots of surprises.

Lows

■ The combat sequences aren’t much cop and all that wandering around gets really boring.

82
FANTASY
EPOCH

■ Trading in commodities like spices, ores and hides is one of the easiest ways of raising rent money in Mitteldorf.



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CITIZEN

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FREE DELIVERY

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SILICA STARTER KIT £49
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SILICA PRICE: £115 (VAT=£135.13 - PRI 2120)

• Citizen 120D+ - 9 pin - 80 column

- 144cps Draft, 30cps NLQ
- 4K Printer Buffer + 2 Fonts
- Parallel or Serial Interface
- Graphics Resolution: 240 x 216dpi
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One of Germany's most successful ST games arrives, but has this epic trading adventure lost something in the translation? Rob Mead finds out

THE



So you think times are tough, eh? In the Middle Ages they had to put up with piracy, the plague and barmaids with halitosis and black teeth. But they were happy because they had the Hanseatic League, one of the most powerful trading blocks the world has ever seen. It bought peace, prosperity and vast quantities of fish oil to the people of northern Europe and now you can join in.

The *Patrician* is a mediaeval trading simulation based on the exploits of the Hanseatic League during the 12th and 13th Centuries. You start off as a humble merchant armed with one poxy boat and no money, but by some careful trading, a lot of bribery and plenty of luck you're expected to rise to the position of Alderman – or Patrician – of the League and defend it from attack by pirates or the ruthless ambition of your rivals.

At the start of the game you and up to three other human players are asked to choose from eight different merchant families and another eight trading towns which you are to use as a trading base. The location of your home city is crucial for a variety of strategic and commercial reasons – for example, Hamburg and Lübeck are wealthy cities cen-

trally located for easy access to all the League's regions, while the strategically less-important town of Visby contains a lucrative supply of wool which enables you to get rich relatively quickly by dumping it in a region where such commodities are very thin on the ground.

Once you've chosen your city and named your first boat it's time to take a trip to the moneylender so you can raise some capital for your first voyage. Not surprisingly,

"It bought peace, prosperity and vast quantities of fish oil to the people of northern Europe"

people are reluctant to lend you money at the beginning of the game since your commercial worth is unproven and any capital they do let you borrow

is likely to be at extortionate rates of interest. However, things improve as your success as a merchant increases and you're able to borrow larger sums at lower rates of interest. You can also start lending money to other merchants as your personal wealth accumulates.

The next step is hiring a crew for your ship and buying the goods you wish to sell on to another city.

There are 18 different commodities you can purchase – from wool to pig iron, from ale to crockery. The aim here is to buy goods as cheaply as you possibly can in

LIFE ON THE OCEAN RAVE

The harbour is the cultural and economic epicentre of the 16 Hanseatic towns. Click on a different part of each building, represented here, in order to access the relevant position



WAREHOUSE

Warehouses are available for purchase or rent and enable you to stockpile raw materials, or produce goods which you can sell at a profit later.



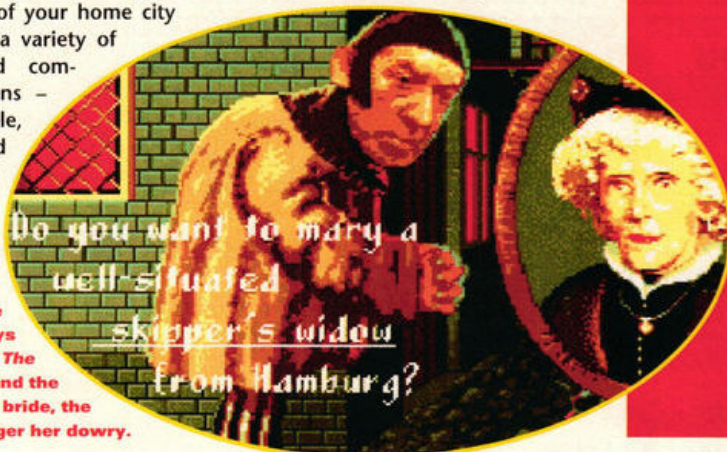
BOAT YARD

Click here to be whisked off to the harbour where you can check your boats' seaworthiness, carry out any repairs or even commission new vessels for your fleet.



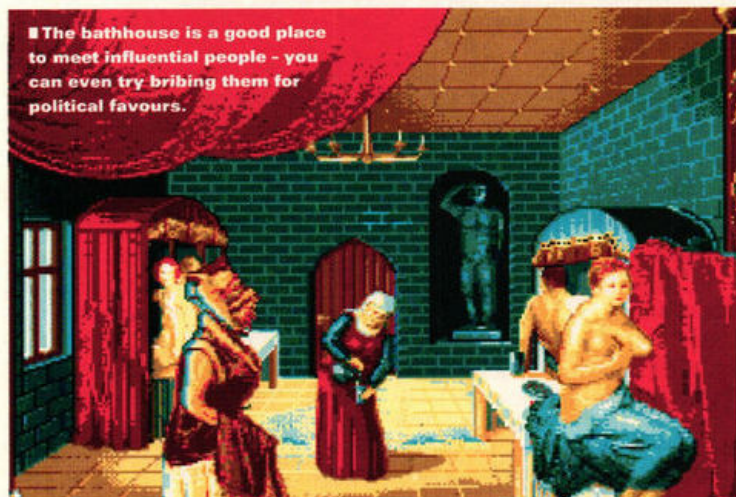
OFFICE

Click here to buy and sell goods in the harbour. You can also keep an eye on your debts, check the current state of your fleet and examine the Hanseatic map for the next port you wish to sail to.



■ Getting hitched is one of the quickest ways to success in *The Patrician*... and the uglier your bride, the bigger her dowry.

PATRICIAN



■ The bathhouse is a good place to meet influential people - you can even try bribing them for political favours.

one town and sell them for as much as possible in another. Unfortunately, you have no control over the purchase and sale prices of the goods you trade in - it's all fixed by the relative economic prosperity of the selected town. It's also important to divide the cargo of your

ship between normal and luxury goods. If you concentrate your commercial activities exclusively in furs, wine and ale, for example, you could end up making the whole trading system collapse because the strategic towns are starved of essential goods.

Power, corruption and pies

As far as trading goes, that's basically it. You just have to travel the seas surrounding Northern Europe and visit each one of the 16 principal trading towns, selling goods and boosting your profits. However, this is all just a means to an end - your real intention is to become a powerful political and economic figure who commands equal respect from both Church and State as well as enjoying the popular support of the humble townsfolk people. Naturally, this is a much harder objective to achieve.

One way of winning political influence is by gaining access to one of the many town guilds which local merchants have formed. There's a high price to pay financially, but this is more than compensated for by your

increased status and the ability to snoop on your competitors' progress. Another way to achieve success is by sending ships to guard ports that are under threat from pirates or to form convoys which other merchants can join. More importantly, you can also throw feasts for the local peasants, give money to the poor and to the Church or even get married to a wealthy widow - all of these help no end to increase your social and political standing.

It's all plain sailing so far, isn't it? Erm, no. The gameplay really starts to



■ The Black Death sweeps through the city of Hamburg, decimating its population.



■ HARBOUR

Mr Blobby arrives in Lubeck, his pockets stuffed with money after a lucrative fur deal in London.



■ ARMOURY

At the risk of incurring the Church's disapproval, you can fill your ship's hold with a large variety of sail-shredding weapons by clicking here.

Go this way to the
■ **TOWN CENTRE**
where you can hold a feast, pop into the local church and send wagons overland to other Hanseatic towns. The Guildhall is also based here.



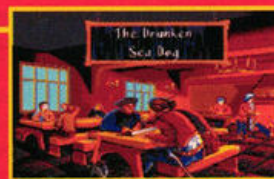
■ MONEYLENDER

Life's tough at the bottom and you need to go and see your local loan shark during the opening stages of the game. Later, you get to start loaning money too.



■ TOWN HALL

Click here to see what's going on in the local town. You can rent or buy warehouses, embark on a convoy or send out a guard ship here.



■ THE INN

Each harbour has its own inn packed with reprobates and low-lives you can hire as ship's crew or workers. You can also indulge in a bit of illegal arms-trading or piracy here.



get interesting when things go wrong. You can sail all the way from London to Novgorod only for your ship come under attack from bloodthirsty pirates or simply fall to pieces because you've failed to maintain it properly. Things can also go badly in the social-climbing stakes – you may start off as a political nobody, but a fumbled attempt at bribery or a disastrous wedding feast could turn you into a social pariah and a laughing stock. Even worse, a desperate scramble for cash by illegal arms trading can not only turn the Church against you, but renders you liable to blackmail and a possible court appearance where you can be stripped of all your possessions. Compared to this little lot, having your warehouse burn down with 100 tons of furs inside or your wife die of the plague is but a small price to pay.

Static energy

The big problem for any trading game – and the *Patrician* is no exception – is how to make chuntering backwards and forwards, buying and selling goods as exciting as possible. *Transactica* tried to do it with some spurious plot about rescuing the Earth from a nuclear winter and train battles, while old space adventures like *Elite* give you the chance to shoot it out with pirates in vector spaceships. *The Patrician* does neither. It

doesn't even feature any animated sequences. Instead, you're offered a series of colourful static screens showing you different locations – the boat yard, and the Guildhall, for example. What's more, the screens are virtually identical whichever city you travel to – the harbours and bathhouses all look the same. The only flicker of graphical interest you get is when a plague or fire breaks out and you're presented with... a static picture of

"Having your warehouse burn down with 100 tons of furs inside or your wife die of the plague is a small price to pay"

Death or a building on fire.

If you're after mad, brain-melting gameplay and saucy graphics you won't find them in *The Patrician*. The static screens aren't that great looking and merely serve as functional menus enabling you to access the different game elements, even a digitized pic of Marilyn Monroe as a prospective bride fails to raise the blood temperature. There aren't any sound effects either – just some rather cheesy Medieval twangs from the ST's music chip. So what does it offer?

Primarily, *The Patrician* is an intellectual challenge. It's about keeping a fleet of boats on the go all at once and commissioning new ones. It's about making as much money as possible and then giving half of it away to the Church and the poor. It's about achieving the highest political office in the land when the odds are hopelessly stacked against you.

This is a perfect game for wannabe managers and, with up to three other human players all sitting round your ST at once, soon turns into a mental battle of wits against your pals as you all try to



get one up on each other.

The game is controlled with a combination of point-and-click mouse controls or by a series of keyboard shortcuts. Each different element on the static screens can be clicked on to bring up another screen or sub-menu. The trading and moneylending screens enable you to click on a commodity and enter the amount to be bought or sold either by clicking on different parts of an abacus – which is a bit tedious, frankly – or by typing them in via the keyboard. To make matters worse it's all too easy to lose the game in the early stages of the game when your only ship is impounded because you've failed to pay

your debts off in time. OK, so it's your fault, but even if you have a lot of money already stashed away you're not given the option to release the ship. You're sent to the Start menu and made to begin all over again.

However, the inclusion of Quick Game and Practise options is a mark in the *Patrician*'s favour and you can save the game as many times as you like. Best of all, you can copy the game to your hard drive if you own one and eliminate all those tedious disk swaps.

Verdict

Bit of a weird one, this. There's no running, jumping or blasting to be done, precious little animation and no sound effects – if your idea of a great ST game is arcade action and fun, fun then you are going to be sorely disappointed.

However, the *Patrician* does hold a very tangible grip on you as

you try to balance all the disparate elements – trading, electioneering, treachery, blackmail and bribery – which go to make up the game.

This trading sim demands a great deal of patience, time and effort from you as a gamer – there's no point giving up the first time your strategy falls apart, you have to keep trying. It all depends whether you want to. **stf**

ware	town	ship	price
corn	5335	0	39
meat	778	0	50
fish	99	0	53
ale	107	0	61
honey	46	0	201
cloth	0	0	235
crockery	0	0	219
wood	2895	0	40
wine	21	0	715
sell	1	Make	2

A selection of the goods available for trade in one of the League's cities. You need to deal in both essential and luxury goods to stop the system collapsing.

The Patrician

£32.99

Daze = 071 328 2762

Three disks. 1MByte of RAM required. Hard drive installable.

Highs

The *Patrician* is a gigantic trading adventure with colourful graphics and absorbing gameplay.

Lows

It can take a long time to get any where and the whole thing is pretty humourless.

76%
ST FORMAT



If you are getting blackmailed, you can always go to the church and purge yourself of sin.

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ANCIENT ARTS OF WAR IN THE SKIES

What has Chinese philosophy got to do with pumping enemy airplanes full of lead? Rob "Mao Tse Tung" Mead decides it's time to find out

The Chinese are a clever bunch. When they're not inventing fireworks, building Great Walls or whipping up portions of egg foo yung, they write epic books about the conduct of humans in battle.

Ancient Arts of War in the Skies is a strategy and action game based on the works of Chinese general Sun Tsu. 2,500 years ago he wrote the definitive guide to battle strategy – the *Ancient Arts of War* – which is still used by military commanders to this day. Microprose's version of this great book is set in the skies above Europe during World War One. You play the commander of either the Allied or Central Power's air forces over 54 campaigns covering the main historical battles.

The majority of the action takes place over a highly detailed map of the battlefield which shows

both Allied and Central Power's Forces. The map shows each side's respective defences – airfields, cities, factories and so on – as well as the battle front where the land battle is taking place. You're given a limited number of bombers and

"A strategy and action game based on the works of Chinese general Sun Tsu"

fighters to play with and have to decide which targets you're going to attack, while defending your own bases. You can select a maximum of three bombers and three fighters to take off on a sortie over enemy lines which you select by

placing a series of waypoints. Because early aircraft had a limited range and climbing capabilities, you have to take distance and natural obstacles – like mountain ranges – into account when planning your route. Once you've decided which aircraft are going to go where, it's time to set the ball rolling... and so does your ST-controlled opponent.

Wholesale destruction

As your bombers and fighters head towards their target all kinds of things can happen – you can come under attack from enemy aircraft, your airfields can be destroyed so you can't land after your raid, or your capital city can be destroyed forcing you to surrender. Defence is often the best offence, especially when the enemy has overwhelming superiority in terms of aircraft and firepower. You can tell how you're doing in the air by the frequent messages which appear on-screen. Your troops also advance or retreat depending on how well your strategy is progressing.

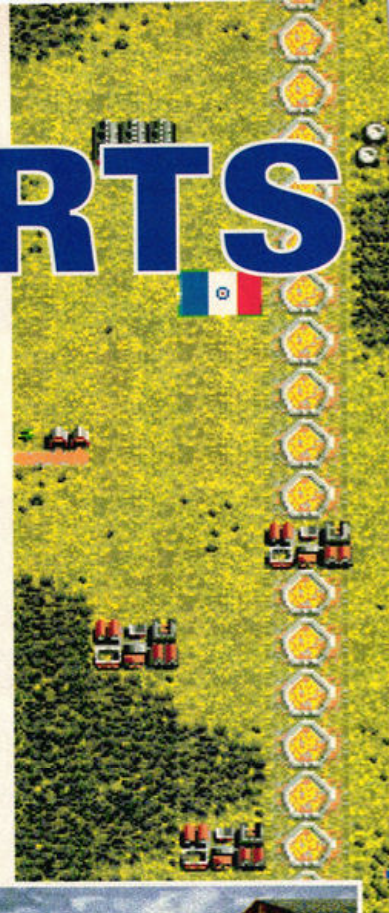
However, there's more to this game than just sitting around watching the battle unfold on a digitised map. You can pile in there and take control of the conflict at any point by taking part in dog-fights or bombing runs. The dog-fight sequence pits fighter against fighter or fighter against bomber with you and your opponent each

■ Hop into your Sopwith Camel and take on the might of the German Air Force in *Ancient Arts of War in the Skies*.

trying to outwit each other with daring manoeuvres and plenty of canvas-shredding gunfire. To make things more complicated your own fighters can inadvertently shoot each other during the melee and your guns can jam at crucial moments – these and other combat options can be disabled if you wish. The other thing to remember is there are no parachutes. Your little chaps can't ejector-seat to safety when they get in trouble, they just die. Sometimes cutting and running is the only alternative.

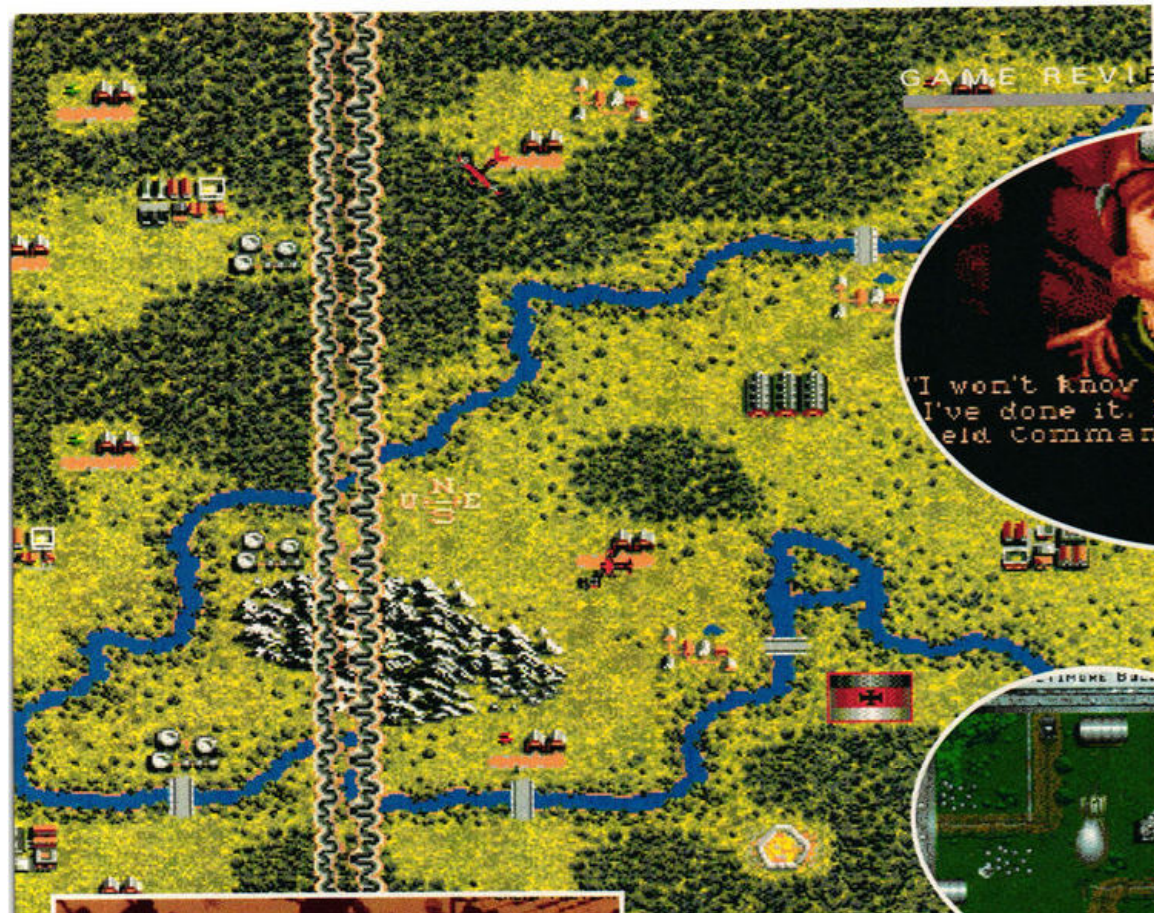
The bombing sequences are just as much fun which have you hanging out over a gaping hole in your aircraft's floor. You have to fly over selected targets and pick just the right moment to release your deadly cargo – there are no Norden bomb sights to help you, you just have to let your bombs go when you think they've got the best chance of hitting your target. At any time during a raid you can call up a reconnaissance photo

■ A trio of German Fokker zeroes in on your lone bomber. You're going to need all your gunnery skills to fend off this lot.



■ The Red Baron was the most successful flying ace in World War One. Now it's your chance to change the course of history.





■ "Herr Loopy, you smell like a blumenkohl mit der leaf rot." "Et vous, Monsieur Spike, have a face like a baboon's backside." "Prepare to die, garlic breath."



Ancient Arts can be controlled with by mouse, joystick or keyboard, although a combination of mouse and keyboard moves is the best option – the mouse can be used for scrolling around the map screen, while the keyboard's best for controlling the aircraft in the arcade sequences. Graphically, the map screens are highly detailed and you get a realistic bird's-eye perspective of the unfolding conflict. The combat and dogfight sequences are equally impressive with slick scrolling and some smooth animation. Surprisingly the sound effects measure up too, with a realistically tinny clatter from the machine guns and some ear-shattering explosions, the chip music's pretty catchy as well.

Verdict

At last, a war simulation which you don't need a degree in Advanced Physics to play. *Ancient Arts* is an original and addictive approach to a genre which is all too often bogged down in tedious manoeuvring and unnecessary attention to detail. The combat sequences are simplistic, but highly effective while the strategy element is rewarding enough to tempt the most sceptical shoot-'em-up addict. **stf**



■ At the start of each campaign, you're presented with a map showing each force's relative strengths and positions.

■ The aim of the game is to cause as much destruction to the enemy's defences as possible. This time you're bombing an German airfield.

showing which objectives you knocked out. It's not all plain-sailing, though – you're constantly under attack from enemy anti-aircraft fire and your plane can literally disintegrate at any moment.

One of the best options in the game is the ability to choose from eight different commanders – Lord Kitchener, General Foch, Kaiser Wilhelm, Helmut von Spike, Baron Richthofen, Captain Fonck, Major Mannock and Sun Tsu himself. You pick one to fight for your side and one for your ST. Because each commander has different battle strategies, there's an endless number of variations you can have when play-

you can accept the default commanders your ST picks for you.

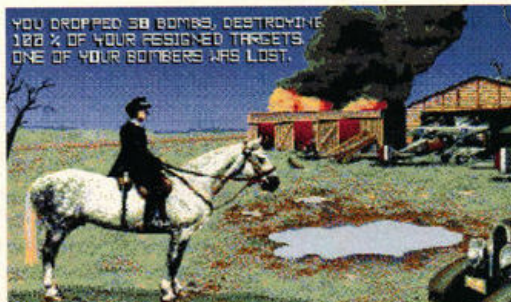
If 54 infinitely variable campaigns aren't enough for you, *Ancient Arts* also has a Campaign Editor, so you can edit existing battle scenarios or create your own. The editor's a doddle to use – you just scroll around a bare map placing enemy and friendly pieces, generating aircraft squadrons and adorning the battlefield with mountains, trees and rivers.

Trench pudding anyone?

Most strategy games are boring affairs which weigh you down with acres of detail and thick manuals. But not this time.

Ancient Arts is a highly enjoyable and addictive game-playing experience. You know you're onto a winner when you see the sumptuous opening pics of Sopwith Camels, the Red Baron and atmospheric silhouettes of trench warfare.

Once the gameplay kicks off you discover – unusually for a strat-



■ Control the bombing yourself and you can achieve total destruction of the enemy's defences.

Ancient Arts of War in the Skies

£34.99 Microprose

0666 514326

Four disks; 1MByte RAM; hard drive installable

Highs

■ Addictive mix of strategy and arcade elements.

Lows

■ Really need a hard drive.



NICKY 2

Combine a white magic goose, lots of nasties and a cute kid and you get... a platform game. Paula Richards does lots of shooting and collecting

Ornithologists and campaigners on behalf of cruelty to geese beware! Nicky's magic goose is exploited mercilessly in *Nicky 2*, the follow up to *Nicky Boom* – and you have to encourage it. Your goose is pretty independent, like all good geese should be, and tends to wander off on its own. You have to find him and use him on your quest to rid the forest of monsters and all other sorts of evil and black magic – and also to get all your toys back that have been scattered around the forest.

Dodgy plots aside, *Nicky 2*'s actually pretty good fun to play – the levels are absolutely massive –

you can wander round for ages without even setting eyes on that goose of yours and when you do find him and clamber onto his back you could find him more of a hindrance than a help.

Conversely, there are places where you can't do without him – although it's more difficult to shoot vicious nasties and you can't explore the ground quite so well – have you ever tried sitting on a goose's back while going down a ladder or even going into a house? When you are on him though you get to explore the attractive graduated sky and can get to places you wouldn't be able to reach on foot.

■ If you can battle your way through the army of gun-toting kangas and keep out of the way of that cute-kid eating bird you'll be in a better position to explore the rest of the level. That castle's very er, rewarding too.

six levels of the game over four different graphical worlds – the forest, the jungle, a volcano and a cloud-filled sky – collecting points and toys. At various places you also need to pick up keys so you can open doors, firecrackers so you can blow up rocks and wall up secret hiding places as well as ultra sound whistles to help kill all the nasties. This is all very well but you can't use half these objects when you're perched on the goose's back so there's lots of irritating getting on and off to do.

The ability to explore is one of the best aspects of the game, even considering the huge size of the levels there's more area to play

in when you've blasted and bashed your way through the caves – they're made of really crap quality stone, you see – and when you've banged your head on the tops of the caves a few times and discovered new ladders which enable you to reach new parts of the level. The

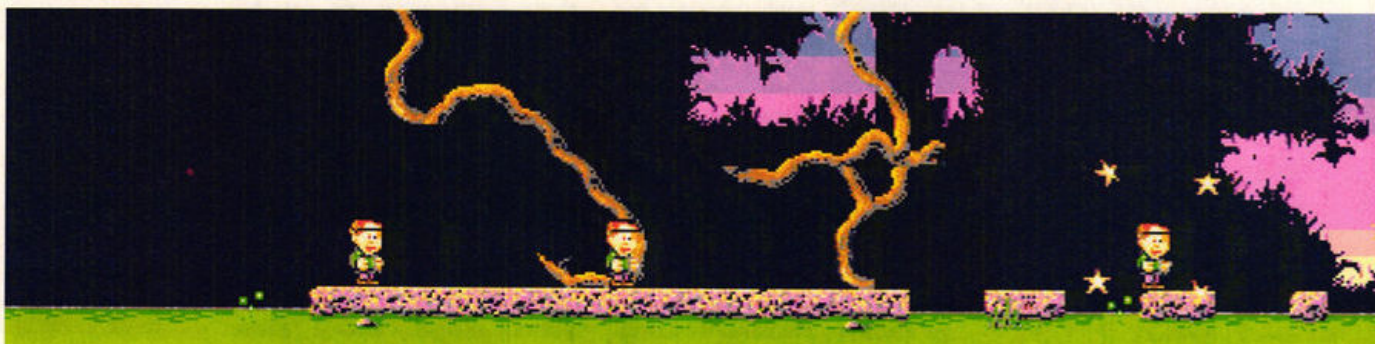
Collecting collectibles

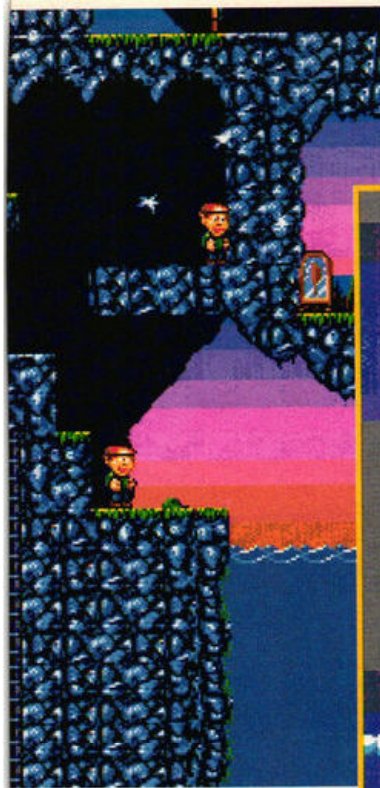
All you have to do is work your way through the

■ Nicky, the too sweet kid and his goose. Did you ever see such an over-loaded bird, it can't be right.



■ Beware the crocodile infested waters beneath you. You need precision control not to fall in here, death is very easy to come by.





■ For some strange reason here you can't actually walk under the water - you never knew you had an allergy to the stuff, did you?



whole design is very attractive - the graphics are absolutely brilliant with huge monsters.

The massive spiders really are terror-inspiring and the weapon-wielding teddy bears and kangaroos give you a whole new perspective on the toys hiding in your cupboard. The only thing that really lets the gameplay down is

"The weapon-wielding teddy bears give a new perspective on the toys in your cupboard"

the jerky scrolling - it's a tad on the difficult side to just jump from one ledge to another if the whole screen moves violently just as you're trying to carefully position the joystick.

All the levels present a challenge of their own - they're set over a series of different scenes and seem to get harder. You access the different levels by passwords that you're given once you've made it through the exit.

Verdict

Nicky 2 presents you with a challenge - the massive horizontally and vertically-scrolling levels aren't easy to conquer, the nasties are very nasty indeed and it's incredibly easy to die. The game looks good and plays pretty fast although some of the sound samples seem to have been ripped straight out of Lemmings. The only problem is that it doesn't really have anything to take it beyond standard platformers - there are platforms, there are nasties, it looks quite nice if you like that sort of thing and there's a

goose in it that tends to get in the way. Originality and humour Nicky 2 lacks. It's good fun if you're obsessive about the genre or have never played one but it doesn't have that certain elusive something to make it stand out from the crowd. **stf**



■ Getting a good view is really the greatest advantage to having a goose to ride around on - he's not much use otherwise.

Beware of nasties

There are over 40 nasty creatures determined to kill you off one way or another. Here is a small selection of the things you should make sure you shoot as soon as you can



Bees



Clown



Eyeballs



Gorilla



Logmen



Spiders



Vicious beast who delights in picking you up then dropping you



Witch



Eagle



Frogs



Kangaroo



Mushroom men



Teddy bears



Nicky 2

£25.99 Microids/Daze
071 328 2762

Highs

■ Looks gorgeous, six huge levels will keep you going for a while.

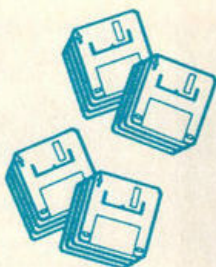
Lows

■ Jerky scrolling, lacks humour.



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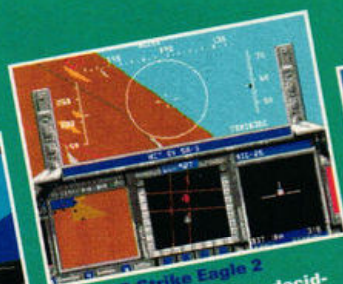
You may be one of many people who enjoy a spot of DIY shelf-making at the weekend, and why not? Alternatively, you may wish to purchase an attractive shelving unit from one of the many DIY stores. Whatever your preference be sure to get some shelves, because *ST FORMAT* and US Gold are offering you the chance to win 50 budget top-notch ST games.

Ten lucky winners can each choose five different titles from US Gold's burgeoning Kixx XL budget range. All you have to do is marvel at the 13 titles and choose five as your prize. Jot the appropriate game number down onto the back of a postcard, with the answers to the questions and send to Gimme, Gimme, Gimme, *ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW. All entries should be received by Friday 17 September 1993.

Psst! Wanna get your mitts on some groovy games? Not until you've answered a few questions you don't



1 Battlehawks 1942
Keep the Japs at bay in this World War 2 flight sim - a knuckle-nibbling joyride through unfriendly skies.



2 F-15 Strike Eagle 2
A flight sim with a decidedly arcadey feel to it, this is going to keep you plugging away at your ST for hours.



3 F-19 Stealth Fighter
Highly-detailed graphics and realistic gameplay make this the best flight sim you can get for your ST.



4 Future Wars
Battle with alien baddies as they travel through time and space in this rather excellent graphic adventure.



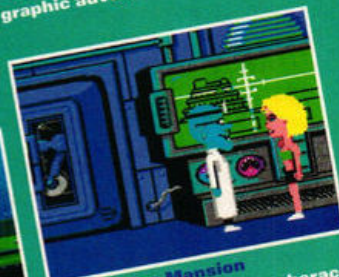
5 Indiana Jones and the Last Crusade
Superb graphic adventure from Lucasfilm, who brought you the Secret of Monkey Island.



6 Loom
Help Bobbin Threadbare unravel the mysteries of the loom in this graphic adventure from Lucasfilm.



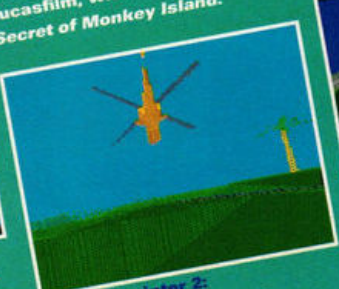
7 M1 Tank Platoon
Pacific Islands-style tank simulator which enables you to relive the Cold War one more time. Stirring stuff.



8 Maniac Mansion
Control up to three characters at once in this French graphic adventure set in a spooky haunted house.



9 Midwinter
Stunning 3D vector adventure brimming with sophisticated weaponry and graphics. *FORMAT* Gold winner.



10 Midwinter 2: Flames of Freedom
Midwinter sequel which features even more gameplay and gorgeous graphics.



11 Operation Stealth
A Stealth Bomber goes missing and it's your job to get it back. Stylish graphic adventure from Delphine.



12 Pirates
There's plenty of gung-ho messing about in boats in this sabre-rattling, cannon-totin' adventure game.



13 Zak McKracken and the Alien Mindbenders
Close encounters of the weird kind in another one of Lucasfilm's hilarious adventures.

Answer these questions and the whole caboodle's yours

1. What ST rating was F-19 Stealth Fighter given?

2. Who does Zak McKracken try to save the world from?

3. How many Kixx XL titles are there for your ST?

4. Who played Indiana Jones' dad in the Last Crusade?

5. What is so special about the Aliens in Future Wars?

COMPETITION RULES

1. All competition entries must be received by Friday 17 September 1993.
2. Employees, relatives and pet fish of either Future Publishing or US Gold are ineligible to enter.

3. If we receive any duplicate competition entries they shall be burned immediately - even if they're written on Jurassic Park writing paper and accompanied by a crisp five pound note.

4. My dad's bigger than your dad.
5. The Editor's decision is absolutely final and no correspondence whatsoever shall be entered into (whatever that means). Ciao.

FIRE FORCE

Kaboom! Bang! Blood and guts – all in a day's work for US Navy Seal Hugh Adlam as he checks out Ice's latest combat sim

If you're the sort of person who would join the army or dress up in silly clothes and rush around a Zap Zone if only you could bring yourself to get out of your armchair, *Fire Force* is for you.

In Ice's latest combat sim, you are cast as a newly recruited US Navy Seal with a choice of four missions – assassinate the enemy commander, destroy a guerilla village, destroy an enemy missile base and free some POWs. Once you've selected your particular Navy Seal you are briefed with details depending on which mission you have chosen and are told about the surroundings of the mission which range from a jungle at night to a town in the middle of the day.

Before the mission starts you've got to choose your specialist weapons from an array that would make Norman Schwarzkopf chuckle happily to himself. Each weapon has a load factor and the maximum load that you can carry restricts the amount of other equipment you can take with you – so, choose carefully. When you've completed the first four missions there are eight

■ The mystic powers of a missile launcher. Now you see it... now you don't



more and your character gains promotion to a higher rank after successfully completing missions.

Go on, make my day!

For some obscure reason the government sends you into the action all on your own. Your buddies drop you off and you must complete the mission and reach a certain grid-reference in a specified time – if you get there, your pals come along in their helicopter and pick you up. As you go through the battle zone, you can enter the enemy bunkers, tents and buildings which, although adding a bit of depth, is a bit annoying because trying to walk up and down stairs is a nightmare because the controls are decidedly dodgy. You also have the ability to search dead enemy soldiers and take their weapons and ammunition. They all carry guns but often they lay mines to give themselves extra protection which are quite hard to hop over – it's a pity you can't take these mines from dead enemy fighters.

The title music is a sampled army drum roll. It's good, for a while at least. The shooting sound effects aren't bad either with differ-

ent noises for each weapon.

The controls are quite difficult to get the hang of – you use the joystick to control your character while the keyboard controls the weapon selections. Shooting diagonally is especially difficult because you have to hold down the Fire button, making you waste precious ammo. The graphics and the animation aren't particularly brilliant, although the death sequences are quite detailed.

The best part of the game is, without doubt, the killing. You can stab, cut throats, shoot or blow up the enemy. By far the best of these methods is the last. Blowing up tents, huts, towers and oil drums is a lot of fun and is even better if you manage to hit an enemy soldier in

■ Experiment with all the weapons.



■ Try not to stand on your detonators when you set them off – it's a really silly thing to do.

■ Your pals kindly drop you off into a guerilla village. As you wave goodbye, you see them laughing.

the process – he ends up flying into the air. When you're choosing your weapons, the temptation is too great and you end up picking grenades instead of medical packs and ammunition just to see the enemy get blown into the air.

Verdict

If you're into armchair violence, then *Fire Force* is what you've been waiting for. What really lets the game down are the sprites which wouldn't look out of place on an 8-bit and the controls which plague the gameplay. Everything about the game is very ordinary. The scenario and gameplay are very familiar, you're likely to have seen it all before. **stf**

Fire Force

£25.99 Ice
0453 756993
Two disks

Highs

■ Good effects and wide selection of weapons makes killing fun.

Lows

■ Controlling the sprite is difficult and spoils much of the fun. The graphics are a bit on the dull side.

STFORMAT
62



■ The Iraqi olympic team fine tune their new high jump technique.

Four things you shouldn't let your baby brother play with

1 GERMAN H&K MP5SCAR

The SAS's favourite. It's light and can fire in three modes: semi-automatic, fully automatic or three round bursts. Great for close quarter combat.

2 M177 CARBINE (CAR 15)

The Colt commando assault rifle. Not brilliant, but it did the job in Vietnam. Because it's light, you can carry more ammo and grenades.

3 AKM ASSAULT RIF

Most of the enemy soldiers use AK47s, so if you choose this weapon you're never going to run out of ammo – just search the dead soldiers.

4 M60 MACHINE GUN (GPM)

The M60 is the most powerful machine gun out of the lot. It's gas-operated and air cooled – don't you just love being in control?

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really like



Also in next
month's
ST FORMAT

- Which colour printer is the best one for you?
- The latest in fractal programs
- How to get the most from your hard drive
- The latest and greatest games reviewed

ST FORMAT

**ON SALE
TUESDAY
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DON'T MISS IT!**

**Struck, dumbfounded, confused?
Don't be. We've got some real hot
tips, cheats and solutions lined up
this month as Rob Mead well knows**

**50
games
tips**

ADVENTURES OF ROBIN HOOD

MILLENNIUM

Matthew Cocking

from Plymouth has sent in some cheats for this mediaeval graphic adventure.

Hold down <Alternate> and type 103 to fall in love with Maid Marian, 659 to become a hero and 441 to skip seasons. <Alternate> and 214 teleports Robin to the Hermit's Island in the top corner, 213 teleports him to Little John's Island. 167 gets Little John to help beat up the Normans and get Will Scarlet.

B17 FLYING FORTRESS

MICROPROSE

Reset the bomber and enter the pilot's name as Dusty. This removes all navigation errors and enables you to nuke all enemy fighters by pressing <H>.



Now, this is what the Battle of Britain should have been all about. None of this fighting stuff - you know it's not good for you.

BRAT

IMAGEWORKS

Level codes

2. MIHEMOTO

3. SASUTOZO

Civilization MICROPROSE

Here are 20 tips on how to be the top dog in this FORMAT Gold winning god game, this time from Manuel de May of Belgium



You better hold onto your underpants, it looks like Montezuma's come to get his revenge.

4. SUMATZEE
5. NOKITAGO
6. ITSANONO
7. NOZIMATO
8. NOZITOMO
9. MOKITEMO
10. ZUMOHATO
11. CHANASTU
12. NAGAITSU

CREATURES

THALAMUS

Pause the game and type A FINE KETTLE OF FISH including spaces to activate the cheat mode. You can now access each level by pressing a different function key. Press <C> to turn the cheat mode off.

DALEK ATTACK

ADMIRAL/ALTERNATIVE

Type JAMES BOND AND OLIVER REED WERE NEVER GOOD SINGERS for invulnerability.

DOODLEBUG

CORE DESIGN

Pause the game and type FIRE WALK WITH ME (including spaces), then press <Return> to activate the cheat mode. Time is automatically frozen and you get infinite lives. Press <F1> to <F5> to skip levels,



Don't let the bugs get you down - a cheat's the only way to beat this platformer.

then <1> to <3> to access the sub-levels. You can get to the boss stages by pressing <4>.

DOUBLE DRAGON 3

VIRGIN

Press <F1> to pause the game, then press <F2> before restarting it with <F1>. Player Two can now use a second joystick in port 0, instead of the keyboard.

DRAGON'S LAIR 3: THE CURSE OF MORDREAD

EMPIRE/READYSOFT

If you don't want to watch the whole game by typing TIME, then follow these moves to complete the game yourself. Timing of your moves is crucial.



Tweedle Dum and Tweedle Dee take it in turns to throttle Dirk in Dragon's Lair 3.

Scene	Joystick Moves
1	Intro
2	Up, Fire, Fire
3	Right
4	Fire
5	Fire
6	Left

CHAOS ENGINE RENEGADE

Thanks to Tom Watson at Renegade for these sample passwords for the one player mode of this excellent eight-way scrolling shoot-'em-up

Password	World	Character 1	Character 2
T6MV6J4GICZ	Two	Thug	Mercenary
73VBPXY1PZV1	Two	Brigand	Navvie
4WQZTTRG61MZ	Three	Navvie	Gentleman
2#YNLN7SR94W	Three	Navvie	Brigand
PK2R9J6G5W4K	Four	Navvie	Gentleman
C8737KFPBCDB	Four	Navvie	Preacher

...or try this password from Graham Jarvis from the STF BBS

Password	World	Character 1	Character 2
H476TW1M3NDT	Four	Brigand	Navvie

- 7 Left
- 8 Up, Down, Fire
- 9 Right, Fire, Left, Fire
- 10 Up, Left, Right
- 11 Fire, Left
- 12 Up, Right
- 13 Left, Fire
- 14 Up
- 15 Left, Down, Right, Right, Down, Fire, Up
- 16 Left, Down, Right, Fire, Fire
- 17 Left
- 18 Fire, Down, Right
- 19 Right, Up, Fire, Up, Fire
- 20 Fire, Fire
- 21 Down, Fire, Fire, Left
- 22 Up, Up, Right, Up, Right
- 23 Right, Up, Right, Right
- 24 Down, Left
- 25 Down, Right, Right, Fire
- 26 End sequence

■ Maim, kill and destroy with ease thanks to Code-masters' invincibility cheat for Firehawk.



FIREHAWK CODEMASTERS

Hold down <*> on the numeric keypad on the title screen. The screen flashes red to tell you the cheat mode has been activated. Press <P> to pause the game during play, then <L> to give you full lives and shield and <W> to top up your weapons, ammo and fuel. You've got Richard Eddy of Codemasters to thank for this tip.

GODS RENEGADE

Level codes
Level 2 PCR
Level 3 JFG
Level 4 ATS

GOLDEN AXE VIRGIN

When you're told to press a key to play, press <T> and you get infinite lives. If this doesn't work plug in two joysticks and select a two-

player game, but don't touch the second joystick. When you lose your last life press Fire on the second joystick for another three lives.

GRAHAM GOOCH'S WORLD CLASS CRICKET

AUDIOGENIC

Thanks to Peter Calver at Audio-genic for these cricketing tips.

1. Don't always bowl at the fastest possible speed. A slower ball can fool the batsmen.
2. Right-handed batsmen are weaker on the off-side.
3. The straight-drive is the most effective stroke, but make sure you don't edge the ball to the slips.
4. Don't forget to vary the position of your wicket-keeper to suit the speed of your bowlers.

GUY SPY AND THE CRYSTALS OF ARMAGEDDON

EMPIRE/READYSOFT

Type GETVONMAXGUY and press <Return>. Now each time you press <F1> you move onto the next scene.

KWIX SNAX

CODEMASTERS

When you complete a level and start the next press <Esc>. You start the level again, but with all your lives intact.

LEMMINGS 2: THE TRIBES

PSYGNOSIS

Graham Fereday from Reading has sent in a



LEMMINGS PSYGNOSIS

Just when you thought they'd gone for good, those level codes are back. We've had stacks of requests for these, so you're just going to have to grin and bear it. This month the Fun and Tricky levels. More in next month's ST FORMAT

Fun

- 1
- 2 KJLDLCCCN
- 3 NJLDLCCDCY
- 4 HNLHCIOECW
- 5 LDLCJNFCK
- 6 DCLCAJNFCK
- 7 HCAONNLHXC
- 8 CINNLDLICI
- 9 CEKHMDLJCO
- 10 IKHMDLCKCT
- 11 OHODHCELC
- 12 KMDLCLNML
- 13 MDLCAKLNC
- 14 DCLJNMOCM
- 15 LCAOLMDPCY
- 16 CMOLMDLQCV
- 17 CEJHLFLBDX
- 18 KKLFLHCCDM
- 19 NJNNHCADDR
- 20 JFLCKNEDW
- 21 NNHCAKOFDV
- 22 FLCMKLLGDJ
- 23 CENLLFHDV
- 24 CMNMLFLIDP
- 25 CCJMFJLDQ
- 26 IJMFJLCKDX
- 27 NJMFJLCLDW
- 28 HMFHCIOMDY
- 29 MNHCAKNNDL
- 30 FLCOKLMODU

Tricky

- 1 HCGOLONPDX
- 2 CMOLMGLQDJ
- 3 CMOLMGLQDJ
- 4 IKHLDLMCCEN
- 5 OHNLBADEP
- 6 IDLMCIOEEU
- 7 LDMCCJNFEP
- 8 EMCJMLGEW
- 9 MCEOLLDEW
- 10 CMNLMEMIEP
- 11 CEKKOLIEK
- 12 IKHMEMCKEX
- 13 OJOLICLEN
- 14 HMDMCIOMEM
- 15 MDMCGJMNEL
- 16 LMBJJOOEJ
- 17 KCCOMMLPEU
- 18 CKNLMDMQEV
- 19 CCKHNNKBFR
- 20 IJLGMCCFS
- 21 OHLFMCAFDN
- 22 ILFMCKOEJ
- 23 LFMCEJMFET
- 24 GICKKOLGFK
- 25 MCGNMLFHL
- 26 BKOMNFIIO
- 27 CAJMGJMFJFS
- 28 MNHCAKNNDL
- 29 OHMFMCALFW
- 30 HMGCMCMOMFU

ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS

DOMARK

When you get to the end of a level, go to the end barriers and push yourself to the left, middle or right while pressing bombs to get to the portomatic.

senate overrules this decision, just cause a revolution.

13 When you conquer the city you're asked to choose a technology advance. Make sure you choose Advanced Flight.

14 With Advanced Flight you can now build bombers.

15 If there is too much sea between you and your rival - more than 16 squares - you have to build a carrier as well, if not your bombers can't make the distance.

16 Found a new city every 16 squares between you and your enemy - your bomber is able to travel between the cities.

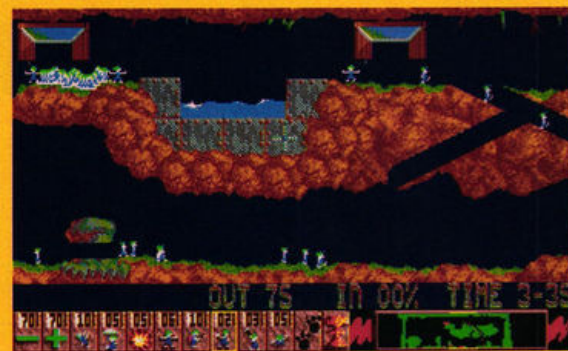
17 Use the carrier to cross the seas if necessary.

18 Bomb your enemy's capital city - see intelligence adviser.

19 Keep bombing the capital and keep making more and more bombers - you're sure to lose a few so be patient.

20 When you finally conquer the capital, your rival's civilisation is split into two. Bomb all the cities and conquer the whole world. Remember a bomber can only attack the defences of a city and is unable to actually conquer it, so always keep a ground unit handy to finish a city off.

■ If you haven't moved onto Lemmings 2 yet, you're probably desperate for some level codes for the first version of this great puzzle game.



What do the following have in common?



- ◆ Meat Beat Manifesto
- ◆ Bizarre Inc
- ◆ 808 State
- ◆ The Orb
- ◆ Utah Saints
- ◆ Orbital

This month it's the turn of ST-toting OMD. Find out how they make it happen in *Future Music*



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simple, but effective cheat for this **FORMAT** Gold winning sequel and wins himself £25 for his trouble.

On the first level of each tribe save only one lemming and you're awarded bronze. Go through each of the rest of the levels with that one lemming – a much easier job. Each time you're awarded gold because you started and finished with one lemming. When you complete the final level you're awarded a bronze section of talisman.

Return to the first level – where you were previously awarded bronze. Complete this level again, saving all the lemmings and you're awarded with a gold section of talisman.

Repeat this process with each of the tribes and pretty soon you have a complete shiny gold talisman and the lemmings all live happily ever after.

RAILROAD TYCOON

MICROPROSE

Fed up with all that disk swapping when you load a saved game? Then **Gavin Simpson** of **Montrose**, has just the tip for you.

Format a blank disk to 80 tracks with ten sectors per track using *FastCopy Pro* or a similar utility. Then, from the Desktop, copy all the files from *Railroad Tycoon* Disk A onto the blank disk by using the "rubber-banding" method. You can copy all of the files from Disk A onto the blank disk except the following four files which aren't required for the game to function: **README.DOC** (text file), **RINSTALL.PR** (installation program), **RR4.MAP** (tutorial map) and **RR4.SVE** (tutorial information).

When all the files have been copied, copy the files from Disk B to the blank disk except **RR4.SVE** and **RR4.MAP**. While your ST is copying a dialog box comes up telling you a file already exists with that name. When this happens press <Return> to overwrite them since the files on Disk B are identical to the ones on Disk A.

When all this is complete, reboot your ST with this new disk, find the **GAME.PR** icon in the open window and save the Desktop. This new disk should have room for one saved game too. The only difference is that the tutorial railroad isn't on the new disk.

RAINBOW ISLANDS

OCEAN

Hold down the <Q> <W> <E> <R> <T> <Y> keys for infinite lives. Typing in the following codes on the title screen also gives you some very special effects.

BLRBJSB	fast feet
RJSBJSBR	double rainbow
SSSLLRRS	fast rainbows
BJBJBJRS	first hint
LJKSKBLS	second hint
LBSJRWLL	continue in all rounds
SJBLRJSR	slow enemies

You can also find the secret room on each level by collecting the coloured diamonds in this order – red, orange, yellow, green, light blue, dark blue and mauve. The secret room on Island Five contains a box for you to collect. There's also a gate with "7" on it – go through it to get to Island Seven.

RODLAND

SALES CURVE

Pause the game and press <Help> five times. Unpause the game and you get infinite lives. Press the Spacebar at the beginning of each level to kill all the baddies.

SAINT DRAGON

VIRGIN

Hold down the left mouse button and press Fire on your joystick until



Flowers, fairies and cough drops compete with the odd strawberry in *Rodland*.

the game loads to get infinite lives. Alternatively, hit <Caps Lock> and type **DECAFFINATED**, then press <Return> for the same thing.

SPEEDBALL 2

MIRRORSOFT

Karl McDowall of **Kirkby** has sent in this maximum energy poke for your saved game disk.

Go into *Speedball 2* and make a saved game of the league or cup on a blank disk. Load up *Knife ST* and insert your Save Game disk. Go to Read on the menu bar and select Physical Sector. Press <Return> when you're given the choice on which sector to read. Go to the Commands menu and select Edit Buffer. Now change all the 64s on that page to FFs. Select Save Buffer again via the Commands menu, then press <Return>. Reload *Speedball 2* and load in the new Save Game as you would any



With 120 levels of rodent-rescuing mayhem to plough through, you're probably going to need all the tips that you can get.

SLEEPWALKER

OCEAN



Brian Harmer of **Bristol** has sent in an invincibility cheat, tips and puzzle solutions for this brilliant **FORMAT** Gold winning platform game from **Ocean**

The cheat

To get infinite energy let Lee and Ralph walk backwards and forwards across the title screen three times, then press the Spacebar to enter the options screen. Go down to the Training Level, then back up to Lives and change it from three to five. Next go to the Animations



Save Lee from being squashed, electrocuted, eaten or run over in Ocean's excellent arcade game, *Sleepwalker*.

option and switch it off. Now start the game. When the level starts Lee should have infinite sleep energy and on the Bonus Level you should

be able to wander around without time running out.

Tips

1. Don't jump on wires when Lee is on them or else he falls off.
2. Find somewhere safe to leave Lee so you can explore more of the actual level and close any more dangerous traps.
3. When underwater check all walls – you could find more lives or letters to spell **COMIC**.
4. Always go in front of Lee so you can bridge any gaps, trigger traps or hit objects.

Solutions to the Bonus Level Puzzles

Kipsville:

Dust + Bin + Man
Lamp + Postbox – box
Lookout + Bellow – L
Man + Keyhole – Key
Pig + eo + ns
Poodle – oo + ud

Jungle:

Act + ion + Man
Banana + Redskin – Red
Honey – Pot + Bee

This moon looks incredibly like Gryff Rhys Jones, don't you think? Hmmm.



Jack + As + Pea
Potty + Train + ing
Ram + Pant + Rhino

Graveyard:

Cof + Fin + Time
Cricketbat – Cricket + S
Open + Gravestone – Stone
Pump + King – G
Watch + Your + Step
Watch – A + I

Building site:

West – S + Cement
Steam + Toilet Roll – Toilet
J + C + Bee
Cement + Mexican – Can

Factory:

Bolt + On + Frankenstein
S + Well + Head
Rag + Bone + Man
Flat + Asa + Pancake



Use our cheat and avoid being caught by the Kipsville dog catcher.

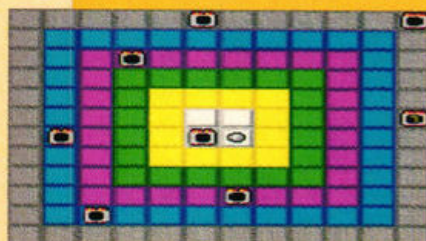
COVER DISK TICKLERS

Stuck on that incredibly frustrating **ST FORMAT Cover Disk** game? We know what you mean – so to make life easier here are a few hints and cheats



ABOMINABALL

STF COVER DISK 47
Richard Cassidy of Dewsbury has discovered a secret stash of 50,000



■ Bounce your balls around the room in an *Abominaball* game.

bonus points on Level Five of this devilish puzzle game.

Defuse the four outer bombs, but make sure you jump on all the disappearing tiles when leaping back into the inner square. Now defuse the last three bombs and you get the free 50,000 points and go straight to the top of the High Score table.

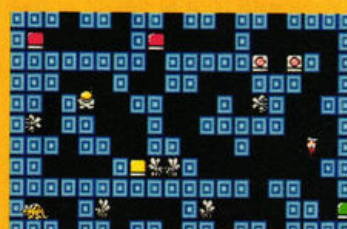


COLOUR CLASH

STF COVER DISK 48

Momentarily distracted from studying for his GCSE exams **Chris Ess** of **Hertford** has sent us the passwords for 36 levels of chameleon fun on *STF 48's* Cover Disk.

1. STARRING
2. ANTONIUS



■ Every *Colour Clash* level code you're ever going to need is right here, right now.

3. COLORING
4. RAINBOWS
5. BESTOWED
6. WITH THE
7. ENORMOUS
8. QUEST OF
9. ESCAPING
10. FROM THE
11. EVILONES
12. BIGMAZES
13. RESCUING

14. THE GIRL
15. KILLING
16. DRNIPPON
17. THE EVIL
18. JAPANEZE
19. LUNATIC!
20. DONTGIVE
21. ITUPNOW!
22. ENDLESS?
23. COME ON!
24. TOO HARD?
25. JUSTWAIT
26. ISITRED?
27. ORGREEN?
28. MAYBE IT
29. IS BLUE?
30. NO! IT IS
31. SUINOTNA
32. BREETHIN
33. DOWN HIS
34. ORIENTAL
35. NECK!!!!
36. FINISHME

other. You should now have full power on all your players.

TRANSARCTICA

DAZE

Can't defeat the Viking Union, eh? Then try this cheat mode from **Cliff Guy** of **Daze Marketing**.

Put the pointer in a corner of the options screen and press the left mouse button, <Control> and <Alternate> at the same time. 1. Top left corner – a Supertrain equipped with everything you need to play easily. 2. Top right corner – the same as for Supertrain, but you get a Superenemy as well. 3. Bottom left corner – a Supertrain plus all the objects and scenario to win. 4. Bottom right corner – victory.

You can also use the same controls as above on the overall map. Move the pointer to the bottom left of the screen to display the positions of the Wolves (red), Enemy Trains (green), Mammoths (pink) and Nomads (Brown). Finally, press the left mouse button and <G> to win or <L> to lose the Train Combat sequences.



■ Your Supertrain reaches the end of its quest in *Transarctica*.

VOODOO NIGHTMARE

GBH

Get Bootsy to jump over a chasm and, while in mid-air, press the

Spacebar to select a weapon. When you return to the game screen Bootsy is flying. To stop him, reselect his boots.

VROOM

UBI SOFT



■ Hold on to your seat – here's a two player joystick option for *Vroom*.

Thanks to the mysterious **Necromancer** from the **Wirral** for this two player joystick option for *Vroom*.

Connect two STs via the modem port, designating one master (A) and one slave (B). Load up the *Vroom* menu screen on both STs. On the A machine change Arcade to Train. Set Nocomm to Local on both machines (A and B). Then hit Start on the A machine to establish communication. A and B then hit Start. When the race screen appears, both hit <Esc>. Machine A changes Train to Arcade, and the Mouse option to Joystick, then A and B have to reselect the Local option. Both STs now press Start. Drive carefully.

WOLFCHILD

CORE DESIGN

Type THE PERFECT KISS on the options screen for those useful everlasting weapons.

XENON 2: MEGABLAST

MIRRORSOFT

Thanks to **Paul Inglis** of **Edinburgh** who sent in a complete

solution to the Bitmaps' *FORMAT* Gold winning shoot'em-up.

Level One

Guardian A – none at this level.

Shop A – sell nothing, buy health if needed.

Guardian B – shoot eye with cannon and bullets, stay centre and at the bottom of the screen.

Shop B – sell rear shot and buy double shot and two-side shot.

Tips – two-side shots are more important than double on this level.

Level Two

Guardian A – go up one side of the creature and shoot the eye at the top. Get across to the other side – avoid the worms – then move up and shoot the other eye. The screen scrolls down enabling you to shoot the bit at the bottom with side shots or cannon.

Shop A – sell nothing and buy double barrel or side shot depending on what you bought before.

Guardian B – shoot web-like barriers at front and back of spider, then move down and shoot the spider in the mouth with cannon and double shot.

Shop B – sell side shot and cannon and buy two lasers, power-up and health.

Tips – keep moving and keep your wits about you.

Level Three

Guardian A – dodge tic-tac type bullets, avoid claws and shoot in the eyes with laser. Watch out though, the guardian moves in a figure of eight.

Shop A – sell nothing, but buy health and power-ups.

Guardian B – move left and wait for it to come out of the hole,

shoot in head with laser. When the guardian goes into the hole wait at right side of the screen and repeat.

Shop B – sell rear shot and buy laser, power-up and health.

Tips – keep moving and watch your health.

Level Four

Guardian A – avoid head and fireballs, move up the side and shoot the smaller heads with side shots. Shoot the tail at top, then move down with the screen and wait for the head to lash out a couple of times. Now move down and shoot head with laser.

Shop A – sell nothing and buy side shot and health. Do not get rear shots at the start of part B.

Guardian B – stay at bottom of the screen, shoot eyes, then move closer in and wait for the tongue to go away. Now shoot mouth with lasers.

Shop B – sell nothing, buy lasers, power-ups, health, experiment if you want.

Level Five

Guardian A – avoid laser down the centre of screen. Return fire with laser. Destroy turrets on tank, then destroy the tank itself.

Shop A – sell everything you've got. Make sure you note down what you have sold so you can buy it all back and make a profit. Also buy a drone and power-ups for everything until you can't get any more.

Guardian B – shoot boosters, cannons, turrets and square flashing bits. Avoid enemy craft and bullets, move down to the bottom and shoot boosters again.

Congratulations, you've just completed the game.



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50 games tips



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Magic Dragon

NEAT My brother's on World Three of Magic Pockets and I need to beat him. Are there any level codes or infinite lives cheats?

Thomas Haywood, Johannesburg

CB: Hold down the <Fire> button when you die and you should be able to carry on playing.

Sleepwalkin'

NEAT Have you got a Sleepwalker cheat which enables you to enter at any level, because I've reached Level Four and it takes about one and a half hours to reach this level every time I play?

Philip Cheetham, Lancs



■ Watch Ralph's nose turn green with gamebusting friendliness thanks to this great cheat mode for Sleepwalker.

CB: Type HOLY.ZARQUONS.SING.ING.FISH (including the full stops) on the title screen and the characters' noses turn green. Press <P> for all the comic solutions <L> for nine lives and <Enter> to skip from level to level.

Outrun cheat

NEAT Have you got any cheats for Outrun?

Chris Phinnemore, Abergavenny

CB: Type STARION during the game, then press the following keys: <T> for extra time, <S> for the next location and for extended play. Other keys do different things, but don't press <X> or you crash the program.

The spy who cheated me

NEAT Are there any cheats for The Spy Who Loved Me?

Luke Lawrence, Suffolk

CB: Type MISS MONEYPENNY on the first title screen for infinite lives.

Fuzzy planes

TECHIE I recently bought A320 Airbus for my ST, but when I try to load the game everything appears on my TV about five times and goes all fuzzy. I've tried the game on my friend's 1040STE with exactly the same problem. The company I got the game from, ECU, told me I needed to retune my TV, but I've tried this without success. Do you know how I can solve this problem?

Jon Iveson, Hull

CB: Your TV is what's causing the problems. Airbus can only run on 60Hz TVs – the European standard – but most TVs in the UK run in 50Hz mode only. Tony King at Thalion UK (☎ 021 442 2050) says the game should run on black and white sets, otherwise you're going to have to get yourself a new TV or a monitor.

Dreaming about pinball

NEAT Is Pinball Dreams – or the sequel Pinball Fantasies – coming out for the ST?

Chris Lazenby, London

CB: Soon after we previewed Pinball Dreams in STF 40 the game's publishers, 21st Century Entertainment, decided an ST version wasn't viable. There were rumours of an STE-only version, but they have come to nothing.

Zak is driving me

NEAT In US Gold's Zak McCrackers, how do you light the firepit in the cave in Seatle? I have the branch and

nest, but I cannot find a way of burning them.

Edward Vincent, London

CB: You need to get the lighter from underneath the sofa cushion in Zak's lounge. Go back to the cave and put the

■ "My name's Bond, James Bond, and I spy an infinite lives cheat on this page."



nest and branch in the firepit. Now use the lighter on the nest. Look out for the full solution coming soon in a future issue of ST FORMAT.

Spanish inquisition

NEAT I'm having a great deal of trouble getting hold of After the War, AMC and Megaphoenix by Dinamic Software of Spain since no one in Britain seems to stock any of them. Can you help?

Ian Gibbs, Merseyside

CB: Dinamic are based at Microdigital Soft SA, Urbanizacion las Lomas, c/ Valle de Belagua 29, Las Lomas, 28669 Boadilla De Monte, Madrid, Spain, ☎ 010 34 1 632 0000.

ST on Bard?

NEAT Was Bard's Tale 1, 2, or 3 ever released on the ST?

Alan Craig, Scotland

CB: The first two instalments of the Bard's Tale trilogy were released on the ST by Electronic Arts, but are sadly no longer available. However, it's possible that Ocean's Hit Squad label (☎ 061 832 6633) could re-release the games in the new year since they have the rights to many of the old Electronic Arts games.

Riddle of Amberstar and Ambermoon

NEAT I can't get past the two part riddle of Amberstar in the Riddle Master's tower – "If flew featherless, into a tree leafless – but who ate it?" and "A woman came mouthless and ate the bird featherless – who was flying?" Can you tell me whether or not Ambermoon is going to be released on the ST?

Angus Thermopyle, Scotland

CB: Yes, Ambermoon is definitely going to be released on the ST and there is also going to be a specially dedicated Falcon version too. Tony King at Thalion (☎ 021 442 2050) managed to dig out the riddle answers from Amberstar's German programmers – the solutions are Thought, Cherry, Ear, Snow, Sun, Shadow and Rainbow... No, it doesn't mean anything to me either.

Bloody data

NEAT When I was reading STF 44 I noticed Mr Hayward of London had a copy of both Bloodwych and the Bloodwych data disk. Where can I get hold of a copy of the data disk as no-one seems to know?

D J Lambert, Somerset

CB: Beaujolly (☎ 0737 222003) included Bloodwych in their compilation but never took up the data disk option from the now-defunct Mirrorsoft. Perhaps one of our readers might like to send a copy of the data disk to us, so we can pass it on.



■ Ambermoon or Amberstar? The great thing is we've got good news on both.

Ice-ST



Are there any ice hockey games for the ST?
Steven Wragg, Nottingham

CB: There are two games as far as we know; Ice Hockey from Zeppelin Games (☎ 091 385 7755), price £7.99 – it got 38% in STF 23; and there's Face-Off Ice Hockey from B u z z (☎ 0709 372290) costing £9.99 – it received 65% in STF 29.

Monkey brains



I'm inside the monkey's head in The Secret of Monkey Island, but seem to be getting nowhere fast. Can you tell me where I'm supposed to go?

David Reed, Chippenham

CB: Find the leaflet called How To Get A Head in Navigation and give it to the natives. They give you a head, so go back to the monkey head and enter it. Use the head and follow its nose at all times. When you see the ship ask for the necklace five times. Use the necklace – you can now get onto Le Chuck's ship. For the complete solution turn to page 59 and order yourself a copy of STF 38.

Elite release



Please can you tell me when Elite 2 is going to come out?

Paul Travis, Sheffield



■ "Flooring inspector? That's rich coming from a Barbara Cartland lookalike."

CB: Elite 2 was originally going to be released in June, but Konami assure us the ST version will appear in the shops in September, price £TBA.

Fire and ICE



Where and when can I get hold of a copy of Electronic Zoo's shoot-'em-up game Fireforce?

Stuart Christy, N Ireland

CB: Sadly, Electronic Zoo are no more, but the Fireforce name lives

on with International Computer Entertainment's (☎ 0453 756993) own shoot-'em-up. They told us it was much better than the old Zoo game, so you're just going to have to turn to page 78 and read all about it!

Last laff Larry



Where can I buy Leisure Suit Larry 2 and 3?
Simon Topcliffe, Kent

CB: Although Sierra no longer produce new ST games, you can still get copies of LL 2 and 3 from them by giving their mail order department a call on ☎ 0734 303322.

Sugar vs Venables



Are there any money or other cheats for Football Director 2?

Keith Gardiner, Tyne and Wear

CB: Save a game and make a note of your bank balance. Now quit the game and load up an ASCII text editor. Load your saved game and go to the eighth line from the bottom and look for the numbers which are the same as the ones you've written down. Change these numbers to whatever figure you want and save the file. Reload Football Director 2 and load up your saved game. You should now have loads of cash.

Methanoid madness



In Deuteros, how do you defeat the Methanoids when they enter our solar system since I never have enough materials to build drones to defeat their space stations?

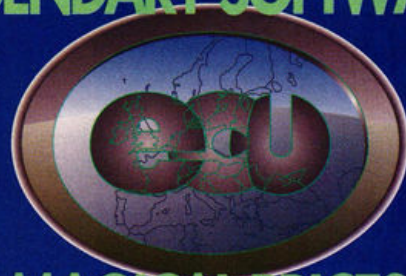
Edward Vincent, London

CB: Easy – cheat! Press <Caps Lock>, and then press <C> twice. Two numbers appear and anything you design is instantly available to you without you having to build it first. You also have an infinite supply of each item. Turn the cheat mode off again by pressing <C> twice.

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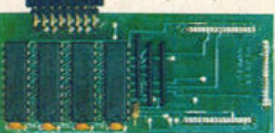
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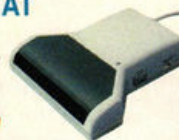
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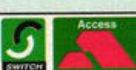
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16-bit DACs and ADCs (Digital to Analog and Analog to Digital converters) – which make up a powerful sampler. These enable direct to hard drive recording of any sound source plugged into the back of your Falcon. *Win Rec* is a fully working hard drive recording program. It can record from 8kHz right up to 50kHz and save in either DVS or AVR format. It's pretty rough and ready, you can't start editing your samples. All you can do is play your samples back again but it's still pretty amazing. Before the Falcon, this trick would have cost thousands of pounds to accomplish. As programmers get more experience with the new machine we can expect a lot more. Also on the disk is a mixed bag of half a dozen other small Falcon utilities.

STF Rating: 78%

BSS DEMOS RIVERDENE PDL DISK FAL 1050

Four cracking little demos that show off what your Falcon can do. Two are rotating and zooming true colour images accompanied by a 16-bit stereo soundtrack. Although they're only single screen demos they certainly use the power of the machine.

The *Speeder* demo has you controlling a craft zooming over a texture mapped landscape with your mouse. The *Intel* demo has a rotating symbol saying, "Motorola inside" in true colour with a horrendous number of colours cycling about. Although these are only

Looks impressive just standing still, now imagine it rotating and zooming at 50 frames a second to a ripping soundtrack - makes you feel quite sick after a while.

tasters of what is to come they are dead impressive. All the demos are for RGB monitors only.

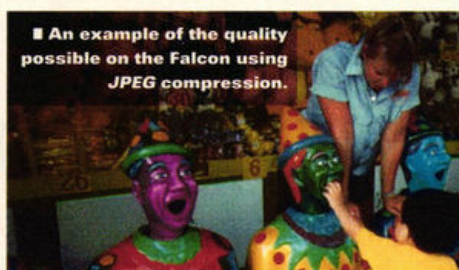
STF Rating: 77%

Win Rec turns your Falcon into a CD quality sampler, all you need is a hard drive. You set the sample rate and how long you want the sample to last and away you go.

PARAGON DEMO FALCON OWNERS GROUP DISK FOG 10

One of six Falcon programs on this disk from the new Falcon-specific library. The *Paragon* demo is not unlike a mass of ST demos showing 3D vectors. The difference is in the shading, no more single colours on each facet. The *3D Realtime* demo runs in ST low res and has 3D objects that you can manipulate with the mouse or keyboard. The *Terminal* demo is a rotating and zooming affair and the *Birdy* demo is a short animation in 256 colours. You also get *Pro-Tracker Replay* to give your modules a serious sound quality boost. Completing the high density disk are four JPEG compressed pictures. A bit of a mixed bunch.

STF Rating: 72%



JPEG PICTURES FALCON OWNERS GROUP DISK FOG 13

JPEG stands for Joint Photographic Experts Group and is a very efficient and clever compression method. It works by reducing the picture to a series of mathematical algorithms describing the relative colour differences. You lose some detail and it's only really good with digitised images. This disk has 21 images. The selection is wide and a theme would help. Also on the disk is a demo of a paint art utility, which doesn't seem to be able to load JPEG pictures which is a little pointless, a JPEG viewer would have been better. It's a high density disk so you get a lot of images for your money even if the selection is seemingly random.

STF Rating: 70%

Spinning 3D shapes are nothing new - but check out the depth-cue shading in true colour. Smooth or what?



FORTUNE FLOPPYSHOP DISK MUS 3632

A completely useless, but fun, utility that plays sampled sounds and displays a bit of text when you boot up your Falcon. The samples are in what the program calls cites. You can create your own cites and *Fortune* loads and saves in different sample formats and can handle eight or 16-bit and mono or stereo sounds. It's been ported from UNIX machines. There are four example cites all featuring depressingly hackneyed *Star Trek* stuff. Yes, we all watched the shows and we all thought they were pretty neat but do we really need it invading every aspect of our lives? *Fortune* is a basic sample player, its ability to handle 16-bit stereo is flash but otherwise it's not pulse endangering.

STF Rating: 62%

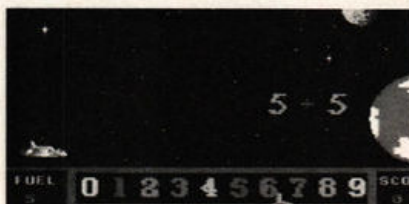
The sample conversion section of *Fortune*, it loads and saves five file formats including PC and Mac formats.



EDUCATION

SUPER FUN LAPD DISK L37

A huge selection of Licenceware educational programs coded in STOS comes on this disk. All the tasks are disguised as simple games - *First Division* is division, amazingly enough, if you don't get enough questions correct your ship



runs out of fuel. Then there's your times tables, drawing pictures using ready-designed bits of landscape, sums that fall from the sky, matching nouns with pictures and a maths version of *Mastermind* (the peg game). The questions are simple but the design of the pictures and text isn't brilliant. The speed at which you have to answer some of the questions is also a tad on the unrealistic side. Still, it's a disk well worth getting.

STF Rating: 82%

■ A wide range of word and number games - you just need to have speedy responses to click on the correct answers if you're not going to send your crew crashing to the ground.

THE SPITTING FISH BUDGIE EDUCATIONAL GAME DISK BU116

Some simple multiplication tables are disguised within a STOS point-and-click spitting game. You control this fish, see, that gets irritated by all these insects who zoom around in the air near him - you have to make the fish



spit at them whereupon they die, providing food for the other wildlife in the water. It's quite tough and you really need a decent mouse to have any chance of killing the insects. After a while of playing this, you get to multiply the spots on the dice that are thrown, clicking on a smiley face to confirm your answer. The more you get wrong, the more your time spent playing with the fish is reduced. It's all pretty addictive and well done.

STF Rating: 79%

■ Spit all over the place and learn your multiplication tables. Gobbing has never been so acceptable.

SOUND SEARCH GOODMANS DISK GD 1954

Another program from the prolific keyboard of David Becker. *Sound Search* is a variation on the classic memory game



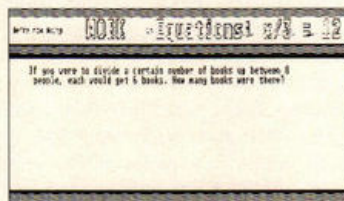
this time with sounds added. You get 20 boxes, click on a box and you hear one of ten samples all you have to do is match the pairs. It needs 1MByte of RAM and a high res monitor or a mono emulator. There are over 60 different samples and the program picks 20 at random. It's well presented and although the educational value is a little doubtful, it's certainly fun.

STF Rating: 71%

■ Click on each square to hear a sample and try to match it with its twin. *Sound Search* could keep the little ones quiet for a while.

ALGEBRA GOODMANS INTERNATIONAL DISK GD1888

There's this boy and he's nine years older than his sister. If you multiply his age by 11 and his sister's by nine and



subtract the two, you're left with 83. How old is his sister?

If you haven't got a clue what the answer is, you could probably do with this set of algebra programs which give you a whole range of problems to test your Xs and Ys. You can start off with learning about solving the easiest equations and move on to some real brain taxing problems. Remember to take your time before answering and use lots of paper to work things out.

STF Rating: 69%

■ If your first calculation proves wrong your ST lends you a hand.

PICTURE TIME FLOPPYSHOP DISK EDU3555C

Create your own scenes with characters and places from your favourite childhood stories like *Winnie the Pooh*. The landscape's already there and you just add the people where you want them. Also on the disk is a program called *Sampled Sounds* that familiarises you with what noises particular animals make. There's also a weather program - you get a weather chart and put your own symbols on it, you can then print the whole lot out. Well done but for a younger age group.

STF Rating: 61%

SEARCH AND FIND GOODMANS DISK GD1956

Match the words with the pictures in this game - except that the words are spoken rather inaudibly by your ST. The whole thing runs in mono and you need 1MByte of RAM. The screen consists of a variety of simple things - boats, rain, beetles and so on. Your ST asks you to click on the beetle, say, and if you get it right, your ST tells you how well you're doing. The problem is the accented samples are really difficult to understand and your ST won't repeat the question.

STF Rating: 52%

BIBLICAL SLIDESHOW GOODMANS DISK GD1941

Most people know what happened in the first seven days when the world was created - and now you can find out what happened during the next week, according to the Bible at least. The only thing you've got to bear in mind that the "weeks" are just representative of the time between the first people on earth about 4000 BC and now. It's all done pretty neatly, but it doesn't give you that much historical information - just an explanation of why Christianity is so fab.

STF Rating: 51%

ART AND MUSIC



PAD 2.4 FLOPPYSHOP DISK ART73M

High res art packages are becoming very popular on the ST, and *PAD 2.4* is just about the best mono art program available. Apart from all the usual commands, *PAD* enables you to overlay different pictures by using logical functions such as AND, OR and XOR. A set of 3D tools, full use of Signum and GEM fonts and the ability to load and save in a wide range of formats completes an excellent program.

STF Rating: 90%

■ For detailed work, you can't go wrong - use the Zoom modes at x4, x8 or x16 magnifications. Plenty of other functions including lines, boxes, fills, vertical and horizontal flips are all supported.



META-BIT CALEDONIA DISK AG 126

Meta-Bit is a very powerful utility for converting GEM metafiles into bit-mapped images. The vector picture appears in a GEM window, which you can resize and play about with before conversion. Images can be saved in IMG, TIFF, PCX, Degas, BLK, PIC and STAD formats, enough to keep everyone happy.

Unfortunately, all the menus and instructions are in German. This shouldn't slow you down too much, because it's all menu controlled and easy to get into. You'll just have to use a German dictionary or experiment to learn all the functions. If you are into DTP and graphics work this could be the utility you've been crying out for. It can be very slow when working on complicated vector graphics but otherwise it's an excellent program.

STF Rating: 82%

MOZART'S DICE GOODMANS DISK GD 1936

A new version of the program that recreates a game first released in 1792. It generates music in Mozart's style by randomly joining together small fragments. You can hear the music through a MIDI instrument or through your monitor. It can now save in standard MIDI format and you can add the pieces of pseudo-Mozart into your own MIDI creations. Great fun!

STF Rating: 78%

■ After his split with the group and a year in the mountains getting his head together, Mozart goes solo.

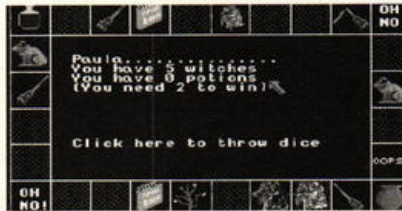




WITCHES, MICE AND FAIRYTALES

LAPD
DISK G266

If your kids are getting bored with traditional fairytales and your board games are neglected, you could do a lot worse than trying this disk. There are two games of the dice throwing and mov-



ing along and back over spaces variety. They're pretty similar apart from in one you're a mouse and in the other you're a witch. Then there are two stories that are loosely based on fairytales. You can customise these by inputting your own words - your ST creates the story around these parameters, creating some real corks, like: Mummy Giraffe had made worm burgers for breakfast, Baby Giraffe said "Mine are too wriggly," "So are mine," said Daddy Giraffe, "Let's go for a mud bath while they rot." Good for a few giggles.

STF Rating: 72%

■ Bored of board games? Turn to the warped sense of humour in these text adventures for some light relief.

HEDGEHOG AND MIX 'N' MATCH

GOODMANS
DISK GD651

Remember that game where you put cards face down on a tray and then turn



them upside down and get matching pairs? Well, that's what the imaginatively-titled *Mix 'n' Match* is all about. *Hedgehog's* a bit like a version of *Frogger* - just get the hopping frog across the road which is virtually impossible - if you don't manage it there's a brilliant splatting noise with the graphics to match and the ambulance comes along to pick the squashed dead creature up.

STF Rating: 62%

■ The Animal National Health Service is incredibly good - you'll be impressed by the speed of their services.

FROM PICTS TO PARLIAMENT

FLOPPYSHOP
DISK EDU 3610

How's your history of the Middle Ages? Could it do with polishing up? *From Picts to Parliament* is aimed at you - it's billed as "an irreverent look at history" and comes in the form of a swiftly-scrolling text and graphics slideshow. The words tell you, in faintly humorous tones, all about the various births,

lifestyles, marriages and deaths of the members of the royal family and people of Britain from the 200 years or so following 1066. There's quite a lot to read on most of the screens and it's difficult to actually get everything into your head in the time permitted, so expect to have to run it a few times if you need the information for a project or something. Graphics are nothing special - just bits of faintly historical-looking clip art.

STF Rating: 48%

DIGIT TRACKER

CALEDONIA
DISK MU 72

If you wanted a tracker running in high res, you've been scuppered - until now. The *Digit Tracker* is just such a beast and it's rather good. There are stacks of features. Songs are easily built up from patterns thanks to a series of windows and icons. Songs are entered step by step from the keyboard. It's much less of a bind to understand than the usual trackers, there's even a helpful text message in the top right corner explaining what each icon does - this is dead handy because the documentation is in German. It's only a demo version and you can't save, if you're into trackers and have a mono monitor then the full version is a must.

STF Rating: 73%

MEGATIZER

CALEDONIA
DISK MU 58

Yet another tracker program. This one is geared towards chip music and is a three channel affair. There are loads of songs, voices and things called Editor Modules to load in. The examples are all beepy pieces. Sadly though, spending loads of time producing more beepy tunes could be spent better elsewhere. Chip music isn't all awful, some is just about alright but it needs careful composition. There is a *Player* program and source code to include it into *GFA Basic* programs. The biggest drawback is the lack of documentation, you're left on your own to figure out what is going on and you need lots of patience to get to grips with it.

STF Rating: 67%

UTILITIES

LABEL CAD

ST CLUB

DISK UTI 316

Label CAD is a German Shareware program to design and print fancy labels for your disk collection. It needs 1MByte and a high res monitor or a mono emulator. It's all in German but registration brings an English version. It works like an art package with drawing tools and block functions. They're in a strip of icons, it's easy to use and packed with goodies. Very Handy.

STF Rating: 85%



■ *Label CAD* is a decidedly slick and comprehensive utility for designing and printing decidedly slick disk labels that win gold stars for extreme neatness.

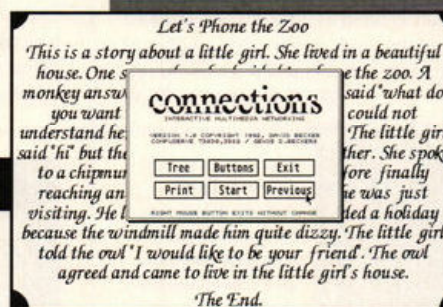
CONNECTIONS

ST CLUB

DISK UTI 315

Connections is a multimedia program for viewing and creating interactive collections of graphics, sounds and text. It only runs in high resolution. You can load in *Degas Elite* screens, small blocks of graphics, samples, text and animations and link them together using a series of buttons. It's simple and very inflexible but easy to use.

STF Rating: 81%



■ There are no hideously complex bits in *Connections*, you'll be putting together interactive databases in no time. It's an excellent way of presenting data, the only time consuming part is collecting all the stuff in the first place.

ST CLUB DISK MAG

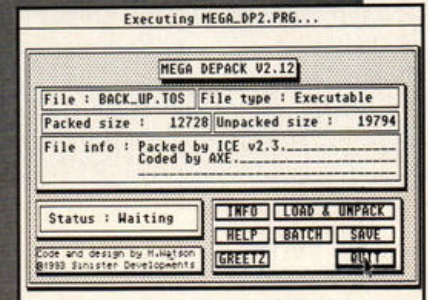
ST CLUB

DISK DMG 35

One of the ST Club's regular disks crammed with various little utilities. There's a clipart printer driver that works with nine or 24-pin printers, a sample convertor, a Patience game,

ZIP 2.2 archiver, *Mega Depack* to unpack files and some utilities for *First Word Plus*. It's a great way of keeping up with all the best in little utilities and programs you might not otherwise see.

STF Rating: 77%



■ From the ST Club, *Mega Depack* - also on this month's Cover Disk - loads and restores programs packed by various packers to their full size. Handy for repacking programs with a more efficient packer.

CALAMUS FONTS

ST CLUB

DISK FON 143

You can never have too many fonts in your collection. This disk is packed with outline fonts like *Chili Pepper* - a slanted 3D font with bold slashes of black and white across it - and *Architect* - which simulates the hand printing done by architects on drawings. Even if only one of the fonts comes in handy it's still a good deal.

STF Rating: 75%



■ One of the 20 fonts for *Calamus* on this disk. It's an absolute bargain which ever way you look at it, even if some of the fonts are a bit weird.

INSIDE INFO 64

ST CLUB

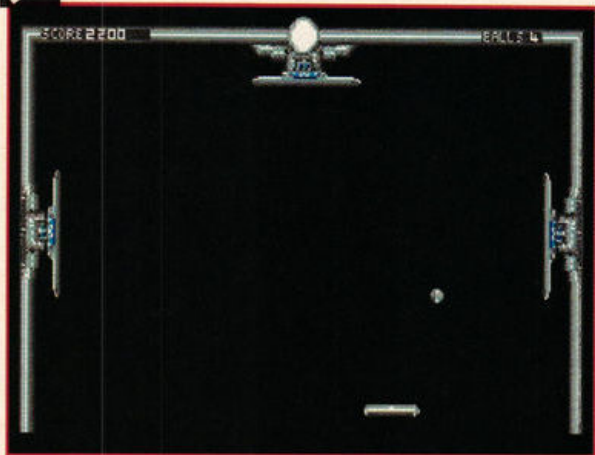
DISK INI 64

A disk magazine produced by ACE - Atari Computer Enthusiasts, who are based in Sydney, Australia. There are a good few articles to read through, but some are of very little interest on this side of the world.

There's also an overview of the forthcoming *Atari Works* program, a look at GIF viewers and archivers. Not a bad read but needs to go into greater detail.

STF Rating: 60%

GAMES



REBOUND BLYTHE PD DISK GAM 51

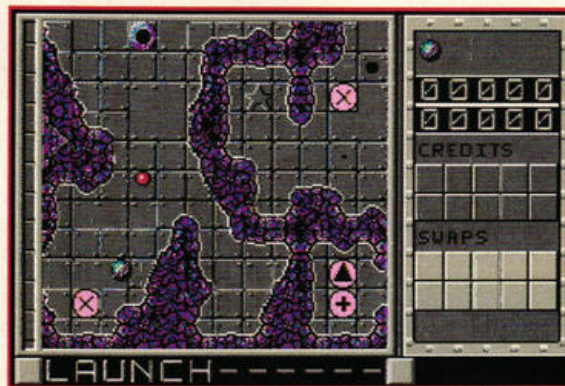
Rebound is a bat and ball job, you control the bat with the mouse and try to keep the ball in play. There are three pads like those in pinball machines, bouncing the ball off these scores you points, if you get all three in a row you

Not the wildest of screens but the task of bouncing the ball around is absorbing and challenging. If you miss the ball your bat gets smaller. Gulp!

get a nice fat bonus. The game is divided into rounds, a little clock shows roughly how far through the round you are, it gets progressively faster and harder.

The control is thankfully accurate and your lack of skill is the only thing to blame if you miss the ball. There are some good samples, including the roar of an appreciative crowd when you get a bonus. It's not exactly mind-taxing gear but well capable of keeping you hypnotised for a while.

STF Rating: 81%



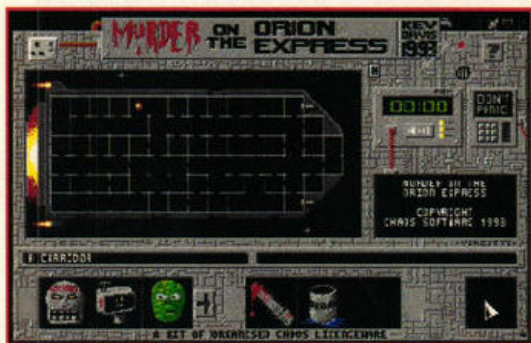
WORMHOLE 1 MERLIN DISK MPD 1459

A unashamed shoot-'em-up, *Wormhole* takes place over six worlds where you and your trusty ball thing shoot gun emplacements, planes and the like. You can move in four directions but can

Aliens - the only viable response is to shoot them, it's as simple as that. *Wormhole 1* is a worthy outing into blastville with guns in all the most awkward places, typical.

only fire up and down. There are tele-port pads and tokens to collect to make progress. The graphics are passable and the sprites move about smoothly and fairly fast. It's playable and worth a good session - it should keep arcade addicts happy and induce a strained trigger finger or two.

STF Rating: 78%



MURDER ON THE ORION EXPRESS TUMBLEVANE DISK OCL 2

A *Cluedo*-style game set aboard a space ship. You need to unmask the killer by interrogating the other passengers and members of the crew. Everybody tells you the truth except the murderer, who - probably for the not unreasonable aim of not being found out - lies a

Based loosely on a certain board game, *Murder on the Orion Express* puts you in the shoes of the detective hunting down the murderer. And there's no threatening to shoot everyone if you can't figure it out.

lot. You can ask the rag-tag collection of suspects where they were at the time of the murder, who they were with and what they were carrying.

It's basically one big logic puzzle, which is great if you like logic puzzles and a bit boring if you don't. You need to keep track of things on paper if you mean to finish a game. It's well screwed together and there are plenty of humorous touches to lighten things up.

STF Rating: 75%



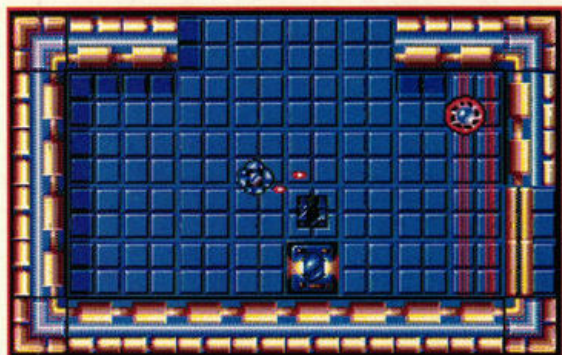
MANIAX EMERALD CITY PD DISK SE 31

A nutty little arcade outing this. You control this tiny thing which leaves a trail and the idea is to close off areas where part of a picture appears. Get a certain amount of the picture exposed

Maniax has you unvelving pictures of cities from around the world, it's an uncomplicated bit of joystick waggling which should distract you for a while.

and it's onto the next level. Pointlessly easy if it wasn't for the gremlin things which bounce around dealing instant death and the little skulls that follow your path with similarly unpleasant consequences. There are lots of bonuses to collect and loads of levels. Only poor joystick response spoils this otherwise rather spiffing game.

STF Rating: 73%



SEVEN GALAXIES MERLIN DISK POW

A flip screen shoot-'em-up from Power-fist which has you scuttling around cleaning up a space station. You control a little droid chappie who can move and fire in the points of the compass. There are aliens to avoid and shoot, door passes to collect and one

Looks sexy but doesn't quite deliver the goods. *Seven Galaxies* is a simple explore and shoot arcade caper. If it moves, shoot it until it stops. Diplomacy - who needs it?

large teleporting alien on each level to waste. The graphics and presentation are very good, the game isn't. It's too sedate and unless you like to approach the arcade experience at a walk then you'll find the game lacklustre and repetitive. The aliens follow simple paths that can mean crashing straight into them when you move onto the screen, a totally unfair way of going belly up. Nice legs, shame about the gameplay.

STF Rating: 64%



OUTWORLD LAPD DISK L 42

Outworld puts you in control of a space colony. Your station is divided into ten sections. All you need to do is make sure you have ordered sufficient supplies of oxygen, water and the like from the supply ships to keep people alive. Easy. Or it would be if it weren't for the aliens. They get everywhere, don't

Outworld has an ambitious scope - managing a space colony and surviving repeated alien attacks. The actual game is a little less exciting though.

they? They attack the sections of your station and zap your supplies.

Clicking the right mouse button takes you to a small scrolling window of the section. Move the cursor over the offending sprite and blast them into oblivion. The game soon dissolves into a hectic rush between the sections trying to down the alien ships and keep supplies up. The arcade section plays a large part in the game and is not exactly gripping stuff.

STF Rating: 61%

ST FORMAT'S TOP TEN

Some of the programs you can get in the Public Domain these days are absolutely brilliant. Here are our very own top ten favourite PD programs of all time

LLAMATRON

1 GOODMAN'S
DISK GD 1200

An absolute thumper of a game. You control a laser-spitting llama through 100 levels of wild and wacky blasting. It's fast, it's furious and it's totally addictive.



Can you hold the pace of this frantic laser-spitting llama shoot-'em-up? We doubt it.

CRACK ART

2 GOODMAN'S
DISK GD 1524

If you do any art in low resolution then this should be in your disk box. It's got more features and special effects than almost any other low resolution art package, brilliant stuff.



Crack Art - simply one of the most feature-packed art programs available in the Public Domain.

DB WRITER

3 FLOPPYSHOP
DISK WRD 3124

An incredibly powerful word processor packed with features including a great spell checker. It leaves some commercial offerings looking quite pale in comparison.

OXYD

4 GOODMAN'S
DISK GD 1881

Totally spiffing game where you battle through 100 levels of devious puzzles at the helm of a black marble. The controls are very responsive - which helps - and each level is beautifully designed.

The excellent gameplay in Oxyd is matched by the graphics and sound making it a cracking game.

TRIP-A-TRON

5 GOODMAN'S
DISK GD 1761

This is a sort of light synthesiser. You can create and play with flowing pat-



Trip-A-Tron isn't a sound and light program - it's an individual instrument which enables you to create constantly changing harmonies and waves using light.

terns of light and colour. Sounds a bit weird but it's a fascinating and powerful program.

FASTCOPY 3

6 ST CLUB DISK
DMG 18

A formatter and copier with bags of parameters and simple to use too. You can copy, format, soft format, scan and more. Indispensable.

GEMVIEW

7 FLOPPYSHOP
DISK ART 3485

A picture viewer which can handle more file formats than you can think of including GIF, TGA, TIFF and JPG. Displays any picture in any format. Extremely handy.

GRANDAD AND THE QUEST FOR THE HOLEY VEST

8 CALEDONIA
DISK GM 1114

A wonderfully humorous and playable graphic adventure. You're a grumpy old git searching through your house for your vest. It's full of puzzles, jokes and lovely graphics.

ALCHIMIE JUNIOR

9 CALEDONIA
DISK MU 55

A superb MIDI sequencer using a structured approach to composition. You have 16 tracks to play with and each can be constructed from 256 patterns. A very smooth program.

FASTBASE

10 FLOPPYSHOP
DISK UTL 415

A stunning database program that runs in all resolutions and can incorporate graphics. It's all GEM based and even has its own programming language. Very slick.



The smallest sprites in a computer game ever, possibly. No prizes for guessing which game Evasion 2 bears a passing similarity with. It plays heaps better than it looks.

ics are crude but it moves very fast.

Evasion 2 is a Pac Man clone with tiny sprites. You move your bod about collecting the white dots and evading the aliens. There are a few goodies to pick up and you can lay mines which comes in handy.

Like Runaway, it's simple, crude and very fast. Both games are playable and potential joystick breaking material.

STF Rating: 77%

EVASION 2 AND RUNAWAY

BUDGIE
DISK BU 115

Two arcade games written in machine code and it shows, they both whizz along. Runaway sees you guiding a spaceship through vertically scrolling tunnels, you wrench the joystick left or right to avoid the walls of the tortuous tunnels. It's very simple and the graph-



Welcome to the inside of Odie's head.

down. If you don't do it for yourself, do it for Odie.

Pictures of Garfield are floating all over

town and it's your job to shoot them down and stop their advance. If you don't, they'll take over the planet - they will, honest. Armed with a mouse-controlled fast gun and a couple of smart bombs you have to avoid being missiled or shot by these cute looking characters. Operation Garfield is just another addictive shoot-'em-up. The first level is easy, but after that things get hairy. You'll never look at his cartoons in the same light.

STF Rating: 70%

OPERATION GARFIELD

LAPD
DISK G279

You've heard of Operation Stealth, haven't you? Well, apart from the similar name it's got absolutely nothing to do with this fun little STE-only shoot-'em-down. If you've never really liked Garfield the cat, now is your time to let your feelings show. Go on, don't be shy - shoot that darn lasagne-eating cat

HUNCHY

AQUILA
DISK L 4

Two versions of a basic arcade game featuring Hunchy, both very similar. You control the little fella with the joystick, press Fire and he jumps. You need to reach the bell at the left edge of the screen without getting shot, falling off or otherwise blowing it.

And that's it. It's very simple which wouldn't be a bad thing if it was playable, but it isn't. The control system is not what it could be and the game's repetitive and difficult.

Hardened arcade players may find it a challenge, but the rest of us are likely to find it too frustrating to bear. The graphics are suspiciously good and rather familiar looking, let's hope the Bitmap's graphic artists aren't going to see this.

STF Rating: 56%

LASERCHASE 2000

MERLIN PD
DISK 1347

A bunch of looney anarchists have taken over Russia and are giving everybody a really, really bad time. The US government has decided to send in its best man - that's you - to sort out the commies. Sadly, you get caught and are given the choice between death and competing in Laserchase.

You're in a red car and you have 40 seconds to go round a maze and turn all the lanterns off. There's also a blue phantom car which goes round the maze trying to stop you from finishing. You control your car with your joystick, but the response is so poor you often miss the different exits and you end up smashing into the phantom car once too often. If it wasn't for that, it might be fractionally more exciting.

STF Rating: 47%

DEMOS

THE DREAMZONE DEMO

LAPD
DISK D 360A AND 360B

A monstrous two disk demo from the Wild Boys. After the big credits bit you get the main menu, which is a "guide



the sprite to the demos behind the doors" effort and is half-way playable. There are a dozen or so smooth sub-demos with some clever scrolling, full-screen stuff, vector balls and very fast 3D shapes. On the down side there's one of those naff lamer tests and a drab flashy house music screen that's starting to look dated. Most of the sound is chip music and terrible. The graphic effects are superb – the scrolling things and vector shapes are fast and impressive. One of the better mega demos.

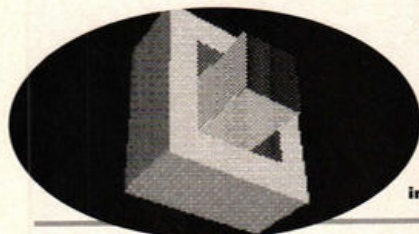
STF Rating: 82%

■ A demo screen if ever we saw one. The Dreamzone demo has all the old favourites done very slickly with fast and smooth things wibbling about.

COZMIC JAM

RIVERDENE PDL
DISK 1033

A rolling demo showing off vector graphics, with rather too much emphasis on the spinning cube. There are some snappy effects and the sound is sampled tracker stuff and rather good



– it gives a much better atmosphere than the usual hopeless sound chip music. There is nothing mind-blowing although some of the distortion effects are admirable. The vectors could be faster. The end sequence shows a spaceship blasting through space, more of that would have made a better demo. No matter how clever they are, spinning cubes against a black background can get boring.

STF Rating: 73%

■ It's not a spinning cube, it's a spinning cube-like thing! The Cozmic Jam takes a jaunt into 3D vectors and comes away looking a little smug.

TERMINAL

FLOPPYSHOP
DISK 3392

One of three demos on this disk, the Terminal demo was originally created by Eric Schwartz. It's a short sequence of

INTENSIVE CARE WARD
SE RECEIVING CARETULY



full screen animation with samples. It features a patient in intensive care, a foxy-looking nurse and a dicky heart monitor machine. It's well drawn but is too short. There is an STFM demo which is a weak four screen effort with hackneyed effects and lastly a flash looking plasma and raster effect with squillions of colours. Mr Schwartz has produced lots of similar humorous animations that deserve an exhibition, hopefully someone will take up the challenge of converting his larger efforts too.

STF Rating: 69%

■ This screen from the Terminal demo is crying out for a witty and decidedly risqué caption. But we wouldn't dare.

ANTIDOTE

CALEDONIA
DISK STE 48

One for STEs only, the Antidote demo has four long pieces of sampled music. It's frantic dance/rave stuff complete with samples originally lifted from children's programs including Rainbow and Trumpton. The sound quality is pretty good and you'll be turning up the volume. Apart from that, there's really not much else going on – a couple of pictures and some scrolling text. Cynics might ask why you don't just get the records and have much better quality sound and more songs, but that's not the point is it?

STF Rating: 62%

THE BLACK DEMO

FLOPPYSHOP
DISK DEM 3401

A mega demo with all the effects you've seen before not being done any better. Apart from one good sample bit of tracker stuff the music is terrible and having bouncing VU meters doesn't improve it one bit.

There are scrolling lines of text, vector balls and a strong feeling of déjà-vu. If you've never seen a mega demo then you'll be impressed, if you've seen a few you'll be less so. If you collect demos then by all means add it to your collection, if you just dabble then start with the meatier numbers.

STF Rating: 58%

THE ST FORMAT PD DIRECTORY

■ Here's a list of where to go for all Public Domain software – demos, games and utilities for around £3 a disk! If you write to any of these libraries for a catalogue, enclose an SAE. Budget games are available from all PD libraries indicated by a (B). Simply mention the disk number (above the review) when you order the disk.

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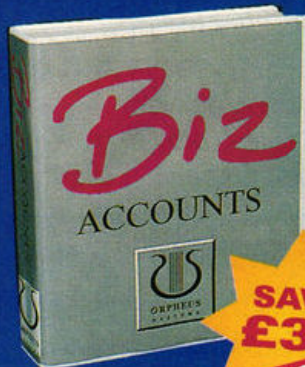
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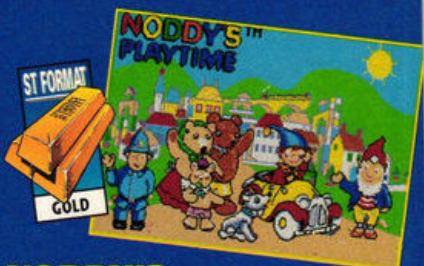
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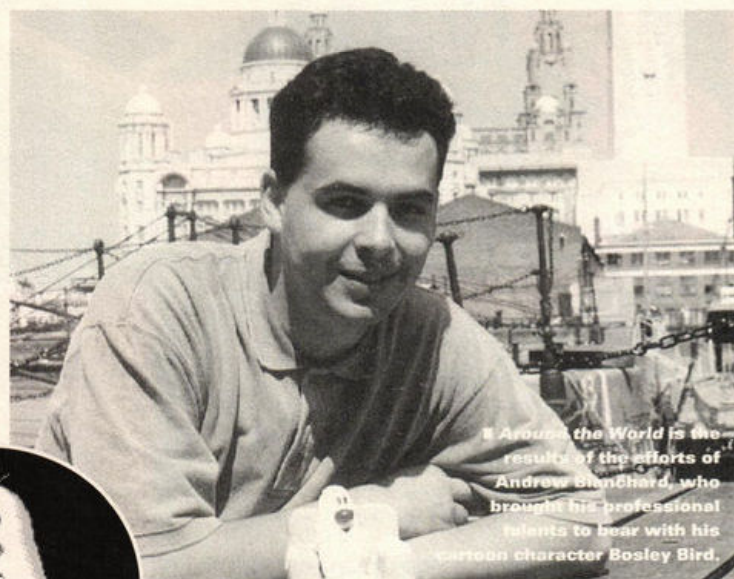
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One of the advantages of dealing without the restraints of commercial pressure is that you can write whatever program you like, however obscure or specialised. There's no project manager to placate or marketing men to please.

There are plenty of people ready to knock the quality of the soft-

ware available but there is nothing stopping you from writing and distributing your own efforts. This month we take a look at *Astrobases*, just the ticket for star gazers. It's an undoubtedly popular hobby but one which is unlikely to attract commercial interest. We also have a package of games and an educational game both only available directly from the authors themselves.

If you've written a program that you think merits a bit more exposure get it into an envelope and send it directly to us at - Indie Reviews, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW.



■ *Around the World* is the result of the efforts of Andrew Blanchard, who brought his professional talents to bear with his cartoon character Bosley Bird.

AROUND THE WORLD

PRICE: £5

FROM: BLANCHARD GRAPHICS
CONTACT: 274 MACKETS LANE,
HALEWOOD, LIVERPOOL
L25 9RT

Written using *Talespin* and featuring some very swish graphics, *Around the World* is a set of multiple choice questions. You follow a cartoon character called Bosley Bird around the world searching for something that's been left in a safety deposit box for you.

The journey starts in New York. Each location has half a dozen or more questions that range from the very easy to the sort of things most of us have to look up. It's all mouse controlled, you click on the figure of

■ Just look what your lack of knowledge of the world we live in has done to this poor old chap's countenance, you beast.

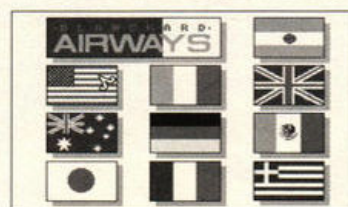


Bosley and he asks the question and gives you three alternative answers. The idea is that you need to research the answers rather than just guess and hope for the best. If you get it right, there's a lovely sample of a cheering crowd, get it wrong and you go back to the start. This can get

frustrating as you need to work your way back through the questions again. Luckily, you can warp to the halfway

mark once you've learnt the password.

The author is Andrew Blanchard, his job as a graphic designer explains why the graphics are so good. "The game was written to bring the cartoon character of Bosley to life. *Talespin* was ideal, there are no time limits for anything. Writing it was a lot of fun, I've dabbled in the Public Domain but I thought people might take a bit more notice if I dis-



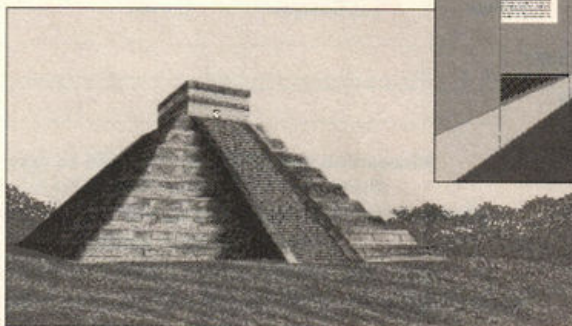
■ All right then, clever clogs, which one of these is the Mexican flag? Ha, not so easy is it?

tributed it." There is a demo version available in the Public Domain while the full version is only available directly from him.

The presentation is excellent but its educational value is limited. There aren't enough questions and once you've worked your way through them all, that's it. What it does encourage is research, if only to avoid being thrown back to the beginning again. Like all *Talespin* games it plays very slowly, each screen is loaded from disk separately and each time you click on anything you have to wait.

Given the simplicity of the format *Around the World* is surprisingly good, mostly because of the graphics and sound effects.

■ The graphics for each location are superb, this is Huddersfield. Each of the ten locations from around the world has an appropriate set of questions.



■ Here's where your multiple choice jaunt begins. See that white blob? That's your good friend Bosley, that is. Playing *Around the World* is simplicity itself - just click on things with the mouse.

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FEEDBACK

Go on! Stand on your soap box and start shouting about the things you care about. On second thoughts, why don't you write in to us?

What a con!

I have owned an STE for three years now and I use it for both games and serious applications. I am among the many people who have felt cheated by the lack of support for the STE's capabilities from both Atari and many software houses. All us STE owners are naturally thrilled that a game (*Sleepwalker*) has been released that is specifically designed for our machine. I think STFM owners should perhaps consider how they would feel if STF put single-sided disks (meaning half the amount of software) on the cover of their magazine just to cater for single-sided drive owners – if there are any left! The point is, I'm sure those owners wouldn't be very

happy about it. I'm not happy about people slagging off STE-only

"STFM owners should consider the fact that it is because they have been too tight-fisted to upgrade to an STE that the machine has been ignored"

games when they don't know what they're talking about. Yes, the samples in *Sleepwalker* could be

played back at a lower frequency to support STFM owners, but then they would sound crap so you may as well use a chip effect instead. I can understand that STFM owners could feel as if they've been let down this time, but STE owners have been let down for four years!

It has to be accepted that the STE is a different machine to the STFM and it's quite a bit more powerful because of its superior hardware. Comparing the STFM to the STE is like comparing a seven inch single to a CD single – there is no comparison! Perhaps complaining STFM owners should consider the fact that it is because they have been too tight-fisted to upgrade to an STE that the machine has been ignored since its release, so now

that it starts to get some support I think you should stop complaining and just be grateful that your machine was not wiped out by the release of the STE.

**T Assman
Cheshire**

stf: Well said, T, though there are likely to be other reasons than tight-fistedness that have prevented some people from buying an STE. Lack of software support, for example...

Huggy bear frenzy

I was surprised to read Nick Coler's ridiculous comments concerning the state of the music industry: "Boring, there's not enough anar-



IS THE GAMES INDUSTRY COMPLETELY BONKERS? ATARI RESPOND



Looking at the article on the games industry in *STF 49*: it's a great piece and what it does, in my opinion, is demonstrate how easily Atari are blamed for other people's misunderstandings. Let me give you just one example relating to two points from the article.

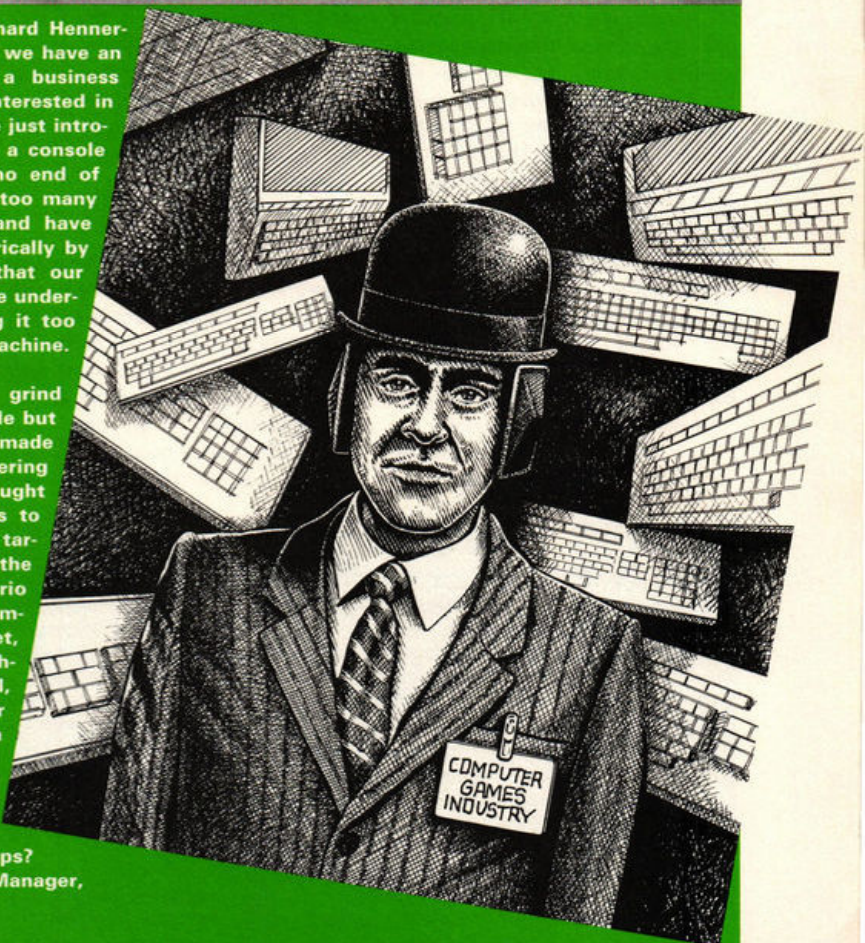
Kev Bulmer showed us *Legends of Valour* in mid-1992 and we immediately decided to target this game for the Falcon. When we release a development machine, the developer signs a form which states that the machine remains our property until the program is released. Kev maintained that this form should be signed by US Gold, they maintained it should be signed by Kev. Nobody signed it.

Then Kev was featured in the pages of *ST FORMAT* in the Rant column proclaiming we would not loan him a machine. I phoned him, explained his machine was here, would he sign the form and he said yes. Another form was sent, ten days later we chased, Kev had sent it to US Gold. US Gold would not sign because they had not seen the machine so I visited their development team with a full show of the working Falcon.

After the visit we still do not have a signed form. Kev Bulmer's loan machine is still sitting here awaiting the form yet a year after we made that machine available pending a basic commitment that it would be returned if they did not develop *LOV* I read that Kev has experienced "huge problems dealing with Atari" and that US Gold do not know the machine is out. Hmmm.

As a footnote, Richard Hennerley of Daze states that we have an idea that the ST is a business machine and are not interested in games. Really! We have just introduced a base model at a console price, we have had no end of criticism for including too many games in our packs and have been told categorically by "people who know" that our main problem is that we undersell the ST by pushing it too much as a games machine. Heads you win...

I have no axe to grind with any of these people but in the past we have made the mistake of not offering any defence when brought to trial and this seems to have made us an easy target. Is it not a case of the old *Life of Brian* scenario – "other than the computer games market, affordable 16-bit technology, low cost MIDI, the opportunity for Future to publish such a superb mag, 950,000 ST owners, Ladbroke Computing... what have Atari ever given us?" A scapegoat perhaps? Darryl Still, Marketing Manager, Atari UK



chy in it." Well, Nick, have you led such a sheltered and sad life that you have yet to witness the anarchic onslaught of Brighton's punksters *Huggy Bear*? This is the band that brought Channel Four's *The Word* to a standstill earlier this year and were subsequently ejected from the studio. So, Nick, get out of the humdrum world of "boring" bourgeois "music" and buy some *Huggy Bear* records.

Timothy Troquet Webster
Lincolnshire

stf: Yes, well, thanks for that. And is that really your name?

Hard drivin'

I'm really fed up. Why? Because I own a hard drive. Not annoying in itself but there is one problem – the number of games that like being installed on to it. Games like *Formula One Grand Prix* would benefit so much if I could install them on to my hard drive. The game comes on four disks and requires loads of disk accessing and swapping. There's a manual codeword protection bit in it and I can make back ups of the disks so why can't I put it on to my hard drive?

The argument software houses put forward is "but if we let people copy games onto hard drives then they could be pirated." Fair enough but consider this: *Protext* can be used by any idiot after a bit of experimentation if he doesn't have the manual (there's even an on-disk tutorial) but games like *F1GP* or *Captive* would cause more than a few problems if you didn't know what you were doing – *F1GP* can't even be played without the manual password, yet *Protext* can be installed on to my hard drive and *F1GP* can't – even though I can make floppy disk copies of it. If I can copy the disks for *F1GP* then I can make floppy disk copies of it. If I can copy the disks for *F1GP* then I can make illegal copies, so what are MicroProse worried about?

I take my hat off to companies like Sierra whose games all

install on to hard drive (they even provide special installation programs to make it easier) and games like *Wonderland* go on as well. Even *Bard's Tale*, a game from 1986, installs fine and it's got key-disk protection (you can run it from hard drive without the original disk in drive A, but, after it's checked the validity of that disk, it accesses from the hard drive). Other installable games all have

"Software houses have to realise that hard drive installation is a necessary feature of any new game they release"

some kind of manual or code protection to stop piracy and, as a result, the disks aren't protected.

If a PC game was released that couldn't be installed onto a hard drive no-one would buy it. Sure, a much greater percentage of PC owners have hard drives, but that's no excuse.

I'm beginning to ignore commercial software that can't be installed on to my hard drive and, with an ever-increasing proportion of ST owners – and now the Falcon owners who are more likely to have hard drives – software companies have to realise that hard drive installation is a necessary feature of any new game they release.

Jon Haworth
London NW3

stf: Jon, you share the same views as many hard drive ST owning people and the games industry is beginning to wake up to the fact that you want to install them on a hard drive as games get bigger and more complex. In the past there have been fewer people with hard drives, but as hard drives have

become more affordable there are plenty of new hard drive installable games: *Ishar 2*, *Reach for the Skies* and *Transarctica* to name but three that we've recently reviewed.

Doom and gloom

Without mass advertising and software support, the Falcon is doomed. Software houses are being hypocritical – they have been crying out for a machine worth waiting for with great sound and graphics yet when one arrives they want to ignore it. Software houses pledging support for the Falcon are mostly small and are not really big players. This situation is a disgrace – companies like Ocean, MicroProse and Psygnosis should be among the first to support the machine. It is rubbish for companies like these to make excuses about machines not having a large enough user base and that they could lose money. These companies make sufficient profits to take more risks – if smaller companies can do it why can't they? If they supported the machine from the start it would take off.

A worrying thing about the Falcon seems to be where you can buy it. I asked in Dixons if they would be stocking the Falcon and the shop assistant said they might not be taking it. If the major shops are not going to sell the machine, the Falcon will only ever be a minority or cult machine. Atari should be negotiating to get the machine in the High Street shops.

David Burman
Lanarkshire

stf: Atari are attempting to get the Falcon into High Street shops but because they want plenty of backup and enthusiasts to sell it – so they're able to sell its best qualities – they're presently concentrating on distributing it via independent dealers who have been trained to know about the machine, rather than just having it as an extra part of the stock of a chain store like Dixons. When it has

been established in the specialist market, they are then likely to encourage Dixons and other such retailers to sell the machine. We spoke to MicroProse about the possibility of games for the Falcon and, while they were reluctant to consider creating games specifically for the machine, they hinted that there was a chance that they would port games from the PC or upgrade existing ST versions to run with the Falcon. They also emphasised the fact that they continually take risks developing for every new format.

Who's gormless now?

Why don't computer shops ever advertise the good things about the ST? I went into one of our local shops the other day and asked if they sold Windows for the ST. ST? replied the bloke at the counter looking completely gormless. The people in the shop don't even know about the product they are selling! However do we expect to get the sales of STs up again if the supposed experts don't know a thing about the flippin' thing they're supposed to be experts on?

Robert Coley
Essex

stf: Robert, before you accuse other people of being completely gormless, I think it would be advisable to make sure you know exactly what you're talking about yourself. Windows, you see, is sort of like GEM – it stands for Graphical Environment Manager – and gives you all those window-like things you get on your Desktop. It also happens to be an environment only available to people with PC compatibles. That's probably why the shop assistant was so amazed when you asked him about it.

■ If you want to have your say about any of the issues raised on the pages of ST FORMAT, please write to Paula Richards, The Editor, Feedback, ST FORMAT, 30 Monmouth Street, Bath, BA1 2BW

COULD YOU IMPROVE THE QUALITY OF SHAREWARE PROGRAMS?

Over the years on every computer magazine's letters page, I've read letter after letter of complaint about the price and standards of software. As the number of Shareware and independent games increases, we have an alternative to steeply priced software.

The problem of quality is yet to be solved – there are precious few Shareware games with slick programming and great audio and visuals, generally because such games are produced completely by one programmer who may be a great coder, but lacking in musical ability.

So here's a plea to artists, musicians and sound effectors (?) everywhere. If you could

set aside some space for names and addresses of these talented individuals, programmers could easily obtain great sound and graphics without resorting to stuff in the Public Domain – thereby giving their program its own individuality and make it excellent in all areas.

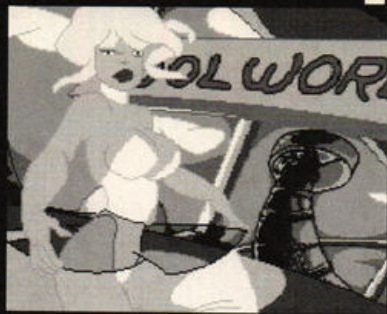
To start the ball rolling, here's my contribution: I've been producing music of all sorts on my 520STFM for around four years and I've got theory and practical music qualifications (grade five for both). I write music in many formats, but the most useful to programmers would be the *Noisetacker* MOD format. If anyone's interested, I'll write a

handful of tunes for a fiver – just write to me at the address below:

Cheers!
Ceri Hughes, Ty Gwyn,
Wyndham Street, Penygraig
Rhonadd, Mid Glamorgan
South Wales

stf: What a brilliant idea! All we need now is a bit of help from everyone else out there who may be frustrated by their weaknesses in one particular area. Send your offerings to – I've got a talent and I'm not afraid to share it, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW.

TOO GOOD A MEMORY?



■ Though you need 1MByte to run *Cool World*, it doesn't mean it's a great game. How much worse would it have been with only 0.5MBytes?

Your latest Cover Disk from *ST FORMAT* 49 continues the worrying trend of having programs that only run on 1MByte STs. Ever since *Monkey Island* you have assumed that all ST owners would upgrade just to play that game. This is disturbing considering how you dumped single-

stf: We're certainly not in league with SIMM chip manufacturers, but we would like to see as many people upgrade their STs to the highest capabilities they can afford simply because then you can then take advantage of so much more of the ST's potential. Even if you just want



■ Upgrade to 1MByte just to play *Lemmings 2* - it's worth every penny.

sided drive owners for the flimsiest of reasons - "flexibility of program size." How long before you deem 520 STs similarly "obsolete"?

Oh - and before you start giving us the line "there's no reason not to upgrade," there is a very good reason - cost. What's more, those people unable to upgrade for that reason are those who depend most on your Cover Disk and its ilk in these days of sky-high software prices.

Are you in league with the SIMM chip manufacturers? I think we should be told.

Tony Jenkins, Suffolk

■ Just think of the advantages of more memory - you get more, er, flesh for your money.



■ The *Ishar* series of games gives you the chance for some of the best adventuring ever. But if you only have a 1MByte ST, you miss out.

to play games you really do need at least 1MByte of RAM - most of the new games need all that extra memory. You can't really begin to get serious with your ST

"Your latest Cover Disk carries on the worrying trend of having programs only runnable on 1MByte STs"

unless you've got the extra memory potential.

Since I have received only two letters - including yours - complaining about the extra memory required to run our Cover Disks, I can only assume the rest of *STF*'s readers agree with us that more memory is the way forward. If anyone else has strong feelings about this subject, please do let me know.

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PIXEL PAINTING

Let's see what you can do when your creative juices are flowing...

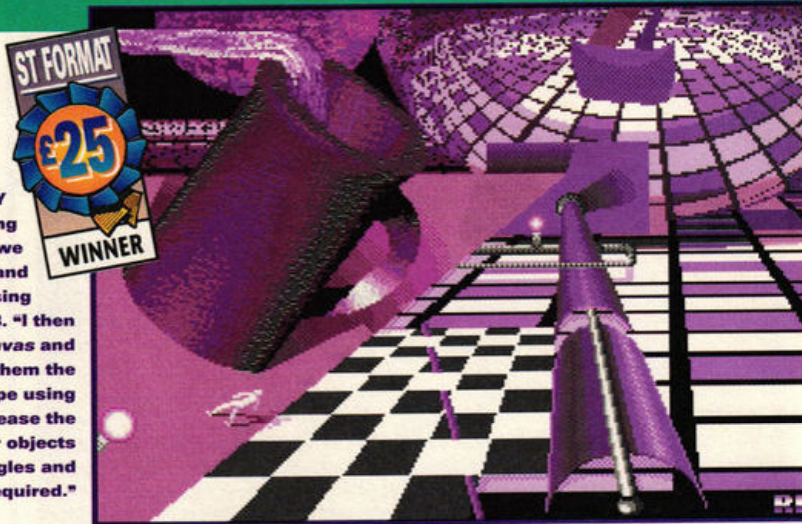
Robin Ball of Devizes has sent in two pictures with very different themes and wins the £25 prize money this month. Infinite Improbability (top right) was created using Canvas and attempts to emulate the impossible perspectives created by M C Escher. The other Greek mythological drawing is of the Medusa drawn in a more traditional manner with Deluxe Paint. The pair shows that you can create any style of picture on your ST with a little thought and effort.

If you think you can come up with equally good – or better – results then send your entries on a disk to Pixel Painting, ST FORMAT,

■ INFINITE IMPROBABILITY
Robin created the background using the Pearle raytracing program we gave away on STF Cover Disk 33, and then raytraced the mug using Rezrender, from STF Cover Disk 23. "I then loaded the pictures into Canvas and adjusted their palettes to get them the same. I created the landscape using extreme perspective to increase the distortion. After drawing the other objects I tidied up the picture, adjusted angles and added shading where required."

30 Monmouth Street, Bath BA1 2BW. Include full instructions and intermediate stages. **stf**

■ MEDUSA "I created a basic outline using K-line and then tidied it up with Bezier curves. I added detail and colour and gradually built up the picture. I then shaded it and added the snakes. You can do this by taking circles, shading them to look like spheres and cutting them out. I then drew a series of wiggly lines using the hemispheres as a brush, then detailed the heads. The whole thing took about five hours in Deluxe Paint."



THAT ESSENTIAL PANEL FULL OF FLANNEL

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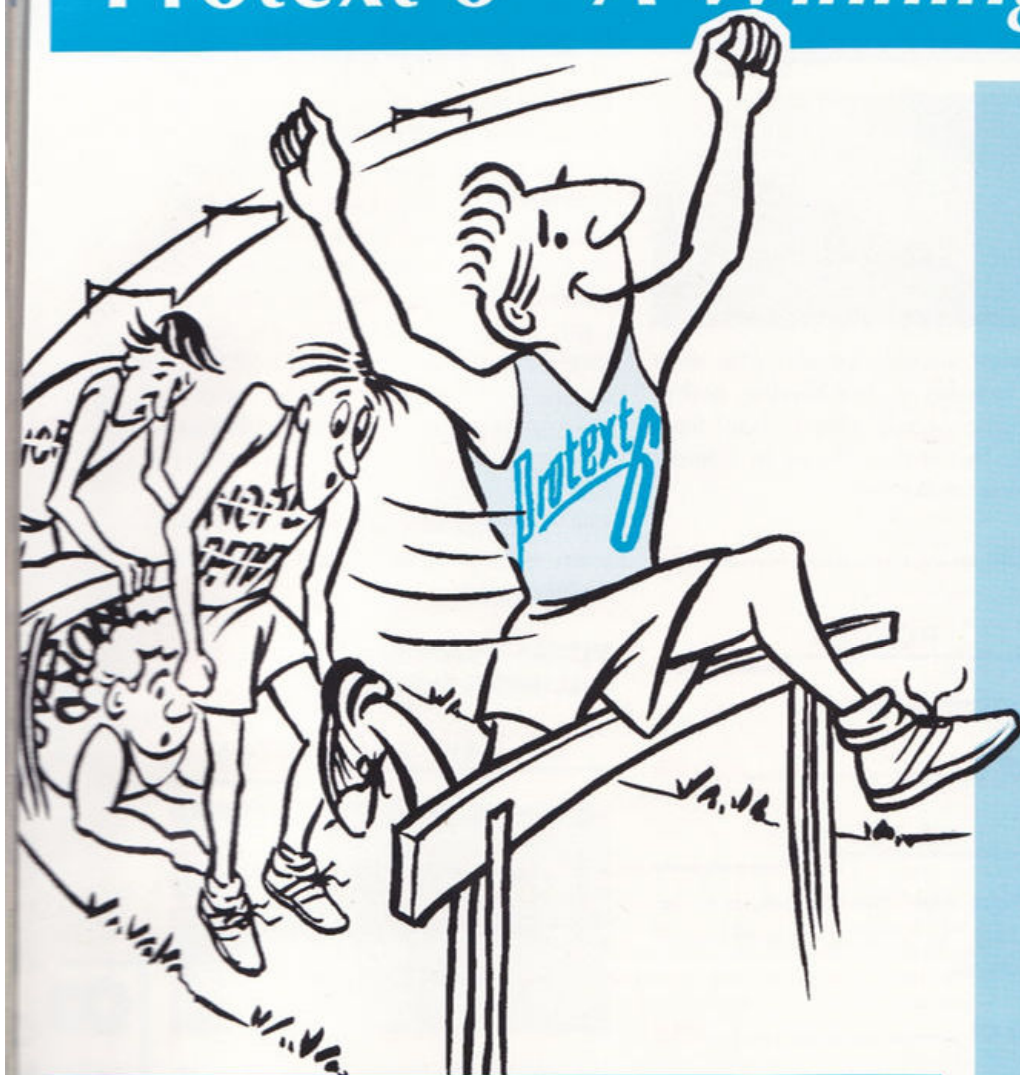
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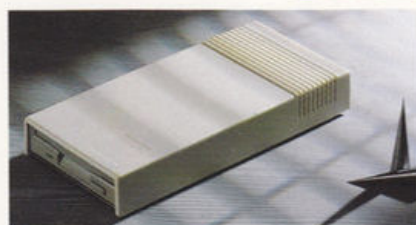
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