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Atari's chief desig

all about the "miracle" ST reads your handwriting: page 25

# BRITAIN'S BEST-SELLING MAGALINE FOR YOUR ATARI ST



You can do this: MidWinter 2 artist Andy Elkerton shows you how see page 90

# Shoot to thril!

Your ST, a video recorder and imagination – all you need to create video masterpieces: page 30

**ON THE DISK** 

Make your very own video blockbuster with our Cover Disk programs: page 38

Introduce vour ST to the real world! We pick the best digitiser around: page 104



### **MORE GOOD REASONS TO** STEP INSIDE

MINELTA

• 29 manic games cheated 23 games under the proverbial microscope 16 PD programs reviewed 12 handy technical tips 5 step-by-step guides to

making your own pictures





















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#### Publisher Steve Carey

Group Publishing Director Greg Ingham Promotions Manager Michele Harris Publishers' Assistant Tamara Ward Colour Repro DP Graphics, Holt Printers Printed and bound by Chase Web

Ltd., St Ives plc UK Distribution Future Publishing (∞ 0225 442244) Worldwide Distribution MMC Ltd (∞ 0483 211678) Circulation Director Sue Hartley (∞ 0225 442244)

Subscriptions/Mail order THE OLD BARN, SOMERTON, SOMERSET TA11 7PV, ± 0458 74011 • FAX 0458 74378

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# Shoot to thrill



For no more than the cost of a lead you can achieve dazzling video effects. With your ST, a video recorder and

even just a pinch of imagination, you can title your videos, create your own cartoon animations, save your performance on Xenon 2 for posterity, record loony coloured patterns or dub MIDI music over your home videos.

Invest a little more and you can get your hands on a digitiser, capable of recording a real image or

> taking pictures from video and storing them as picture files your ST can then manipulate. Turn to page 30 and begin exploring the possibilities for ST Desktop video.

WE REVEAL THE BEST ST DIGITISER YOU CAN BUY

04



**25** Discover exactly what Atari's exciting new "STs" are capable of



**48** The game that time forgot is here at last! Wonderland comes to the ST



**87** Get all your games under control with this bizarre new joystick



**144** Win one of three great Canon inkjet printers in our £1,200 compo

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# **Cover disk p 38**

#### **IT'S SIMPLY TWO MUCH**

Battle it out with ferocious llamas for superiority on your own farm with this special ST FORMAT version of Llamatron, Jeff Minter's mind-blowing beat-'em-up. Then go round the bend with our playable demo of Psygnosis' puzzler, Atomino. Plus: Part three of our assembly language programming tutorial by game-makers Bullfrog And: Four invaluable utilities for file-selecting, document handling, virus-spotting and more!



L PROGRAMS STE COMPATIBLE Disk format by Rob Northen

**Bigs** sets a new standard in Baseball simulations.

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9. 9. 9. 9011997-

2

Choose them any League Baseball

Easy to play, you can really feel the crack of ball against bat as you hit a big one and go for a home run. Wind up to pitch a fast ball or play tricky with a slow curver. Put on your glove and dive for catches or try to tag those runners between bases.

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form at your local retailer, answer the three simple questions and YOU could be flying to the USA in September to see a real life baseball game between the

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mmn rights reserved. ™ Atari Games Corporation kaging © 1991 Domark Software Ltd. ftware Ltd, Ferry House, 51-57 Lacy Road, London SW15 1PR Tel: 081-780 2224 ri ST, IBM PC 3.5" & 5.25", Commodore 64, Spectrum, Amstrad.

STE price slashed • STT transputer confirmed • STE problems clarified

#### STF COMMENT

Powerful 16-bit ST technology for under £300. Atari have surprised everyone yet again with their new Discovery Xtra pack. The launch of the package means that Atari now have a cogent family of machines which beat the competition hands down.

The emphasis has shifted from games to "serious" applications, and from a disparate array of packs to a clearly-defined range of 16 bit machines. Atari have said that they will eventually drop the "little Es and FMs" from the range and refer to the computers simply as the ST. This means that as people upgrade to the STE there will be less and less confusion about exactly which machine they've got.

Of course it won't stop there. Perhaps the most interesting development is the official confirmation of the STT transputer add-on board (see page 10). Imagine for a moment the unrivalled processing power this will give to the ST owner. Applications such as video processing and graphic workstation packages will enjoy a speed boost of some 80 times for the low, low price of £500.

By the summer of 1992, Atari should have launched the STT, the Panther, STyle (the ST Pad) and the Notebook (the ST Book). The emphasis of course is on the "should." Existing Atari owners don't have to be reminded of the meaning of the expression "vapourware" - promised hardware that never appears. But if all goes as planned, Atari will have a range to beat the world.

# **STE breaks** £300 barrier by Andrew Hutchinson

tari have slashed the price of the 520 STE by £50 to a remarkable £299.

The machine now comes in a new bundle named Discovery Xtra, with four games, three starter programs and a joystick. This cut, part of Atari's aggressive new marketing plan, comes just two months after they dropped the price from £400 to £359. At £299 the STE is now the best value multi-purpose 16-bit computer on the market.

The Discovery Xtra pack takes its place at the cheap end of the STE range, which includes the 520 STE Turbo games pack (£359) and the 1040 STE Family Curriculum pack (£399 - review, page 133). The Xtra pack is aimed squarely at younger users who want to play games but may progress to other applications.

Asked if this STE marketing strategy meant that support for the STFM would be dropped, Atari UK's Marketing Manager Peter Staddon insisted: "Not at all. From the end of this year the FM won't be available, but that's because demand will

### **TEN REASONS TO UPGRADE TO THE STE**

1. 4,096 colour palette to choose from, compared to the STFM's 512, means flashier games and more versatility in paint packages

2. DMA Sample quality sounds. You can now mix "real" sounds with chip music

3. In-built blitter chip means that block memory copying operations are speeded up. This speeds up practically all memory operations

4. Latest and best version of **TOS means standard Desktop** functions such as Format and Copy are vastly improved

5. Up to six joysticks can all be plugged in at the same

time. Multi-player games will never be the same again

6. Analog joystick ports which can also accept light guns and light pens

7. 8-bit stereo sound output via stereo jacks on the back of the machine's casing

8. Memory upgrades are now considerably easier - simply add a new card of RAM

9. Increasing amounts of software are taking advantage of the advanced hardware capabilities of the STE, including hardware scrolling

10. Oh yes, and it's now only £299. What are you waiting for?



The brand new Discovery Xtra pack, signalling Atari's decision to move away from just games: a 520 STE with four games, three utility disks and a joystick for £299



Bob Gleadow, Atari UK Managing Director: "We're keen to be seen as a pro-active company. As part of this stance we'll be shifting the emphasis away from a pure games focus to a more general computer usage image"

switch to the STE. There just won't be a demand for the STFM."

Bob Gleadow, Atari UK's Managing Director, revealed that Atari's new portable machines the ST Pad and the ST Notebook (see page 25) are to be launched at the 1992 Hanover show, with the former probably renamed STyle. He remained adamant that a floppy drive won't be added to either machine, but said a bolt-on hard drive would be made available. He expects the price point for the two machines to be somewhere between £1,500 and £2,000.

Surprisingly, Atari have also announced a price rise of £100 on 

continued on page 9

AIN'T THAT THE TRUTH Some of the truly - er, noteworthy things people say "It takes five minutes to lose a reputation and years to build one up." Peter Staddon, Atari

. "You English guys have got such cute accents. Any time you're over here, look me up." Young lady from Atari USA.

"If you're sick, and you want it, it's available." Martin Moth of Microprose on the forthcoming Gulf war mission disks for F-15 2.

"Did you know that Clint out of Inspiral Carpets has the same kind of Farfisa organ that Floyd used on Atom Heart Mother - the album with those cows on the cover? Yow!" Jeff Minter, Lord high Yak

"Is this some sort of April Fool's Day joke?" Simon Stock of Sound Technology on being told about the ST Pad.

"We've been quite arrogant towards the outside world." Peter Staddon of Atari comes clean about the company's past marketing skills.

#### **HiSoft News** All the latest news and product information.

We will be releasing new versions of many of our existing titles over the next few months. To make way for this new product, we will be reducing (yes ... lowering!) the retail prices of older versions from 1 June.

Or you can use the order form below to obtain these reduced price bargains now.

Here is a summary of our new releases:

#### **HiSoft BASIC 2**

- brand-new, multi-window editor with bookmarks, mouse block selection and much more
- tremendous increase in speed of program development and extra flexibility
- extensive, well-documented GEM library allowing high level control, with many examples
- many extra language features including static arrays for faster-running code
- link with Lattice C 5 and Devpac ST 3
- support for the 68030 and 68882 TT chips includes a resource construction set (WERCS) and a low-level debugger - no more to buy

Complete with a new manual, support for the STE and much more, BASIC 2 is set to be the BASIC of the 90s. Price will be £79.95 inclusive with upgrades costing

£39.95 to registered users of HiSoft BASIC and £49.95 for Power BASIC users. Release date: June 1991.



HiSoft Devpac 3

brand-new, multiwindow editor

re-designed user interface with pop-up menus

many more assembly

optimisations

faster, more flexible assembly HiSoft BASIC 2 and Lattice C 5 linkable code

Devpac 3 is another major step forward for assembler programmers, novice and expert alike. Release is likely by late June 1991 at a price of £69.95. Upgrades from previous versions will cost £34.95.

#### Harlekin 2

- re-designed and enhanced scrapbook, giving a complete time management system
- greater configurability allowing Harlekin to be used even on a humble 520ST
- many other improvements and enhancements to this already amazing package

works on the TI

Harlekin 2 is due for release in June 1991. Watch out for details of price and availability.

# **HighSpeed** Pascal 1.1

Version 1.1 of this new, already immensely popular compiler is now available. Additional features are:

- inline assemble
- help desk accessory
- i/o-mapped maths co-processor support
- faster, improved editor
- more compact libraries

Upgrades from earlier versions cost £7.50 inclusive.



For those not in the know, HighSpeed Pascal comes from Denmark, is extremely fast and friendly to use and is very closely compatible to the immensely popular Turbo Pascal on the PC, even including the graphics unit from

Compilation speed is roughly 20,000 lines per minute with excellent code generation for the ST and the TT.

# ProFlight 1.2

We are pleased to announce the release of version 1.2 of ProFlight, our im-

Tornado flight simureviewers and users

This new version of simulator includes graphics, the ability set-up, a pause key, the view angle and works on the TT!



more ... it even A1 RATED

Registered users can upgrade by sending their master disk back, together with £2.50.

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# HiSof

The ideal way to learn the difficult C language is with an interpreter and HiSoft C for the ST has all you need:

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- debugger with single-step
- extensive GEM toolbox

complete manual with C tutorial



 $\wedge$ 

### the official guide

The comprehensive reference guide and tutorial to the popular FirST BASIC package which is supplied with your new Atari ST computer.

- Full command reference for FirST BASIC
- Extensive tutorial, guiding you through using BASIC from first principles. Includes many examples plus how to use GEM
- Detailed descriptions of all the GEM and other operating system libraries supplied with FirST BASIC
- Concepts chapter which explains, in easy-to-understand language, the modern, structured aspects of FirST BASIC
- Many technical appendices giving a fascinating insight into the workings of the Atari ST

Use the order form to obtain Your FirST BASIC and we'll include a mouse mat (with the ST ASCII set printed on it), completely free of charge



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#### v Order For



The Sample Tools software makes cataloguing your samples (ooer, Dad) easy as load/click/store The Gaiits stand was doing brisk business on Gadjits' popular £89 Sequencer One software

Plasmec's hard drive recording system gives you editing options unthinkable at the price last year From L to R): Jon Bates, Darvi Still. A Punter and Peter Staddon discuss the niceties of MIDI and the Mega STE

### New ST software on show at MIDI Music Fair Atari show the Mega STE

# **ST dominates MIDI Music Fair** Hutchinson

he ST proved its domination of the computer music market at the 1991 MIDI Music Fair held at the Novotel, Hammersmith, in London. Practically every stand had an ST on show running MIDI software.

On the stand ST FORMAT shared with Atari, the brand new Mega STE was on show for the first time in this country. The 16MHz machine was running the new AVR 16-bit sampling software, which makes extensive use of the DMA chip. Peter Staddon, who was manning the Atari stand, said: "The Mega STE was extremely well received at the show. From the MIDI user's point of view, it represents an extremely compact and efficent computer solution. The faster operating speed of 16MHz enables it to double the speed of

software run on other machines, but because it's switchable it remains compatible with all existing software, though the new versions of Creator and Notator run at 16 MHz."

Audio Visual Research have been responsible for at least four samplers, ranging from a cheap entry level cartridge right up to last year's 12-bit Pro-series package (awarded FORMAT Gold in STF 16). On show at the stand was their latest machine, one which represents an assault on the professional end of the market.

The AVR Pro-Series 16-bit sampler can sample right up to CD quality, namely 44.1KHz. It oversamples 64 times on input and four times on output. Input and output filtering is taken care of by digital auto-tracking hardware and distortion is down to 0.05%. The sampler's pro-

jected price is £350. ☎ 0582 457348. Intersound's new

Sample-Tools package was also on show. It's a sample organiser designed to enable the user to 18,000 samples and

include spot data on them in memory. The package costs 450DM (about £155) and works with the industry standard S-1000, as well as the W-30, S-550 and S-50 samplers. Once in memory all samples can be edited via a sophisticated sample display window. More details from Intersound, Loretostr. 47/49 1-39040 Salurn, Italy ☎ 010 39 471 884646.

Gajits Music software were doing brisk business at their stand. The



Plasmec's hard disk recording system is £839. Two years keep track of up to ago a similar system would have set you back £50,000

popular package Sequencer One has been updated and Sequencer Two is pencilled in for a summer release at £190-£250. The new version includes conventional notation, event list editing, simultaneous multitrack recording, sys ex bulk handling (which means the MIDI system can handle several instructions at one time) and improved note editing facilities. Gajits = 061 236 2515.

Plasmec Systems have developed a remarkably inexpensive hard drive music recording system called Adas. (£839; available from DAC Distributors, = 0784 462175). The package enables the user to record stereo music straight onto hard drive and then modify it. The most obvious use for the program is in creating remixes. By chopping pieces of the music out, you can create a play-list and then play back the re-arranged version. Plasmec ☎ 0252 721236.

Digital Muse were demonstrating two recently revised packages. Their Virtuoso and Prodigy programs are modular sequencers. This means they can be run on a machine with any size of memory, with the user Simply loading in the appropriate module for any particular task on that machine. Prices were not available at press-time - contact Digital Muse = 071 586 3445 for details.

### **STE price cut**

continued from page 7

the Mega STE. Peter Staddon claimed this was because "The dollar has buggered us about. We're trying to claw back some of this dollar exchange problem we've had."

The company have just appointed a new advertising agency, who are to deal with what Atari call "repositioning" the STE range. Their new ad campaign, costing around £2 million, will revolve around slogans such as "Life's not a game; neither is our computer." Staddon said: "There are better machines about for just playing games on. We're looking to establish a position based on the ST's strengths." Thus

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the ad campaign will cover the whole ST range, illustrating a clearly defined upgrade path.

"We're not going to play to the competition's strengths," Staddon said. "The ST isn't just a games machine. We see it as being a specialised computer that's a threat to the Mac." To back this up, Callum Ross, Atari's Technical Manager, revealed that there are hardware Appletalk capabilities built into the Mega STE. The machine can also accept Ethernet VMU networking cards straight onto the main board. This means that you could plug a Mega STE straight into an Apple or a PC network - though the best option of course would be to set up a network based around STs.

#### **GOT AN STE PROBLEM?**

Bob Gleadow, Managing Director of Atari UK, is keen to clear the air about STE DMA problems. As FORMAT eported in issue 16, a faulty DMA chip in some STEs could result in hard drive data becoming corrupted after just a few hours' use. Gleadow told ST FORMAT that if you've got a problem with your STE, and you can prove it's a legitimate DMA problem, then Atari will deal with it free of charge. If you feel your STE is one of the small" batch of machines that has a duff DMA chip, then phone Atari on 0753 33344 and ask for the techni-cal department. Oh, and tell em ST FORMAT sent you

World exclusive! New "super ST" under development ST FORMAT got there first - way back in issue 17

EXCLUSIVE **ADD-ON TO** 

**SPEED STs UP** 

**TO 20-FOLD** 

**CONFIRMED!** 

cret

# **ST Transputer** available by the end of the year

Atari have confirmed that they have a team of technical bods based in a Cambridge think-tank working on what Atari's boss Bob Gleadow calls "a cost-reduced version" of the ATW transputer workstation - a powerful processor that could speed STs up from one MIPS (one million instructions per second) to between 15 and 20 MIPS and enable true multi-tasking on the ST.

ST FORMAT reported on this hardware development way back in the Decem-

ber 1990 issue. Gleadow confirmed that the so-called "STT" will be an add-on board for the Mega STE, carrying up to 16 T800 chips running the Helios operating system. Gleadow said: "It's being designed to take up to 16 sites, but it'll probably be sold with only four chips on board. We expect the price to be about £500 to £600 when it's released at the end of the year."

Asked if he was surprised about our story on the board six months ago, Marketing Manager Peter Staddon admitted: "I was obviously surprised that ST FORMAT got hold of the story so early in the development stage."

r is

by Andrew Hutchinson

Atari's Peter Staddon -"obviously surprised" believes that new hardware like the STT proves that Atari's research department is alive and well

Light speed ST

#### Three American ways to speed up your ST right now

**Quick ST**, the popular software acceleration software, has been updated to version three. The program runs on all STs and TTs. It speeds up screen re-draws and enables the user to create a custom screen resolution which can be scrolled around.

The program installs itself at boot-up from an AUTO folder and can load in custom Desktop pictures. Custom fonts and icons are built in and these can be edited. The program now boasts vastly improved software compatibility and is available direct from the States at \$34.95 (about £20). Contact Branch Always Software, 14150 N.E. 20th Street, Unit 302, Bellevue, WA 98007, USA ☎ 0101 206 885 5893.

■ Gadgets By Small's 68030 accelerator board has gone into production in the States. At least 80% of software should enjoy a speed increase of up to 33MHz. The board is asynchronous and can be fitted to run at practically any speed.

Dave Small, the designer of the board, summed up the philosophy behind it quite simply: "There's something about getting there faster that's fun. We designed the board to buzzsaw through your programs, and we're giving you space for 8Mbytes of top speed RAM just to help do that."

The board comes complete with 68030 chip, a co-processor the

socket for a 68881/2 floating point chip and eight simm sockets. The 68030 board can only work with TOS versions 1.6 upwards, so the board comes bundled with TOS 1.6, thanks to a licensing deal with Atari USA.

Since there's plenty of room onboard for SIMM ram boards it's possible to build up your ST's memory to a full 12MByte. A basic 16MHz 68030 costs \$200 (about £120), the 4 Meg 16MHz 68030 version costs \$460 (about £220) and the 33MHz 68030 with the 68882 co-processor and 4 Meg costs \$800 (about £550). The board is available direct from Gadgets by Small, 40 W.Littleton Blvd, #210-211, Littleton, Colorado, 80120, 🕿 0101 303 791 6098. To check British availability, ring Ladbroke Computing = 0772 203166.

The Turbo 20 board from Fast Technology takes a different approach to acceleration. The unit uses a 16K high speed static RAM instruction/data cache to help the built-in 20Mhz processor speed up machine operation.

James Allen, the president of Fast Tech, told ST FORMAT why his board is so good. "Well, the Turbo 20 is the fastest 68000 board available. It's got a more advanced cache design than any other board. It combines that with an 8MHz configuration mode. Installation in STs requires some soldering but not in STEs. It'll appeal above all to DTP users. Some professional musicians are going to be interested. C-Lab Notator runs nearly twice as fast and it's the same story with Calamus - it'll run at about half the speed of a TT."

The board includes a hardware switch, which means that at boot-up the user can choose whether to run at 8MHz or 20MHz. However, it does require a high degree of technical ability to fit because you've got to desolder the original 68000 chip. The board typically doubles program speed and costs \$329 (about £200), from Fast Technology, P.O. Box 578, Andover, Ma. 01810, USA = 0101 508 475 3810.

# **Freestyle** sounds come out

New from Zone Distribution is a MIDI improvisation package called Freestyle. The program provides five backing tracks played via five MIDI channels, based upon the entry of just one or two chords. Thus a whole backing track can quickly be built up.

Freestyle can improvise on 32 different styles and Zone promise that further add-on styles will be available. Completed songs can be saved as standard MIDI files for later use. The package costs £149.

Also from Zone comes an Advanced Guitar Tabulator - a learning and composition tool for bass and guitar players. Cost is £99. Band in a Box, another improvisation tool, has just been updated to version four

Zone Distribution = 081 766 6564.

### ONE YEAR AGO

A nostalgic roundup of happenings at this time last year This time last year, Mike Dale of Signa, distributors of Calamus, was up in arms about a "grey import" of the powerful German DTP package. Network News Services were importing Calamus from the States and selling it for £343, against Signa's £458. Frank Sheen of NNS was in an ebullient mood. He said he was "sick and tired of Mike Dale poking his nose into our business."

In the spirit of Glasnost (and no doubt opening up a huge untapped market), Atari were planning to trade STs for Soviet 256K dynamic random access chips. Apparently the USSR were knocking out 2.5 million of these chips a month. Shame that they couldn't turn the same mass production expertise to food production.

F-19 joined MidWinter at the joint highest FORMAT rating for a game: 96%. Obviously our review was spot on - one year on, it's still riding high in the charts.





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# Special Reserve





■ Avant Vector is the latest outline artwork program to be released for the ST. Original artwork can be transformed into vector drawings which can be scaled up or down in size smoothly. Here a butterfly has been transformed into hundreds of vector points, ready for scaling

# A nice line in art

**As DTP packages** become increasingly sophisticated, so do the support programs for them. Avant Vector is a new program which enables the user to convert standard high res pictures into vector drawings, for importing into a DTP program.

Vector images are made up of a series of lines, rather than pixels. This means that unlike conventional bit-mapped images they can be scaled up or down in size smoothly, with no loss of resolution.

Avant Vector includes automatic vectoring from original PI3, PC3, IMG, BLD, PIC or PAC format pictures. Mac, PC or Amiga images can also be vectored from TIFF, IMG or IFF file formats. Calamus, Fleet Street Publisher, Repro Studio, Timeworks, Publishing Partner, Pagestream and Easydraw can all load in the newly vectorised images and manipulate them.

The program costs £234 from Atari Workshop, Windsor Business Centre, Vansittart Road, Windsor, Bucks. SL4 1SE, = 0753832212.

# Duster-up at Realtime

**If you're one** of the loyal band of long-time *ST FORMAT* readers, you may remember a preview in issue 15 of a game called *Duster*, which was to be a spectacular 3D action/strategy game by Realtime Software – known for *Carrier/Battle Command*. Now here we are at issue 24 and there's still no sign of it. Then – a press release! Is it ready at last? Is it the best game of all time? Er – no.

Apparently, because of "a change of direction within the com-

pany" (ahem), Realtime felt they "would not be able to complete the program within the projected scale." Forgive us for being cynical old sourpusses, but we can't help wondering what juicy behind-the-scenes crises this neat piece of press-release-ese might be referring to.

However, *Duster* is still promised for sometime this year. Rowan Software – who handled the ST conversions of *Falcon*, its Mission Disks and the coming-next-issue (-would-have-



been-in-this-one-but-it-was-bugged) *Flight of the Intruder* – have joined in the programming of the game in a joint venture. Their press release declares: "The opportunity to complete *Duster* came at just the right time. We are itching to get started."

Presuming they do actually manage to finish the game, we might see it by the end of the year. Or not. Whatever, it looks as though Duster is definitely vying for the Damocles/ Midwinter 2 "Coming Soon" award.

## Need help with home finance?

If you're one of those people who actually fill in the stubs in their chequebooks, even after the third cheque, then this program should appeal to you. *Home Accounts 2* is a package which enables the user to keep complete track of all moneyrelated matters.

The program has a very attractive front-end with customised icons. Digita have spent a lot of time making the program easy to use and yet retain the GEM front-end. Some features:

Unlimited number (memory permitting) of accounts, transactions, standing orders and budget entries

Report output screen, summing up complete net-worth

■ Graphical display of your savings, budgets, and so on

- Updateable VAT facility
- Context or on-line help facility
- Recoverable trash can

Standard, interest and budget calculator facilities

Password facility

Home Accounts 2 costs £54.95 and is available from Digita International, Black Horse House, Exmouth, Devon, EX8 1JL,  $\Rightarrow$  0395 270273. Read the review soon in *ST FORMAT*.



■ *MiG-29M SuperFulcrum*, coming from Domark. To retain an eastwest balance, the same software developers, Simis, are also working on an American Harrier game – the *AV-8B*. Launch date: late 1992

### WHISPERS

Snippets from the ST universe

■ Fans of C-Lab's Notator software should be pleased to hear that version 3.1 is currently being beta-tested and is due out in a couple of months. It isn't a major upgrade – the only big addition is a graphical arrange mode. Contact Sound Technology on = 0462 480000.

Picture the scene. A very large international company, not entirely unrelated to the subject matter dealt with in this mighty organ, arrange a football match between all the international divisions. The head of this company telephones from a land of waves and babes to congratulate the chaps on their moves towards detente. The first fixture between the English and French divisions takes place. A French player performs a crunching tackle on an English guy, who promptly pops the guy smartly about the head. Result: international chaos as 22 players practise the fine art of fisticuffs on the field.

■ At the last count, Atari had 480 registered user groups in the US. Kind of lays waste to the myth that STs aren't popular machines over there.

Atari have confirmed they are appearing at the Computer Entertainment Show in September. The company will be pushing the STE range, but their handheld Lynx will also be prominent. There's no word on whether the ST Notebook and ST Pad (just renamed STyle) will be around by then.

■ Good to hear that Lucasfilm are working on *Monkey Island 2*. The original received a *FORMA* **P**Gold rating last issue. We wait with sweet-smelling breath.

Domark are beavering away at a follow-up to their popular MiG-29 flight simulator. In fact it was so well received that they've decided to craft a new MiG game, called MiG-29M SuperFulcrum. Apparently the dashboard on the SuperFulcrum is different and the setting is switched to poor, put-upon South America. Watch for our review and remember: no ST, no comment.

# cadaver - the payoff



**BITMAP BROTHERS** 

Dianos is dead.

The Cadaver contract has been fulfilled.

But collecting your reward will prove more difficult than you ever imagined.



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# The Ateri ST is the perfect introduction to the world of computing

The **Atari ST** is the perfect introduction to the world of computing. The power of the ST allows you to run "serious" applications as well as playing games, and the ST system is flexible enough to allow you to expand as you develop your interests and expertise in different applications.

With so much diversity and power it is easy to see why the Atari ST family is one of the most successful ranges of computers in the world. But best of all is the builtin growth potential. The 520ST user of today is the TT user of tomorrow; beginning with games or a simple word processor, anyone can learn about computers and gradually acquire the skills of the professional computer user. And unlike many other systems, an Atari upgrade is not wasteful. Much of the software available for the 520ST will run on both the Mega STe and the TT systems. With an Atari an upgrade means that you can add new capabilities and expand your computing horizons without losing everything you have acquired along the way.

If you thought that computers were all about playing games you've been missing out on the real potential that you and your computer have. To find out more about either the **Atari ST** or peripherals for any applications simply fill in the coupon and send it to Atari at the address below.



Whether you are looking for a leisure computer, an educational computer, a computer for all the family or a powerful business system, look no further than the **Atari ST Range.** 

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The Atari 520ST is an easy way for you and your family to learn about computers while having a great deal of fun. This best-selling computer has an impressive range of features that fit many requirements at home or in the office. A generous 512K RAM memory is included as standard - enough to run large spreadsheets and databases as well as the latest generation of computer games. There are plenty of expansion ports available for printers, modems, monitors and hard disk, and other peripherals allowing you to increase the power and flexibility of your system as needed. MIDI expansion ports are fitted as standard. MIDI (Musical Instrument Digital Interface) is the music industry standard interface that allows you to control both recording and playback of synthesisers and other digital instruments with your computer.

There is no other computer range in the UK that can offer its users such a wide variety of software support, ranging from educational learning programs to 16-bit computer games to professional quality desktop publishing packages.

The **JATARI** ST

# he beginning

The power of the new **Mega STe** range makes it a serious contender for those who are after power computing. It is an ideal machine for the student or computer enthusiast who wants to run memory intensive applications such as Computer Aided Design (CAD) or graphics applications. The Mega STe features separate keyboard and central processor with a 1MB floppy disk drive and a 50MB Hard Drive for data storage. The Mega STe features a fast 16MHz operating speed, which can be switched to 8MHz to run any programs developed for the 520ST, making it even easier for you to upgrade.

ATARI

For those of you who want to run a 'home office' with separate files for word processing, spreadsheets and accounts packages the Mega STe - with its vast amount of built-in hard disk storage - is an excellent choice. For those running graphics intensive programs the faster operating speed will make the Mega STe a much more productive machine. The Mega STe also features an extensive range of expansion ports that allow you to add even more power and flexibility to your system.

The portable Atari Stacy is completely compatible with all monochrome ST programs, but allows for complete portability.

It features a supertwist backlit LCD mono screen, split horizontally and has all the standard ST ports. It is available in various configerations, with Hard disk as standard. It weighs approximately 15.2 pounds and has its own carrying handle making it easy to transfer from place to place. Because the ST, with its MIDI interface has become the accepted standard in the music industry, the Stacy is a boon machine for musicians with a busy schedule. Songs and sequences written at home can be stored on the built-in hard disk, then the whole computer can be easily transported to the studio or gig, with minimum stress, they can even be worked upon and improved on the road. Although it is the most specialist member of the ST family, the Stacy is still versatile enough to be used for all serious ST applications.



The incredibly powerful Atari TT, at the very top of the Atari range, is the first in a new generation of high specification professional personal workstations based on the successful Atari ST standard. Similar in style and design to the Mega STe, the Atari TT features a separate keyboard, 1MB floppy disk, 50 MB Hard Drive and the same range of excellent expansion ports. The basic model comes configured with 2MB RAM which can be expanded up to a massive 26MB. With a Motorola 68030 central processor, the TT runs at up to 32MHz. But speed and power are not all the TT system offers the professional user. Six standard built-in screen resolution modes mean that there is always one suitable for the purpose that you have in mind. For animation or computer graphics, choose from a pallette of over 4,000 colours with the ability to display 256 on screen at any one time, and the exceptional 1280 x 960 pixel high resolution mode is one of the best screen modes available at any price.

### More than just great games

# IN A WORLD FULL OF CHARACTERS





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#### **IN PRODUCTION**

Damocles fans still hungry for more should be pleased to hear that Damocles 2 (or Mercenary 3) is due in the summer. Subtitled Double Trouble, it uses the Damocles universe but adds another participant. Some bloke called K C Kimm, ruler of Bacchus, wants to become king of the universe by destroying every other planet. Makes sense. As well as the interaction, there'll be a load of newstyle puzzles to make the game as different from Damocles as chickens are from double-decker buses. Ocean have snapped up more licences, and catch of the month must be The Simpsons. No word yet what type of game it'll be, but there's certainly scope for excellent graphics. Another is The Addams Family, being written by Ocean's in-house team. Of course it's based on those zany funsters of the '60s series, as is the new film that should be released in tandem. Then there's Bruce Willis' Hudson Hawk, concerning an art thief hired to steal the blueprints for Leonardo da Vinci's alchemy machine. Uh-huh.

■ US Gold, no strangers to the licence front themselves, are currently working on **Godfather 3** for release in the autumn, along with **Indiana Jones and the Fate of Atlantis,** the game of the non-existent film. As with *Indy 3* there'll be separate action and adventure games. Now if USG can just convince Harrison Ford to make a fourth film...

The much-previewed Big Run – a rally racing simulation type thing from Storm - has been set back to a November release date, no doubt to avoid the annual summer slump in sales. Around Christmas, look for Double Dragon 3: The Rosetta Stones - more martial arts tomfoolery, no doubt. Remember Jetpac or Lunar Jetman on the old Speccie, programmed by Ultimate Play the Game? Well, Ultimate became Rare Ltd., and they're bringing him back for the ST in Solar Jetman: Hunt for the Golden Warpship. No release date yet, 'cos Storm are trying to tie up another deal with Rare for a second title, Battletoads, a Teenage Mutant Thingie Turtles clone. Elite have a pile of conversions lined up, first of which should be Last Battle (a beat-'em-up), followed by the budget release of Paperboy in September, European Championship 1992 in November and Caveman Ninja for Christmas. Mixing beat-'emups and "prehistoric"-style games,

ups and "prehistoric"-style games, it's being converted from the Data East coin-op by the team who did *Shadow of the Beast* on the ST. Another coin-op conversion – but not due till spring 1992 – is (ahem) **Edward Randy.** Apparently it features fight scenes on the wings of biplanes in flight and a whip with which Edward can do amazing things. Mind, begin boggling.

# Previews

Dames et gentlehommes! Un temps encore, le FORMAT crew avez pour vous un formidable swag de prevues

fter Activision – the software house behind *R*-Type and Millennium 2.2 – went up for sale at the end of last year, it looked as if we might never get to see their potential chart-toppers, Deuteros and *R*-Type 2. Now they've been taken over by The Disc Company, a Frenchbased software publisher, and you can expect to see many new releases from them soon.

Top of the list for the many Millennium fans must be Deuteros. the sequel which seems like it's been years arriving. First previewed in STF 17, it continues where Millennium left off. Having restored the planet Earth to its former glory - after a gigantic asteroid smashed into it - from their base on the moon, the entire population have been evacuated back to the mother planet. But no thought has been given to the Moonbase, or the other colonies on the rest of the planets - some with huge numbers of mutated inhabitants. Left to their own devices, they soon come up with their own inventions, not all of them friendly. Meanwhile, secure on Earth once again and with no immediate threat, the survivors gradually lose all knowledge of space travel and weaponry. But they have to learn again pretty quickly because the mutant races



■ Knock knock. "Who's there?" Deuteros. "Deuteros who?" Deuteros-car the gorilla going on the rampage the whole place is wrecked. (I don't know. Pathetic, isn't it?)



"Yeucch! What's that huge blob of nauseating yellow sludge doing in that *R-Type 2* screenshot? It seems to just sit there menacingly no matter which way I turn and regardless of what I fire at it!" "Oh, er, sorry – I've got a cold..."

# Activision go Gallic

aren't idle... *Deuteros* is due in August and if it lives up to the promise of previews we've seen it should be a real corker.

Before that, though, look out for R-Type 2. R-Type was the coinop conversion that defied the odds and turned out to be one hell of a blast. One of its best features was its collectable weaponry that enabled you to turn your puny little ship into a massive harbinger of photon death (as it were). R-Type 2 offers all this and more. Played over five levels (less than the original, but then who managed to reach level eight anyway?) including a refinery, an underwater cavern and the home planet of the Bydo Empire (boo hiss), the game offers plenty of collectable weapons to help you, such as old faithfuls the side pods, front pod and the power up charge, and some new ones like a blue bounce laser, terrain-hugging bombs and flame throwers.

The plot of *Hunter* sounds suspiciously like that of *Carrier Com*-



■ Lesson 24: how to enter into the spirit of these things and get *really* involved in ST games. All together now: "Behind you! It's behind you! Tcch! Call yourself a *Hunter*?"

mand. A group of islands has been occupied by the enemy and it's your job as a highly trained soldier (again) to carry out a number of sabotage missions to liberate the islands. The difference is in how you do it. Each island has a different objective and time limit, given to you at the mission briefing, and most of the time you're on your own – no huge carrier to back you up, though there are a few vehicles and aircraft about. *Hunter* is a solid 3D game set in a fractal generated landscape and is due in August.

Finally there's *Beast Busters*, a straightforward blast with no plot as such, just seven levels in which a variety of strange beasts attack the player. From the screenshots it looks as though the game could be another *Operation Wolf* clone, though some of the levels scroll vertically. *Beast Busters* looks like being the least impressive of the new releases, but for the full verdict on this and all the other games watch for the full *STF* reviews.



■ "Hello, we're from the church of the Latterday Enlightened Zombies and we'd like you to have this flower." Bet you're glad you're a *Beast Buster* now, aren't you?

#### LOOKING DOWN ON REVENGE



■ The peace of this happy, unsuspecting family is soon to be brutally shattered. Yes, that's right – the Jehovah's Witnesses are on their way. A peaceful scene from *Shinto's Revenge*, before the bloodletting begins

**Gauntlet continues** to cast its shadow over the ST world. US Gold are releasing *Gauntlet 3* in a month, but the next game with an overhead perspective view should be *Shinto's Revenge* from Millennium. A stock nasty character has captured this Shinto bloke's girlfriend, and since he's got nothing better to do he's gone off to rescue her. Visually, this looks like a standard version of *Gauntlet*, but with much larger player graphics in that distinct Japanese cartoon style, set in an apparently huge playing area.

#### SICKLY SUPERHERO TACKLES THE TRASH

**Oh dear.** Oh dear oh dear. It had to happen, didn't it – "the first ever environmentally conscious software challenge" is on its way from Mindscape, going by the name of (retch) *Captain Planet and the Planeteers.* "Our children can inherit a legacy of wastefulness and pollution... or follow Captain Planet in his fight to cleanse our fast deteriorating world," goes the blurb. Would *you* want to be under the command of someone who wears a blue and red body stocking and calls his disciples Planeteers? Yes? Fine. Just don't call us when you get arrested for indecent exposure.

The only information at the moment is that it's a cutesy platform game, and from the screenshots we've seen it features hordes of clean-cut well-behaved children living in environmental harmony under the guidance of their mentor. Yuck. Still, it may be a good game for all that (unlikely though that is). Watch for the review next issue.

■ This is Captain Planet. He's going to save the planet. With the aid of his dedicated team, he's going to cleanse the whole globe of the filth that's choking it. No wait, you have to listen! A little leprechaun told me! Wait – come back!

### **PLEASE MYTH, WHAT'S A NINJA?**



■ "Come back! Come back, Last Ninja (3)! I want to play with your shuriken!" Ah me – the perils of being famous

**Think System 3,** and what springs to mind? A load of old ninjas. After *Last Ninja 1* and *2* and *Ninja Remix*, they're now set to unleash *Myth* upon an unsuspecting public. *Myth* was first released on the 8-bits and apparently met with overwhelming waves of admiration (it says here). Naturally an ST version was on the cards.

The main character, once an ordinary bloke in jeans and T-shirt, has been transformed into a muscle-

bound Conan sprite, a hero with a capital H and not afraid to show it. Like *Gods*, the game's a platformstyle arcade beat-'em-up with puzzle elements to add variety, played over four levels of many sub-levels. All the usual claims are being made: atmospheric music, superb animation, "glossy" graphics, etc etc. But wait for our full review before you do so much as even glance at the box in Boots.

The poor old Ninjas haven't been completely forgotten: Last Ninja 3 is also due soon. It's an action adventure game, which means you wander around kicking people in the head while picking up crystals and suchlike. The first four levels depict chambers of a temple in Tibet in which you're fighting your adversary Kunitoki, each chamber in turn representing the four elements of Water, Fire, Wind and Void. (Doesn't sound quite right...) Impressive claims are being made: sword fights use the animator's trick of speed-blurs (as seen in *Golden Axe*) to reinforce the impression of movement; you now have to manufacture objects instead of just picking them up; and oriental theme music reminiscent of those old '70s martial arts films is promised. Personally, I can't wait...

THE KILLING EYE STORM SHOW

**Remember** The Killing Game Show? Keep it in mind while you read the plot of Eye of the Storm, Empire's imminent opus. Far in the future, law-free zones have been created by the holovision conglomerates. By law, everything that happens in these zones must be filmed for the networks and transmitted to the viewers back home, 'cos it makes great telly. You've been sent into a newly-discovered zone in the depths of Jupiter's eye, on a kill-or-be-killed mission.

Plot aside, the specs for Eye sound promising. The game uses solid 3D graphics with light source illumination, depth cuing – that is, colours become darker the farther away they are – and Gouraud shading. This effectively blurs the



"I think we're lost. Last thing I knew we were swimming around with that nice man from the BBC and now here we are in this blummin' Eye of the Storm"

boundaries of colour between the individual polygons of an object and gives the shape a smoother appearance. Add to this 210 different object types, some with over 100 faces and 26 frames, and graphically the game appears strong. Whether the gameplay lives up to the visuals remains to be seen – in our review soon.

#### YOU THERE! STOP SMERCING!



See, you're this crack secret crack daring heroic crack and wonderfully super "merc" type person who runs around all day in his balaclava and shouts very very loudly indeed

US Gold continue their relentless struggle towards world domination with another Capcom conversion, Mercs. The wibble goes like this: you - a skilled, professional and virile soldier trained in anti-terrorist tactics - are hired by the US Government. It seems a former President of the USA (no names, no autographs, no cameras - oops! a clue) has been kidnapped by revolutionaries. A diplomatic approach is called for, so you are sent in as part of an elite corps of mercenaries known as the Mercs. Your mission: rescue the Pres, stop the rebels before they take over (er) Zutula and save the world too.

Now what is the game really about? The screenshots promise a *Commando*-style vertically-scrolling shoot'em-up with the traditional aim of destroying the maximum number of enemy scum possible. There are eight levels and a simultaneous two player option to boot. Is it any good? You'll just have to wait for the FORMAT review soon(ish). **stf** 

# ls your brain big enough





#### **IS YOUR BRAIN BIG ENOUGH FOR SWAP?**

Are you a budding Einstein, or are you only good at lifting heavy things?

Find out - test your brain-power with SWAP, a compulsive puzzle game that requires thought, planning and concentration.

Presented with a board of coloured tiles you must swap pairs around to create clusters of the same colour which then vanish, the final aim is to clear the board completely. No problem... are you sure you should have made that move? SWAP also features:

- Three different tile shapes, different sizes and six different colours so you can customise the level of difficulty.
- Full competition mode, with hi-score table.
- Extra game features debits for stupid moves, "avalanche" facility and supplementary tiles for when your brain-power begins to flag.



#### **TAKE THE SWAP TEST – HOW BIG IS YOUR BRAIN?**

1. What is the next number in the sequence: 2. 3. 5. 9. 17. 33. ?

2. Complete the next figure:



3. Insert the same three letters to make five words:



4. Insert the shapes that complete the box:



5. Supply the missing number:



#### **HOW YOU SCORED**

0-1. Your brain-power is severely underutilised. Buy SWAP and get some much needed practice in.

2-3. Pretty good. Buy SWAP - A few sessions of brain-pulsing action could radically re-model your cranial capabilities.

4. Wow! Your mind is definitely kickin'! Buy SWAP and your already huge brain will soon be spilling out of your ears!

5. Cheat! You can't possibly have a brain that big, buy SWAP and check.



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35	NE	Navy Seals Ocean
36	~	Toyota Celica Rally Gremlin
37	¥	MidWinter Rainbird
38	¥	UMS 2 Rainbird
39	¥	Night Shift US Gold
40	RE	Coin-op Hits 2 US Gold

issue 24-JULY-91

# **STcharts**

"Don't believe the hype – it's a sequel, as an equal. Can I get this through to you?" - Public Enemy, Don't Believe The Hype

#### **ST CHART CHAT**

Hi ho, hi ho, it's off the cliff we go. The Lemmings march right up to the top spot, but are they promptly going to leap into the chasm next month better known as the bottom of



"Suicide squad – eyes right! Right, chaps, we've made it to the top, now we've got to stay here. Oi! Stop pointing at Final Whistle"



🖩 Ugh, ugh, belly bump, ugh. Don't stop till ya drop. Ugh, ugh, belly wobble, ugh. Let's all do the zany Chuck Rock - in at number 5

#### CHARTBUSTERS

Main issue an FORMAT budget s and sup Europe Publish

CH RE NE 40

We have a winner! Come on up, Gavin Parish from St Austell in sunny Cornwall. Pat yourself on the back, Gavin, you got as close as anyone and successfully predicted Lemmings' blind supremacy and Final Whistle's staying power. A copy of the snort ooer fnarr fnarr multi-event game Viz is bottom-humouring its way to you even as we speak.

Right, if you think you can predict the top three games in the charts, send us a postcard (only one, remember - multiple entries will be burned). Write on it your predictions, the month you're predicting for, your name and address, the game from the top ten you'd like to win and your favourite quote from James Joyce's "The Dead." Then send it to: Chartbusters, ST FORMAT, 29 Monmouth Street, Bath, BA1 2AP. If no-one gets it right, the nearest correct entry out of the hat wins. This month's pointers: Cruise for a Corpse, Flight of the Intruder, R-Type 2 and Beast Busters.

Charts: STF refers to discore of review in ST	S	T	BUDGET '	<b>FOP TEN</b>
These full price and	1.		Steve Davis Wo	rld Snooker
ST charts are compiled				CDS
plied by Gallup. © 1991 n Leisure Software	2.		<b>Operation Wolf</b>	Hit Squad
ers Association Ltd	з.	•	Fantasy World I	Dizzy
				Code Masters
ART KEY	4.	NE	Ninja Rabbit	Micro Value
	5.	NE	Kick Off and E	xtra Time
Re-Entry				Anco
New Entry	6.	•	Little Puff	CDS
	7.	NE	North and Sou	ıth
Non Mover				DIgital Integration
	8.	NE	Speedball	Mirror Image
Up	9.	NE	California Gan	nes Kixx
Down	10.	NE	Sherman M4	
				Digital Integration

because of the FA Cup and the League play-offs - or could it simply be because it's a real doozy of a game? There seem to be a heap of old familiar names still scattered through the listings - Kick Off 2, for instance, must have been there for about a decade and a half - but it looks like there's a

challenge coming from the recent crop of adventure games! In the software house stakes, Mirrorsoft are bouncing back with a vengeance too. Their reissues of highly rated games from the past have proved very popular despite a "budget" price of ten squids. However US Gold

appear only three times in the top 40. No doubt they're preparing a salvo of licences to launch at the Christmas chart.

**ST FORMAT** 21

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# ST power in the palm of your hand EXCLUSIVE!

bout 12 months ago, Atari set themselves a very ambitious goal, according to Richard Miller, Atari US's Vice President in charge of Research and Development: "to design the most portable and friendly computers in the world." Their two new machines, ST Pad and ST Book, just might come close to that goal.

As *ST FORMAT* reported in issue 22, the ST Book – a replacement for the ill-fated STACY portable – is a compact 68000-based machine with a footprint of 297mm by 210mm, under 35mm thick, boasting an LCD screen and either 1MByte or 4MByte of RAM. Even more exciting is the ST Pad, a keyboard-less "portable user interface" – basically a pad you can write on directly with a special stylus.

In a recent press conference, Atari US Vice Presidents Leonard Tramiel and Richard Miller explained that one of their main goals was to achieve 10–20 hours of battery life. To do this, both the Pad and the Book use a standby mode:

if nothing is happening, they can actually stop the processor clock and video refresh, reducing power demand by over 20%. There is also a "suspend and resume" facility – a major safety feature, according to Leonard Tramiel. "If you've been running batteries for 15 hours," he explained,

"they don't have enough power left to start the hard disk. That would crash a less sophisticated system. With the Book, however, you simply turn the machine off in the middle of your application and not lose anything. And you can maintain this data in memory for months." In standby mode, Richard Miller said, both the Pad and the Book can maintain the contents of memory for probably over six months.

An AC adapter and battery charger enable you to recharge the batteries fully in about two or two and a half hours without degrading the battery pack.

The ST Book has an internal 2.5 inch 20MByte hard drive. "We can make versions with up to 60MByte today," Richard Miller said, "and by the end of the year over 100MByte. The Book also has the capability of an internal fax modem – 9600 send fax, 4800 receive fax with 2400 Baud data" but without MNP (the Microcom Networking Protocol error correction system). Leonard Tramiel added: "We intend to include several utility packages, a diary and alarm software very much like what's in the

Portfolio but friendlier to use, and various useful accessories like a clock and calendar."

Since the Book is only 34mm thin, a trackball could not be fitted and Atari came up with another alternative – "something we're not quite sure what to call yet, 'mouse-pad' or 'joy-pad,'" Richard Miller said. "It's a pressure-sensitive mouse. We were a little concerned about this, so we tried it out on Sam Tramiel and he fell in love with it almost immediately."

**The Pad and the Book** are technically very similar, and both offer the full set of ST peripheral ports. "Both machines have a full expansion bus," Richard Miller said. "The connector has 120 pins and is about 1.5mm thick. We expect people to hold the Pad in their hand, and for that reason we were unable to put a hard drive inside it. What we used are memory cards – up to 4MByte each, which is significantly more than a floppy disk and their access time is very fast. The expansion devices

"The Pad is an STE that can read your handwriting; the portable Book boasts a 20MByte memory" actually sit underneath the machine, so you're still able to hold it the same way. The devices include a radio modem for wireless communication and CD-ROM – that would enable the Pad to become a portable electronic encyclopaedia."

The most exciting thing about the Pad is that you don't even need to be able to type to use it. Leonard Tramiel explained: "There are at least three different methods to get text into the machine. You don't want to write a novel in longhand, so you can plug a keyboard into it. For small notes you can use a box which can recognise your handwriting. The system is trainable, so although it can recognise handwriting quite well without being trained, after using it for a few days you can even write things in code. This information can be handed off through the operating system to an application as if it were typed on the keyboard. For slightly larger pieces of text you can pop up an image of the keyboard and just tap on the appropriate keys."

What's more, data can also be taken up from a disk created on another machine or transferred through serial and parallel ports directly.

"One of the very nice things you can do with a machine as graphical as this," Leonard Tramiel went on, "is use it as a notepad. You can just draw, make little squiggles, then tell the system to store this with some set of keyAtari's recently announced new machines, ST Pad and ST Book, promise truly portable ST power – even if you can't type! Don Maple has the inside story from Atari US's senior engineer himself



At Atari US's press conference: Richard Miller, the British lad formerly with Sinclair but now Atari VP R&D, and Leonard Tramiel, VP Software



■ The ultra-thin ST Book: fully-compatible and genuinely portable ST power – with 100MBytes of memory possible by the end of the year



The ST Pad: a hand-held, keyboardless "portable user interface" that makes ST power accessible even if you couldn't type a word

#### **PREVIEW** hardware

words. There'll be a small database program that'll enable you to retrieve these.

"One of the major uses for these sorts of machines is to fill in forms," Tramiel said. Atari intend to offer an application to make it very simple to build a form and then to run it. Another system due to be included should enable you to use the Pad either sideways, in "landscape" format, giving you a 640 x 400 display, or upright, in "portrait" orientation, looking more like a book.

**To find out more** about these fascinating machines, *ST FORMAT* spoke exclusively to Tracy Hall, Atari US Senior Design Engineer. He began by explaining that the Pad was conceived as a "vertical market device... an opportunity for third-party people to develop their own markets" – that is, Atari would produce the hardware and leave it to third parties to find and develop its applications. From the outset, however, it was designed to be a machine you could use even if you weren't "computer-literate."

<sup>66</sup>You need to be a user, not a computer expert. The Pad actually started off as a touch machine rather than a stylus machine – as in finger-touch. The reason we went away from that is there isn't a currently existing technology that allows you to do both finger input and accurate pen input. There's various technical reasons for it...<sup>99</sup>

### And biological. The finger is much thicker than the stylus...

••You could also have picked up a plastic pen and tried to use it, but it turns out even that wouldn't have worked.

#### Something like the Koalapad?

••Yeah. Exactly. The technology has not advanced much over that. And you still have that choice – you get either a pen or the finger. The circuitry in this thing actually is very close to compatible with a finger type of display.<sup>99</sup>

You are basically getting the X and Y coordinates of the point, the same as for touch sensitive pads. Do you triangulate?

••No, we don't triangulate. We actually set up a voltage gradient across this sensitive surface, once in the Y direction and once in the X direction, time multiplexed.

#### Do you have sensors along the edge?

**••**Effectively. There is a piece of glass in front of it, which is coated with a resistant material. The edges are set up in such a way that we can drive a voltage gradient across the field – top to bottom and then from left to right, linear across the screen. Each time I set up the gradient the pen is actually in metal contact touching the resistant material. It's a high impedance input. It's basically a voltage measuring device.**•** 

### The pen actually measures the voltage at that particular point?

••Yes. The reason your hand doesn't interfere with this is that the screen is a relatively low impedance system compared to your hand.\*\*



■ The Pad can recognise your handwriting, and text you input using the special stylus can later be used in a word processing program as if typed in!

#### Is there any way to adjust the sensitivity?

"It isn't so much sensitivity as the alignment. The screens are not perfectly linear. Essentially we do a calibration operation. That'll be one of the Desktop utilities. Basically you end up having to touch five points – that adjusts the linearity. We also provide a very simple test – you just touch one point – to correct for parallax. A touch sensitive screen is a very short distance in front of the LCD, so at extreme angles you get a little bit of parallax effect. It's essentially negligible. Where it'd really matter is if you switched from landscape to portrait mode. The point of view would change enough that you would want to realign the parallax."

#### How do you switch between landscape and portrait orientation?

<sup>66</sup>That's actually done in software. The tools in the AES and VDI are already capable of turning 90 degrees. Programs that completely obey 'Atari rules' would read the aspect ratio, adjust themselves accordingly and work right off the bat. It will be just literally pull down that Desk Accessory to swap from one to the other.

"Incidentally, one of the advantages of having used the STE hardware here is the fact that the STE hardware includes things like fine picture scrolling over a large region."

#### So it's not just a plain ST, it's an STE!

<sup>66</sup>This is deliberately STE hardware to allow things like that, particularly when you're dealing with forms and such. One of the things you might want is a form which is obviously larger than the screen. So it would be quite easy for an applications writer to scan a window across the form using fine scrolling.<sup>99</sup>

#### Who did the character recognition software?

••Nestor Technologies, using a neural net – an actual simulation of the structure of neurons in biological brains. A neural net is not told how to do it – in fact it teaches itself. In terms of optimisation, this is not strictly a neural net in that they've optimised the structure specifically to deal with this type of information. A much more accurate way to describe a neural net is an extremely complex multidimensional filter. That's how the brain works – it tends to filter in or out particular types of information. One of the side effects of that, particularly in this system, is if your handwriting is shaky or you can't hold the pen still, the net can still derive the proper input because it filters out irrelevant 'noise' and reads out the pattern behind it.<sup>99</sup>

#### What was the most difficult thing to do?

Actually it was the low power circuitry. The thing that took the longest was finding out how to read enough of the information about the system to be able to save the hardware state and power down in the middle of applications for essentially all applications. The hardware actually monitors the load off the disk drive. If that load gets too high, it aborts that procedure and gives the user the option of doing a shutdown. It reads all the hardware, including a few places where you can't actually read the information directly. That's what took a while. It took me about two months and we actually found all the ways to solve it - except one: you can't read (some) Baud rates. We will provide a 'cookie' in the software where users can put the Baud rate so that when you power back up again you can put the appropriate one in."

#### That's a minor software update ...

<sup>€6</sup>Absolutely! But it still means an update. We were trying to do this so they wouldn't have to update. That was actually a goal and it is kept to a minimum. All of the software that's been running on the Pad is unmodified software. We just copied it in and it ran. All the applications you see here were developed on STs, TTs and STEs. It's a fully compatible system.<sup>♥</sup>

### Is the battery life the same for both the Pad and the Book?

"No, mostly because of the Book's hard drive. The Pad is designed to have a battery life of 10 to 20 hours. The main power control on the Book is mostly the hard drive. Even in idle mode it does tend to pull quite a bit more power than the simple solid state circuitry in the Pad. So my estimate for the Book is five to ten hours."

#### And the six month standby mode?

"The memory backup is exactly the same for the two machines. So that part's okay. It's only when it's in operation – the disk drive pulls more power than the rest of the Pad circuit does."

#### Were you hired for this particular project?

•• No. I came to Atari a year and a half ago as a new product developer specifically for consumer operations. The Pad is actually conceived more from a consumer's point of view than from a computer user's point of view. The Book was, to be honest, derived from the Pad, not the other way around. I had got the power demand so low on the Pad that we figured it would be very easy to repackage it with a keyboard and a hard drive into a very nice notebook package.

And a very nice package it is. After disastrously short battery life scuttled the STACY, the Book should appeal to anyone who wants truly portable ST power – particularly musicians, for whom the ST is already the machine of choice. And the Pad looks like the perfect computer for people who don't want a computer! **stf** 

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ave you ever been envious of all the neat DTP programs for the Mac? They have all those great PostScript fonts, multitudes of clip art and with Adobe Type Manager they don't have screenjaggies. "Sure, we didn't have to mortgage the house to buy a computer, but it would be nice to have all those fonts."

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# Get into

Cue, jog, shuttle, track and review your way into the wonderful world of desktop video. Hollywood beckons for the inspiring video artwork of Andy Hutchinson – the man with a video camera and a SCART lead

ong, long ago, before semi-skimmed milk and vicious one-way road systems came into being, there was television. It ruled the British household until the fateful day when video recorders and home micros appeared in the shops at knockdown prices. The rise of the home micro has been matched step by step by the video recorder, but have you ever considered combining the two?

The applications for "desktop video" are endless, especially since the most important elements in any setup are your ST and video recorder. You don't need much to liberate your defenceless video from *Dick Tracy, Police Academy 19* or *Return of the Swamp Thing* and make your own ST-generated videos.

Imagine the scenario. You've written a wicked ambient house dance mix on your ST and you feel you can take the clubs by storm. But how do you get your work recognised? Nothing to it! Plug your ST into the video, stick a house type graphic display on the screen and then dub your song over the top.

Or let's say you've written a superb new game and you'd like the software companies to take notice of it. Plug the TV cable from your ST into the video and play your way through the game, demonstrating all its innovative features while recording the whole thing. You can even dub a commentary over it later on.

What if your sister's getting married and you're called in to man the video recorder for the big occasion? Why not spice the whole tape up by adding some titles, credits, captions and even doodles over the top? Perhaps your school has put in a bid for a large cash donation from a local high technology firm. Why not impress the company (and the teachers) by illustrating the school's needs on your ST? You can use icons, diagrams and scrolling text, and then dump the whole thing onto a presentation video tape.

#### THE SCART OF SOMETHING WONDERFUL

Where do you start? The answer is a lead from either a Maplins catalogue (= 0702552911) or your local Tandy shop. If you've got an STFM or an STE you can plug your ST's television lead into the back of the video or use an ST monitor SCART lead for a crisper image. If you own a Mega ST or Mega STE, you must use a SCART cable because there's no built-in modulator.

With the lead in place you're almost ready to start recording your ST's images. But first you must get the ST's signal tuned in correctly. The ST transmits on UHF channel 36, so you need to tune your video using a spare video channel.

Sometimes you get interference from the video itself which makes the picture look fuzzy and the sound crackle. To get around this you need to tweak the UHF channel dial on the back of the video. With a small screwdriver, twist the dial slightly and then try to tune the video channel



■ Use the psychedelic effects in *Trip-a-Tron* to help you create plenty of stunning images for your video

again. You should now be able to get a perfect picture. Bear in mind, however, that you need to re-tune the television to this new channel.

The lead is in place, your ST is up and running and the video's ready. What's next? For starters, load up your favourite game and hit the record button. This demonstrates the kind of sound and picture quality you can achieve with a simple ten quid lead and a bit of knob twiddling. Even so, just watching *Xenon 2* highlights isn't exactly thrilling so let's try something different.

Let's say you've made a home video. Adding some titles to the beginning of the tape takes only five minutes. Just load up your favourite paint package (preferably one with a decent text function), work out what you'd like the titles to say, and type in the text. When it looks attractive enough, flip to "screen preview" so there's no cursor floating around the screen, then hit "record" and "pause" on your video. Release the "pause" button for as long as it takes you to read through the titles, then hit "pause" again. Now you can compose the rest of the titles. Remember, however, to read them slowly to yourself before pressing "pause," 'cos otherwise they tend to whizz past like the credits at the end of American soap operas.

If you have two videos, or a video and a camera at your disposal, you have all you need to do some video editing. This means you can place captions or intro screens in the middle of your work. If the video is of your holidays for example, why not place ST screen shots at strategic points in the tape – when there is a change of location for instance?

We've already mentioned the music video possibilities of DTV. If you're looking for a decent computer-generated accompaniment to your wonderful music, why not try Jeff Minter's Trip-a-Tron ( $\pounds$ 34.95 Llamasoft  $\boxdot$  0734 814478) – a light synthesizer that displays gloriously psychedelic patterns. You can modify these in real time and easily build up a graphic display which reacts to your music.

If you doubt the effectiveness of this kind of video, take a look at the Chart Show and see just how many video promos use exactly this kind of effect. You can even combine a light show, like *Trip-a-Tron*, with video titles and an end credits sequence.

The other option is to use a Public Domain demo creator to do your light show. This could include your own picture, a sprite of your design and your own scroll-text. These programs are

#### "The applications for desktop video" are endless – you only need an ST and a video recorder"

available for only a few pounds from PD libraries (see our PD directory, page 100), so you don't have to spend a fortune to make professional looking videos. But if you have got some loot handy, take a look at what else you can do.

#### **GENLOCK ONTO VIDEO**

If you ever watch Top of the Pops, you're seeing the cutting edge of video mixing technology. You can achieve similar effects by plugging a device called a genlock into your ST. This enables you to lay computer graphics - like a chart number or a band's name - over the top of video images. Early STs didn't have the hardware to be able to use genlocks, but that has now been remedied. However, at the moment it's difficult to obtain genlocks in this country, though digitiser giants Rombo say they're working on one. ST-compatible genlocks like the GST Gold 40E are imported from Germany and cost around £250. If you're interested, contact one of the big hardware specialists like Ladbroke Computing (= 0772 203166).

As the price of **digitisers**, even colour ones, has plummeted, it is now possible to perform sophisticated effects without spending a fortune. You can digitise a shot of yourself on video, for example, monkey around with it using a paint package and then cut to the real image. TV companies do this all the time. (If you want to know more about digitisers, see page 104.)

Why not try some animation in your video? If you saw *FORMAT*'s animation special in issue 21, you know all the tricks (and if you didn't, see page 138). You can create your animated sequence in many of the popular art packages, such as *DPaint* (£49.95 Electronic Arts  $\Rightarrow$  0753 49442) or with a specific animation package such as *Animaster* (see page 44) or *CyberPaint* (£51 Electric Distribution  $\Rightarrow$  0480 496789). Once you've got your sequence, you can record it onto video directly – or plug the genlock in and mix animation with an existing recording.

Most modern video recorders now have a near-perfect pause function so you can splice together almost seamless edits. Don't be afraid to experiment – if you muck it up you can just rewind the tape and start again. You can get away with a lot and produce very professional effects. Forget the BBC! Ignore ITV! The real video experience starts on your own ST! **stf** 

#### VENI, VINCI, VIDEO

at 12 11 . . . . W

-5DE

There are so many different formats of video around at the moment that you'd think it had been around for years. But video as we know it now – the VHS system – was developed in 1969 by the Victor company of Japan.

Video recorders have circular recording heads placed on a slanted drum. These heads poke out of the sides of the drum and send magnetic information to the tape. The drum is at a slight angle, so that as it rotates it records a diagonal (helical) signal onto the tape. Later on, the tape passes over a standard audio head which can either record or play back audio signals.

Home video editing kits have now found a specialist niche in the High Street market. With these cheap units (from about £200) you can perform many effects – fades on edited images, for instance. When used with new videos (ones with such features as jog and

ATARI

shuttle controls) you can produce effects that can even match the professionals.

Recently, improved video formats have started appearing – S-VHS for example. These offer better picture quality and vastly improved audio heads and can also provide you with such features as surround sound and synthesised stereo.

For more information on modern video technology, check out *Newnes Guide to TV and Video Technology* by Eugene Trundle. This is available for £8.95 from Maplins ≖ 0702 554161 (Sales) or ≖ 0702 552911 (Enquiries), code number WS34M.

■ If you're having trouble getting hold of suitable leads to hook your ST up to a video or monitor, contact Lightwave (≈ 051 639 5050). They can also give you advice on what kind of cable you need



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Vou can make your own video soundtrack using either semiprofessional gear (left) or a more common home keyboard (right)



# Do the dub

The days of silent movies are long gone, so why make them yourself? Neil Jackson shows you how to turn your tapes into talkies, ST style

nce you've made your ST-generated video masterpiece, the first thing you're going to notice is its poor or non-existent soundtrack. All the best videos have some form of audio – a narrator's voice, atmospheric music or synchronised sound effects – and if you want people to watch your video, it should have some form of audio too. Soundtracks are just as important as the images because they work on an almost subconscious level.

Setting up for soundtrack making (or audio dubbing, as it's also known) can take a bit of time, and it's worth knowing what you require before you start. There are hundreds of leads, cables and connectors you can join together, but there's nothing worse than setting three-quarters of it all up only to find you're one cable short.

Depending on your make of video, you may be able to dub stereo sound onto your tape. (It's worth checking the manual – they're all different). Most likely it has only one audio input, which is mono, but this needn't be a problem. Firstly, familiarise yourself with the controls you're going to need – audio dub, pause, play functions and input source.

To make the sounds, you need some sort of sound source. This could be a MIDI keyboard, which you can connect to your ST and play remotely, or it may be something more simple, like a microphone (for voiceovers) or just a humble cassette-player. You must make sure that you can connect the output from the device



into the video's audio input socket – microphones and electric guitars often need amplification first or you won't hear very much at all.

Some videos enable you to control the recording level – you set it up so that the sound levels average at 0dB or "just into the red" on most modern level meters. You may also need to tell your video to look to an external source for its sound input rather than a TV channel. If you attempt to dub a soundtrack and end up with Nicholas Witchell wibbling on about the news, then that's the problem – look for the EXT or AUX selector.

For a more professional sound, you may want to use a whole range of instruments, mikes and gadgets to make your soundtrack. The best way to do this is to use a portable mixing desk. Save yourself three or four hun-



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dred quid by hiring one. Check out the music store where you bought your instruments for more information.

When you've connected up the mixing desk to the video the desk performs many tricks:

 It acts as a booster for electric guitars and mikes;

 It gives you the option of adding echo effects and adjusting treble and bass controls;

• It enables you to mix the sounds from all the different instruments.

Rather than attempt to mix all of these onto the video at once, in a "live" situation, you can get better results if you mix-down onto a cassette tape first. That way, you can run the video while you play and re-do the track as many times as required. When you're happy with the tune, mix and levels, you then only need to sync up the beginning of the cassette version and the rest falls into place.

Whatever your setup or budget, there *is* a way to make your own video soundtracks. Your biggest problem is likely to be the fiddly connectors which manufacturers put onto their videos and keyboards. Don't let this stop you! For every awkward plug, there's an adaptor somewhere. Most decent electronics stores, like Maplin (who run a mail-order service on = 0702554161) or Tandy, stock all the adaptors and cables you're ever going to need. You can do it! **stf** 

side from titling your videos, there are plenty of other ST generated effects you can record to give your videos a touch of class. Animation is the obvious choice, and virtually any software that can string two frames together into a sequence can be used to produce it. The main contenders are *Cyber Paint* and *Deluxe Paint*, because they offer specialised animation facilities. If you're after the psychedelic effects favoured by Manchester bands in their videos, look no further than *Trip A-Tron*. Finally, there's nothing to touch *TV Titles* for listing the grip, key grip, best boy, etc etc of the video of your family holiday in Majorca.

■ With just a few macro commands, your ST can generate complex displays like these using *Trip-A-Tron*. Unfortunately a screenshot cannot do justice to the swirling colours of the real thing on-screen

#### **TRIP-A-TRON**

£34.95 Llamasoft **a** 0734 814478

Written by ace games programmer and full-time hippie Jeff Minter ("Yak" to his friends), *Trip-A-Tron* is a powerful "light synthesiser" for generating lightshows. Unlike a conventional paint package, it is designed to create the visual equivalent of a piece of music, a continuously changing abstract stream of images. Its many features include:

• KML, a built in macro language with which you can run up to eight programs simultaneously, at the touch of a key;

• the VSEQ, or Video Sequencer, which enables you to flip, rotate (in 3D), distort and generally mess about with a standard screen picture in much the same way as it's done on TV;

• the Event Sequencer, to set up sequences of effects by assigning KML programs to keys and entering them onto a matrix, in a similar way to a conventional music sequencer;

• the Sillyscope, a programmable tool to reproduce the sort of laser effect you get in nightclubs (you provide the smoky atmosphere);

 and the 3D Starfield Generator, for the flyingthrough-space effect often seen in games.

MIDI is supported, but not in the usual way. You can't input music through the MIDI port and have a display automatically generated in time to the music, because Jeff Minter felt this would be the visual equivalent of a robot playing a

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■ CyberPaint's ADO section – the Antic Digital Omni-Mover, since you asked – gives you almost Quantel Paintbox-like power. It enables you to flip, squeeze, rotate and shift to your heart's content

guitar solo. Instead, you can trigger events from a keyboard connected to the MIDI port, or you can MIDI-link up to eight STs together and control them all from one slave ST.

Trip-A-Tron can be as complex as you like. If you're not into programming you can get some respectable effects just by using the basic presets and modifying the demos. When you get more confident you can progress to the VSEQ and KML to utilise the full power of the system and generate spectacular displays. A warning

#### "Trip-a-tron is designed to produce a continually changing abstract stream of images"

though: the more advanced features can only be accessed if you have a meg of memory or more (the more the better); and the manual, written in Yak's distinctive style, is best described as, er, idiosyncratic. If you put in the time and effort required to learn the system thoroughly, there's nothing to touch it for what it does – which doesn't include 3D or cel animation.

For a very effective demonstration of just what can be done with *Trip-A-Tron*, have a look at *Merak*, the full-length video Jeff Minter produced (in conjunction with musician Adrian Wag-

5011

If you fancy putting your own ST-

generated cartoon on tape - or just

listing the stars of your last holiday

video - you're going to need some software.

packages currently available for your ST

Ed Ricketts rounds up the best "desktop video"

■ The *Trip-a-Tron* Event Sequencer screen may look complicated, but that's only because it is. Learn to find your way around it, though, and you have total control over your psychedelic displays

ner) using just five STs linked via a custom video mixer. It's  $\pounds12.95$  from The Music Suite, Cenarth, Newcastle Emlyn, Dyfed SA38 9JN.

#### STF Rating: 91%

#### **CYBER PAINT 2**

£51.03 Electric Distribution 🕿 0480 496666

Part of the exceptional Cyber range of products (reviewed in *ST FORMAT* last issue), *CPaint* is mainly designed for touching up 3D sequences produced with *Cyber Studio* et al., but it also has excellent standalone cel animation facilities.

With the range of drawing tools provided, you can draw unaided, frame by frame, or use the traditional animation technique of "blueing" – that is, displaying one frame in a uniform blue colour for you to draw the next frame over exactly, with just the required changes. Because of the system used to store frames, keeping only the changes between them in memory instead of the whole of each frame, you can build up long sequences even if you don't have a hard drive.

There are some similarities to *Trip-A-Tron* in the Antic Digital Omni-Mover or ADO section. Frames can be spun, rotated and twisted or moved along a predetermined path, all with full tweening – which means you set a start and end point and the ST calculates all the intermediate frames. There are also several weird and wonderful effects you can apply either to a single frame or a whole sequence, such as bending the screen in a sine wave, antialiasing and outlining specified colours, which can produce some interesting results.

If you want to create good old fashioned cartoon-style animation for your videos, *Cyber Paint* is a sensible choice. It has all the features you need and then some – but it's not going to take away the sheer tedium of drawing frame after frame – or turn you into an artist either.

Where it excels is in the movement of lettering. You can prepare your titles using a fancy font (*CPaint* can use GDOS fonts without needing GDOS itself – Atari's graphics management system – loaded) and then whizz them around the screen quite easily. Unlike with a dedicated titling program, you're not limited to straight vertical scrolling, and with the effects available – such as fade, wipe and venetian – there's the possibility of some mind-boggling credits.

STF Rating: 80%

#### **TV TITLES**

£25.00 (inc P&P and manual) Caledonia Public Domain Library 🕿 0463 225736

If you want the scroll'em-up of the standard credit sequence, your best bet is to go for this STOS-written program, dedicated to producing – well, TV titles. It does everything you'd expect and a bit more besides, with the exception that it can't create the titles in the first place. This is a bit of a disappointment, especially considering the price.

It also means you need at least one other art or font package to make full use of it. You must prepare static screens using a conventional paint program, then import these into *TV Titles*. where you can apply various effects: scroll, yer basic bottom-to-top shuffle, as seen at the end of most TV programs; fade, a gentle transition between screens; Venetian, which, as you might expect, generates a Venetian blind effect; or the more exotic fades, like Spiral, Dissolve or Wipe. Colour shifting is possible, as is flashing (ahem).

If you want to try out the program before buying, check out the Cover Disk demo with issue 20 – but beware, it's not STE compatible (though the full program is). If you missed that issue, see page 138 for ordering information.

STF Rating: 91%

STF Rating: 96%

#### DELUXE PAINT

£59.99 Electronic Arts 🕿 0753 49442

Though it's known more as an excellent paint package, *DPaint* also has some sophisticated animating options. Its features are similar to those of *Cyber Paint*: you can draw frames individually by hand or take advantage of the tweening facility to move parts of your design smoothly over several frames. 3D rotation is also possible, together with resizing and the usual animation effects.

DPaint's animation suite is so like Cyber Paint's there's little to choose between them. Cyber Paint does have some extra image processing skills, though it's doubtful whether these are genuinely useful in the production of a video sequence. In the end, it's probably the conventional art features which make up your mind, and the FORMAT Gold winning DPaint shines in that regard. For a comprehensive review and useable Cover Disk demo, see FORMAT 15.



■ 3D effects are easily created in *DeluxePaint* by using the imaginary Z dimension – if Y is up the screen and X across it, Z is "into" it, away from the viewer – to move a frame at an angle away from you



■ More frame flipping in *Deluxe Paint*. You may not find it as easy to use as *Cyber Paint* because of the way rotations and movements must be set up, but there's certainly plenty of power available





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# Side 1

**ATOMINO** – Particle puzzles galore in Pysgnosis' molecule-mixing game. Get up and atom!

**LLAMATRON** – *Exclusive!* Special *ST FORMAT* versions of Jeff Minter's stunning new shoot-'em-up, for both 520 and 1040 owners. They're baaaaa-d!

**REVENGE** – Tired of your tatty TOS text? Get your revenge and do documents dynamically with this incredibly fabbo file-viewer

DIY ASSEMBLY – Part Three of the Bullfrogs' easy-to-follow assembly guide really brings out the violence in you. Shoot to thrill! (Hey, nice phrase...)



**FLU** – What can a virus do to you? Find out the hard facts the safe and easy way

**LITTLE GREEN SELECTOR** – File-finding need never be the same again. *LGS* does all the hunting work for you, while you take it easy

**WORD PROCESSING TOOLKIT** – Put extra power into 1st Word with this sweet Accessory

#### ATOMINO

BY: PSYGNOSIS
SIDE: 1
MACHINE: ALL COLOUR STs
FOLDER: ATOMINO
FILES: DEMO.PRG

Psygnosis' Atomino is the nearest you'll get to having fun with molecules! In your lab, you have two significant items: your particlespace and your test-tube. The particle space is the place where you link atoms together. The test-tube connects to a particle-accelerator which separates the atoms and deposits them into the test-tube.

An atom is simply a blob of electrically-charged matter with a number of negatively charged electrons. If two spare electrons from different atoms come together, the atoms link. Each atom can link to as many other atoms as it has free electrons. To position an atom, just move the joystick to the desired



position in the particle-space and press "Fire." The current atom, the one at the bottom of the test-tube, is then dropped into that place.

The cursor changes to reflect the number of electrons available on the next atom (which drops down the tube) and the process continuesr. You can place a new atom on top of one that's already positioned, providing the old one is not a fixed atom. Thus you can redesign your overall molecule until there are no spare electrons left on the chain. When that happens, Atomino gives you the chance to don your "aren't I clever?" hat and have a bash at making molecules. It's almost exactly the same as the physics they taught you at school – remember the electro-valent theory? – but who cares when it's this much fun!

the molecule is removed. Depending on the level, you must make two whole molecules, or one of a predefined shape, or one in a confined space. When the tube's full, the game's over.

Just set your machine to low res and double-click on DEMO.PRG to begin. You can select music or sound effects (or both) using the joystick. "Fire" toggles the selected option. When you select Game, use the "Fire" button again to advance each screen when you've read the instructions.

	FLU
CL I	(Version
	BY: GEO
	SIDE (PUI
	SIDE: 2
	MACHIN

SIDE (PUBLIC DOMAIN) SIDE: 2 MACHINE: ALL STS FOLDER: FLU FILES: FLU.DOC, FLU.PRG, FLU.RSC

1.30)

RGE R. WOOD-

Flu demonstrates exactly what happens to your ST when certain disk viruses are picked up and reach their "deadly" phase. However, it displays the effects without causing any damage – you are the antibody, and it's up to you to take note of the effects and keep an eye open for any real attacks!

The program runs in any resolution, so just double-click on FLU.PRG to run it. The FLU.RSC file must be in the same directory for it to work properly. Several ST virus strains are examined – just click on the virus type you want to see. Weird things may happen to the display – some older STs may even crash – but no actual damage is done to either the ST or the disk.

By looking at these effects you'll now know if you ever see the same effects (when you're not running *Flu*) that you probably have a virus. Prevention is always best so have a viruskiller handy.

For further information about the virus-types, read the FLU.DOC file, by double-clicking on it and selecting SHOW, or viewing it with *Revenge*, also on the Cover Disk.



Coke is it! So run like crazy or you'll be "it" too! Collect the lostlooking sheep to earn bonus points, and kill all the nasties to move to the next level. Warning! There is nothing here which is llogical – everything is llooney – so llook out– llamamania! Beware the mutant Ilamas! Dodge the gobbling brains and watch out for those killer joysticks! Things go completely hatstand in *Llamatron*, the game which turned the crowned heads of Europe into raving lunatics. We're talking *far out*, dudes!



LLAMATRON BY: LLAMASOFT (SHAREWARE) SIDES: 1 & 2 MACHINE: ALL COLOUR STS FOLDER: LLAMA512 (Side 1) and LLAMAMEG (Side 2) FILES: READ\_ME.TXT and TRON\_512.PRG (Side 1) TRON1MEG.PRG and SCORES.YAK (Side 2)

LLamatron is a belter of a game, created by everyone's favourite boffin, Jeff Minter. It's a fab joystick-controlled shoot-'em-up, featuring a wealth of llamas and sheep! It's simple to play and as addictive as hell, but before you play, read on.

If you own a 520ST, you must use the TRON\_512.PRG version. Copy this from the folder on side 1 onto the root directory of a blank, formatted disk (that is, not in any folders). If you have a doublesided disk drive (and can read side 2) copy the file called SCORES.YAK from the LLA-MAMEG folder onto the same blank disk. This file contains a

#### REVENGE

(Version 2.01)
BY: THE HITCHHIKER (PUBLIC
DOMAIN)
SIDE: 1
MACHINE: ALL STs
FOLDER: REVENGE
FILES: DISPLAY.TXT,
REVENGE.PRG

Revenge is a super-intelligent document displayer which can make file-reading a dream. Everyone knows what a pain it is to read a document file in low res - you can't scroll backwards if you miss a bit, and often half the display whizzes off the top before you can read it. Revenge can help!

To use Revenge, just doubleclick on REVENGE.PRG. The pro-

# SHAREWARE? WHERE? THERE!

You may have noticed (here and in READ\_ME.TXT) that Llamatron is Shareware. This is the first time a complete, full-price-style game has been released in this way. What does it mean? Well, you are entitled to copy, distribute and give away copies of *Llamatron* to your heart's content. No problem! In fact Jeff Minter would like *Llamatron* to spread all over the world! All he asks is that if you like the program and play it more than once, you send him a fiver. He reckons that most people will do this, and in return for their honesty he promises to send them a free Llamatron poster, a Llamasoft Newsletter and an extra, free, complete, classic game; Andes Attack. Wow! Now there's a reward! Surely that's worth a fiver if anything is?

As far as ST FORMAT is concerned, we know what you should do if you like Llamatron - send Jeff the cash. If you don't like it, don't destroy it. Give it away! Maybe the next person will like it enough to send in the dosh. If you like it and play it but don't contribute, two things will happen: (a) you'll die a horrible, lonely death and (b) Jeff (and loads of other top-class programmers) won't write any more Shareware stuff. It'll be your loss – and every ST game-player's. But most importantly – Jeff and ST FORMAT want you to have fun.

So read the READ\_ME and play the game! It's incredible - you'll see!

high-score table. It's not essential to use this one, because Llamatron creates a table if it can't find one. However, ensure that your working copy of *Llamatron* is write-enabled (with the notch closed) or it won't be able to save your high-scores at all.

If you have a 1040ST, then use the TRON1MEG.PRG file. Copy this to a blank disk along with the SCORES.YAK file, again leaving the disk write-enabled so the highscores can be updated. The



Revenge displays your documents and enables you to view them easily

gram loads and displays a neat intro screen where you select the file you wish to view. Revenge loads it up, formats the text for you and displays it on-screen. You can move backwards and forwards through the text simply by moving the mouse up or down. What could be simpler?

Revenge can also handle document files which have been packed

1MByte version features

much better sound-effects

than the 520 version. It uses

samples which have been

severely cut in size to fit into

folder, you can find another

file, READ\_ME.TXT, written by

Jeff himself. In it you can find

everything you need to make

Llamatron more fun - as well

as some "software history."

To read it, just double-click

on it - or use Revenge, also

Also in the LLAMA512

the 520ST version.

on this Cover Disk.

using the Pack Ice compression program (available in the Public Domain). It de-crunches them when they're loaded and then displays them like normal documents.

For further information from the programmer, covering all the features in-depth and a history of program's development, the double-click on the file called DIS-PLAY.TXT. Alternatively, why not load up Revenge first, and use it to show the DISPLAY.TXT file and all the other document files on this month's Cover Disk?

#### THE KEYS TO REVENGE

Arrow keys Scroll up or down one line <Shift> + Arrows

Scroll a page at a time

<Shift> + Function Key Set a "bookmark" in document Function Key

Move to a preset "bookmark" position

<Enter> or <Return> Scroll down one line

Spacebar Scroll down a page <Control> + T

Set the tab widths Zero key

Toggle between 50 or 60Hz display (colour only)

Zero key Reverse the screen colours (monochrome only)

<Tab> Display the pop-up menu

<Undo> Quit back to the Desktop

<Alternate> + T Move to top of document

<Alternate> + B Move to bottom of document <Alternate> + G

Move to a specific line <Alternate> + F

Search for a phrase <Alternate> + N

Find next occurrence of phrase <Alternate> + S

Mark the start of a block <Alternate> + E Mark the end of a block

<Alternate> + H Hide the block

<Alternate> + C

Set up the printer configuration <Alternate> + P

Print the whole document <Alternate> + W

Print only the selected block <Alternate> + L Load a document

<Alternate> + X

Run another program

<Alternate> + Q Quit back to the Desktop

#### LOOK AT THE SIZE OF IT!

Every month, FORMAT's Technical Ed sets to work on the worldfamous Cover Disk. Requiring more coffee and fags than any other magazine's disk to put together, this is, as they say in technical circles, big. This month there are eight folders packed with goodies for you.

**OLD-FASHIONED SINGLES CLUB?** Things went a bit awry with the first STs Atari ever made. The drives they fitted could read only one side of a disk. Yes, it is a bit daft, but it gets worse. The oldfashioned "singlies" couldn't even begin to read a double-sided disk. At least, not until ST FORMAT put its best brains on the problem...

#### ANYONE CAN USE IT

Rob Northen was an unknown genius living in Surrey, until he created the first ST FORMAT Cover Disk. Now he's a world-famous unknown genius living in Surrey, and his legacy is an amazing disk formatter that enables everyone to read at least the first side of the Cover Disk. No-one need be left out. We guarantee that this disk can be read by all STs, no matter how old or new.

#### **DOUBLE THE FUN**

If your ST is younger than three years old you should be able to read everything. To get access to the second side of the Cover Disk just double-click on the folder named SIDE 2. It should open up a normal window, listing all the files contained on Side 2.

#### T WON'T OPEN?

If you have a single-sided drive and you try opening the SIDE\_2 folder, then you see an alert box. You're told that the data on the disk may be damaged. This is just your ST's way of telling you it can't read Side 2. Don't fret, just click on CANCEL and you'll be okay.

TROUBLE-FREE DISK DRIVING Whatever your ST set-up, you can't afford to take risks. FORMAT's **Cover Disk is guaranteed virus-free** - our duplication master disks are tested personally by the Tech Ed. However, if the write-protect tab on the disk is left enabled (closed), then viruses can get onto the disk. Protect your Cover Disk as soon as you buy it, by opening the tab and backing it up. It's the only way to be absolutely sure you're safe!

#### LITTLE GREEN SELECTOR

(Version 1.4)
BY: CHARLES F. JOHNSON
(SHAREWARE)
SIDE: 2
MACHINE: ALL STs
FOLDER: LGSELECT
FILES: LGSELECT.TXT, LGSE-
LECT.PRG

Little Green Selector is a replacement for the ST's GEM fileselector, the box which pops up asking for a filename when you're loading something from inside another package. We've all cursed GEM's less than helpful version at one time or another, when it decides to ditch out or get hopelessly lost when you change a disk. Little Green Selector can put paid to all of that, as well as providing a wealth of really useful features.

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■ The standard Atari GEM dealt with file-selecting like a blind man choosing paint. Now you can see the light with the *Little Green Selector*, a program you can install to give your ST a superior grasp on your data

#### LITTLE GREEN FEATURES

*Little Green Selector* enables you to do all these handy things:

 Sort files by order of name, extension, size, disk order or date
 Show all files (\*.\*) or specific file types (\*.DOC, \*.PRG or whatever you choose)

• Store 18 user-defined pathnames (like c:\myfolder\yetmore\\* .DOC or similar) which can be recalled at the touch of a button  Show hidden or system files which exist but are not normally displayed in the directory window
 Save all your defined paths,

templates and extensions so they're auto-loaded next time you use *Little Green Selector* 

• Clear everything (paths, extensions) at the touch of a button

• Operate by either keyboard or mouse commands

• Communicate with Codehead's Multifile accessory and MultiDesk

 Display the sizes of files as well as their names

 Change drives with a single button press

 Flush out the folder counter to avoid the 40-folder bug (only TOS 1.0 and 1.2 STs suffered from this ROM fault)

• Execute fast file-searching to locate files in well-stuffed folders

With this much to offer, *LGSelect* is bound to be of use to everyone, no matter how old your ST is. However, the *Little Green Selector* is a Shareware program, and as such it's slightly different from normal PD stuff. Check out the *Llamatron* panel on page 39 for more info on Shareware. Basically, if you decide that you like *LGSelect* enough to keep it, you really ought to pay the programmer, Charles Johnson.

For more data on operating *LGSelect* double-click on the file LGSELECT.TXT. Inside are all the instructions you need, plus a contact address for Charles himself.

#### **FAULTY DISK?**

In any disk duplication process as earth-shatteringly large as *ST FORMAT's*, it is possible that a tiny proportion of disks might be faulty. If you're unlucky, sorry. You're guaranteed a replacement if you send your disk, enclosing an SAE, to: *ST FORMAT* July disk returns, PC Wise Ltd, Unit 3, Merthyr Industrial Park, Pentrebach, Merthyr Tydfil, Mid Glamorgan CF48 4DR.

## Llamas in your disk drive? Atomic piles? Call the... COVER DISK HOTLINE 0225 442244 WEDNESDAYS (2pm to 6pm)

If you're having trouble with your Cover Disk, you need someone to turn to. The Cover Disk Hotline provides you with a direct link to the *ST FORMAT* offices, where you may find the answer to your problems.

Before you ring, please make sure you have thoroughly read all the relevant parts of these Cover Disk pages and all documentation files. If that doesn't solve your problem, try consulting your Atari ST Owner's Manual, which may help you find what you're doing wrong. If all else fails, give us a buzz during the hours specified and we'll do our best to help. However, we don't write the Cover Disk programs ourselves, so we may not know *everything* the programmers do. Try to have the ST nearby (up and running), and let us know which model ST you have, plus the issue number of the Cover Disk that's giving you all the hassle. Do this before you call, and it might save you a large phone bill when we tell you to go back and find out!

#### WORD PROCESS-ING TOOLKIT

BY: SANDY JANAS (PUBLIC DOMAIN)

SIDE: 2
MACHINE: ALL STs
FOLDER: WPTOOLS
FILES: WPTOOLS.DOC,
WPTOOLS.ACC,
WPTOOLS.RSC



■ Feeling a little lost in 1st Word? How about a few more features to make word processing an easier and quicker task? They're all here in the Word Processing Toolkit, and you don't even need a WP! The Word Processing Toolkit is primarily designed for use with 1st Word or 1st Word Plus, but since it's an Accessory you could use it with anything. To use it, copy WPTOOLS.ACC and WPTOOLS.RSC to the root directory of your boot disk, or the disk you boot 1st Word from (preferably a backup). Reset your ST and you find WP Toolkit tucked away in the Desktop's Desk menu. To access the program, select it from that menu.

More information can be found in the file WPTOOLS.DOC. This is a *1st Word* file, so to read it you can load it into that word processor. You can also just double-click on it to SHOW it to the screen, but the display looks a bit strange, because of the *1st Word* control characters contained in it.

## **INSIDE YOUR TOOLBOX**

The WP Toolkit offers eight functions for you to use:

#### AN ALARM CLOCK

To set the alarm, just click on ALARM and then enter your chosen time into the dialogue box. Hit <Return> and the display reverts to the main panel. At the appropriate time, a window opens up on top of the screen display, informing you that the alarm has gone off.

#### A PRINTER SELECTOR

The printer selector enables you to choose your printer emulation mode, output quality and paper style, just by clicking on the appropriate buttons. You can then alternate between two setups (or two printers if you're lucky enough to have them) for draft and final quality printouts.

#### A WORD COUNTER

You can use this function to add up the number of words in a document. Choose the desired document from the fileselector and away it goes! The number of words is printed on screen when it's calculated.

#### A FREE RAM CHECKER

Clicking on "FreeRAM" interrogates the ST to find out how much space you have left for your document. If you don't have much memory left, you can save a bit of space by disabling the *WPTools* Accessory and resetting your ST.

#### A DISK RELABELLER

Use this helpful function to change the current disk's volume name. Just click on the box and enter a new name. It's saved to the bootsector of your disk and you can check it using the Show Info command. It's just a handy way of knowing what disk you have in the drive.

#### A DISK FORMATTER

The "Format" option enables you to prepare a new blank disk from within the word processor you're currently using. *1st Word* was unable to do this, so *WP Toolkit* can stop you from losing newly-entered data when you find you've got no space to save it and no blank disks spare.

#### A FILE RECOVERY TOOL

"Undelete" is a smart way of retrieving old files which have previously been dumped into the trashcan. It may not be 100% successful, especially if you have saved data to the same disk since deleting your file, because this can over-write the file's datablocks. However, it may still be able to retrieve a fair portion of the data you've trashed, so it could save you having to type it *all* in again!

#### • A SCREEN BLACKOUT TOOL

The "Blackout" button turns the screen black to save wear and tear on the phosphor dots on the TV tube. Prolonged exposure to the same screen display can cause the dots to become discoloured and a faint, ghostly image of your wordprocessor screen is "burned" onto the screen forever! You can stop this by using the blackout option when you're away from the machine and it's not switched off. Press <Return> or <Enter> to get the display back.

# **TURBOCHARGE YOUR ST OR STE** Get literally twice the power for just £179 inc VAT

### THE TURBO 16v2

Announcing... the new Turbo series of accelerators. The Turbo 16v2 is here already. The incredible new Turbo 30-40 and Turbo 30-50, running at up to 20 times the speed of your ST, are soon to be released - watch the press for reviews and features.

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## **MULTIDESK 2.3**

The ultimate accessory handler. Load and clear accessories without rebooting. Load up to 32 accessories at a time.

Clear accessories out of your root directory and into a folder which MultiDesk will automatically load from. Create saveable Set ups of frequently used accessories. Runs as a program, or an accessory. Can be installed into Hotwire to run accessories from the desktop.

## LOOKIT & POPPIT

Two powerful and useful new utilities for the price of one!

Lookit is an ASCII file viewer and additionally a powerful binary file editor. Amazingly, you can even open several files and cut and paste from sector to sector!

Poppit lets you "Hotwire" your desk accessories and "pop it" up within any GEM program with a keypress! Naturally, it finds accessories you've loaded with Multi-Desk too.!

## CODEKEYS

Codekeys records all key strokes and mouse clicks and plays them back either with precision timing, or as fast as possible. Both GEM and non-GEM! Automatically loads the correct macros for each program, and with the correct screen resolution. Creates time-controlled that play at set times or set intervals. Built-in editor to fine-tune macros. "Nest" macro option.

## X-BOOT

X-Boot is a new program from Germany. It runs at bootup time and gives you a menu of default configurations to select the correct auto programs and accessories for your current work session.

You can also load the correct GDOS set up to run with the chosen program, copy set up files, perform batch file operations and auto-start the programs of your choice.

X-Boot is very easy to install and has a clever GEM-like front end. You can either point and click, or hit pre-defined f-keys.

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You can advance order any item. If you do this, we will not debit your card until the goods are despatched. VAT invoice sent with goods. Post and packing is £2.75.



# COMING SOON THE TURBO 30-40

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- ★ Includes licensed, specially modified TOS.
   ★ Bundled with SofTrek's TurboST software
- accelerator
- ★ Specially tuned for Hi-Res video boards
- \* No auxiliary power supply needed
- ★ Ring us for advance information.

# 1.44 Meg Floppy drives

- ★ Ever needed to read/write a 3.5 or 5.25 high density disk?
- Ever wanted to increase your floppy disk storage capacity?
- ★ Ever wanted greater compatibility with PC disks?

Here's a high density disk drive purposebuilt for the ST. The 3.5 version holds up to 1.44 meg of data. With the 5.25 model, you can switch between 40/80 tracks and it holds up to 1.2 meg.

Both models also work perfectly as single and double density drives, and are compatible with IBM emulators. They also run as external drives on the TT.

The drive is either available as an internal unit for fitting into computers or towers, or as a cased external unit with its own built-in power supply. Either way, DIY or workshop fitting of an interface is needed. The drives come complete with full fitting instructions and are available only from the Atari Workshop. Prices are as follows:

Uncased internal drive kits (inc VAT)	
3.5" high density drive	£99.95
5.25" high density drive	£129.95
Cased external drive kits (inc VAT)	
3.5" high density drive	£129.95
5.25" high density drive	£149.95
Add £2.75 per item post and packin	ng.



#### **DISK** intro

#### **DIY ASSEMBLY** GUIDE (Part Three)

**BY: GLENN CORPES** SIDE: 1 MACHINE: ALL COLOUR STs FOLDER: BULLFROG

FILES: SPRITE16.DAT SPRITE32.DAT, SPRITES.S This month you can find all the files for the DIY assembly guide (see page 95) in the BULLFROG folder. SPRITES.S is a source-code file for HiSoft's Devpac 1 and there are two sprite-data files. First load the SPRITE.S file into Devpac 1 (yours free on Cover Disk 22 - see page 138 if you missed it). Devpac

# THE DISK NEEDS YOU!

We need your software - games, utilities, demos - anything good, original and preferably short. If you've written anything worthy of the ST FORMAT Cover Disk (and remember, only the best will do), send it with this form and full documentation to: Neil Jackson, ST FORMAT Cover Disk Editor, 30 Monmouth St, Bath BA1 2BW. Allow at least four weeks for a reply.

Name Address

**Daytime phone Program title** 

Size of files in K

What's so brilliant about it \_

Don't forget 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

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

Signed

Note: we pay out up to £800 for contributions to our Cover Disk. But to earn that kind of dosh, of course, you'd have to write something pretty spectacular, original and complex.

1 can be loaded in high or medium resolution, but not low. Once it is loaded, reset the tab size to 4 so you can fit all the lines on-screen. The bottom entry of the furthest right-hand menu contains the TAB control. Just change the number from 8 to 4 and hit <Return>. Then load up the SPRITE.S file, using the "Load File" option in the File menu.

Your screen is now full of program lines. Follow the guide on page 95 to find out what you can safely do. When you want to create an executable program file, select the "Assemble" option from the right-hand menu. A dialogue box

then asks you for a BINARY FILE-NAME and offers a choice of output displays. If you want to save the complete file to disk, enter a name; if not, just leave it blank and Devpac attempts a dummy assembly to test the program. To see the source file as it's being scanned just select "screen" (or "printer").

After a final assembly (saving to disk), you now have a new file. Copy this to the same folder as SPRITE16.DAT and SPRITE32.DAT or the program can't find them and can't run. And to be sure you don't ruin your Cover Disk, remember to do all your work on blank disks.

#### **BACK UP YOUR DISK!**

Because the ST FORMAT Cover Disk is non-standard, the back-up procedure is not simple. Follow these steps and

is not simple. Follow these steps and you won't encounter any problems. Do it any other way and you could mangle your Cover Disk. 1. Format a couple of blank disks (you may not get all the data onto one) – single-sided if you've got a single-sided drive, double-sided if you have a double-sided drive. 2. Write-protect (notch open) the origi-

2. Write-protect (notch open) the original Cover Disk and insert it into the drive (if you have two drives, insert the Cover Disk into drive B). Double-click Cover Disk into drive B). Double-click on the drive B icon to open a window showing the Cover Disk contents. If you haven't got a second drive, a mes-sage appears requesting you to put disk B in drive A. Simply click on OK. 3. Insert one of the blank formatted disks into drive A (removing the Cover Disk if you have only one drive). Dou-ble-click on the drive A icon and open up another window. You may be asked to insert disk A into drive A - you just

to insert disk A into drive A – you just did, so just click on OK again.
4. Highlight each folder in the drive B Cover Disk window and drag them into the drive A window, one at a time.
5. If you have one drive, you're asked to insert disk A and disk B at regular intervals. Don't mix the two up! Disk B is the Cover Disk and disk A is the freshly formatted disk.
6. When you get a "disk full" error message, recopy the incomplete folder and any subsequent folders onto the second freshly formatted disk, using steps 3 and 4 above.
7. Double-sided owners, double-click

steps 3 and 4 above.
7. Double-sided owners, double-click on SIDE\_2 once you've finished copying all the folders from side 1 of the Cover Disk. Copy the folders inside as above. When done, use only the back-up. Put your Cover Disk away safely.
8. Don't forget, you must not try to use the standard Atari disk copy (dragging floppy A onto Floppy B) function – it won't work.





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Fast Lane Ticket Holders have their own priority entrance.



# Get an imating with Animaster! "Potentially the best ST



hat's what professional game-designer Peter Molyneux said about Animaster. You can't overlook praise like that when it comes from the programmer who created hit games like Populous and Powermonger.

Animaster is ST FORMAT's exclusive and unique animation package which enables you to design your own animated sequences. You can create your own sprites in Animaster, load in backdrops and then make your characters run, leap or die over the top of them. Save your sequences to disk and then merge them together to build up a short cartoon. Using a *GFA Basic* program supplied as part of Animaster, you can even incorporate the sprites into your own BASIC programs.

A taster of Animaster appeared on Cover Disk 21. The full version of the program enables you to create and edit your sprites using a range of drawing tools. You can then test them over the top of a background to see how they look. What's more, *Animaster* even makes use of the enhanced features of the STE, offering you a choice of 16 colours at a time from a staggering palette of 4,096.

Using Animaster's powerful sequence editing features, you can construct a short "film." For example, define a sequence showing a little man running, then another showing him leaping and yet another showing him bending down and touching his toes. Using a special recording matrix, you could then define a "film" which shows the sprite running for a while, stopping to touch his toes, running again and then leaping into the air. Imagine the possibilities for a Superman sprite or a colourful Mickey Mouse!

#### ANIMASTER PRIORITY ORDER FORM Yes, I would like to Name order .....copies Address of Animaster at the special price of £14.95 (ref: ST367) Postcode Note: Animaster is only Telephone available through ST FORMAT Method of payment: (please circle) Access Visa Cheque PO SEND THIS FORM TO: ST FORMAT **Credit Card** Animaster offer, The number Old Barn, Freepost, Somerton, Somerset, **Please make all cheques Expiry date** payable in pounds sterling to TA11 7BR (No stamp needed if posted in UK) **Future Publishing Limited.** 11 **ST FORMAT**

#### **ANIMASTER'S FEATURES**

- Runs on any ST or STE, with support for the STE's extra palette of 4,096 colours
- Automatic creation of a special mask to use
- your sprites in *GFA Basic* • Single or multi-frame "grabbing" from pic-
- tures created in a paint package • Eight times magnification for close-up editing
- of your sprites
- Extensive sprite drawing and editing features
   Comprehensive testing features
- Comprehensive testing feature

• A unique sequencer enables you to define up to 16 animation sequences which can then be animated over a blank screen or any picture of your choice

• A "Film Matrix Recorder" enables you to record, edit and save a sequence file to disk



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protar products include the fastest hard drives available for the Atari ST. The fully compatible auto-bootable hard-disks are mounted in an elegant housing

which is perfectly at home with the ST design. They are supplied completly ready for operation – no hidden preliminaries.

The system software supplied provides access to such features as 12 partitions per disk, selectable boot partition, write protection and password, all of which are fully

compatible with the numerous operating systems and emulators which are offered for the ST.

protars' 40 DC, 80 DC and 160 DC models are additionally equipped with a 64 kB cache memory integrated on the hard disk; this cache memory reduces disk accessing times by up to 50%.

Some other examples of protars' hardware include:

• the R44 removable disk drives

– a safe option

for the future.

• the T60 and T150 tape streamers

• ProScreen TT – a large scale monitor for the Atari TT There is a minimum guarantee of one year on all components used in our products. We guarantee fast, efficient, hassel-free technology at a price our success has allowed us to offer.

protar products are leaders on the German market which are now available to you nationwide.

We are currently renaming our hard disk series for copyright reasons. Also, we are putting the final touches to our new U.K. subsidary. Until further notice our products are available to you without delay, direct from Germany at absolutely no extra cost. Definitely worth checking out!

For further information please contact:

orstar

# cree

In a world gone mad, there's one thing you can rely on. It's not the Six O'Clock News. It's not lan McCaskill inanely warbling "helloo!" It's not even those ticket machines you get outside car parks where you need an arm at least seven feet long to reach the darned ticket. No - it's Screenplay, your FORMAT guide to the sexiest games around

#### LEMMINGS

After a long and somewhat puzzling wait the game of the nature documentary is here. The lemmings are cute, cuddly, utterly stupid, and you've got to take care of them. Who on earth wants to be a lemmingminder (whatever that is)?



#### THE *STF* RATINGS SYSTEM

It is ST FORMAT policy to review only finished games - that is, the games you could actually buy in the shops - never incomplete or demo versions • We review all games released, but only when they're finished. We will not be rushed into reviewing unfinished games to beat our "competitors"

GRAPHICS: A score out of ten for the quality of visuals and animation, including how big and colourful the sprites are, how smooth the scrolling is, and so on.

SOUNDTRACK: (out of ten) Sampled sounds ate highly but ST sound chip noises tend to send your eardrums convulsing

INTELLIGENCE: (out of ten) How clever do you need to be to tackle the game? Puzzle and strategy games should be tough; few shoot-em-ups are mentally taxing

**INSTANT APPEAL:** (out of ten) You take the game out of the box and drop it in the drive. How well does it draw you in? How easy is it to get into?

LONG TERM INTEREST: (out of ten) You've had the game for a couple of weeks. Is it covered in dust, in the bin or still in your drive?

**OVERALL:** (a percentage) Terrific graphics and wonderful sound make a game look hot, but they don't make it great. The overall score comes after joint discussion between the FORMAT reviewers and depends on the audit of the second score of the second the quality of the gameplay and its long-term appea



HILL STREET BLUES

Still sobbing uncontrollably because the series with the melancholy theme tune and no discernable plotline has finished? Long to hear the words "let's be careful out there" just one more time? Boy, are you in luck! page 54

#### **STORMBALL**

You've followed its development in the FORMAT articles. you've played the Cover Disk demo, you've seen the ads. Put yourself out of your misery and see what Stormball's really like page 60



#### WONDERLAND

Mad Hatters? Cats with a visibility problem? Magnetic Windows? That's right - you've entered the Twilight Zone. No, wait - it's Wonderland. the mindbending puzzler page 48

new

#### **MEGATRAVELLER 1**

Another one of those huge and complex board games (which you've probably never heard of) that has millions of players worldwide. On an ST near you right now page 67



■ The FORMAT crew: master hypnotist Ed Ricketts (left) demonstrates his skills to tortoise Dan Goodleff (centre) and constipated ostrich Neil Jackson (right)

#### SCRUTINISED THIS MONTH

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#### THE YAK'S TOP 20

Ace, cool, wonderful and altogether groovy games programmer Yak (AKA Jeff Minter) picks his most, like, fab games in our extremely mellow Top 20 (man)! page 74



Over 25 games cracked on page 77 – Make yours the Final Battle • Tactical advice for Carrier Command 

Lighten up Shadow of the Beast 

Codes to Chip's Challenge

# **VIRGIN MASTERTRONIC £30.64**

# Wonderland

An Alice in Wonderland adventure game sounds good, but if you're late for a very important date you can't spend hours typing in awkward phrases. Ed Ricketts asks whether Wonderland's new control system is one to lose your head over

emember those good old text adventures? "You can see a light." GET LIGHT. "You can't see a light." Ah, those were the days – spending hours trying to get the parser to understand CUT ROPE, and even longer working out that it was only capable of understanding DESCEND THE CRAGGY RAVINE and not CLIMB DOWN.

Well, those days have gone, and good riddance to them. Adventurers nowadays want to be taxed by the puzzles in the game, not the game itself, so Magnetic Scrolls have pro-

Main	Access	sories	W beautiful antique table
	WONDER	R14	blue dress Exits
File	Text	Verbs	breakfast egg
Dinner Ro There is a b here. > <b>look</b> Dinner Ro Just like th which lies get the fee eaten here There is a b here. >	om ne breakfa to the nor ling that n in a long t	Get Wear Drop Remove Xrink Eat Search	<pre>corving peg coat har potion bottle oup right hand pouch cushions saucer gardeni sheet music gazette shoes glass bo slippers glasses <u>small canves sack</u> handy la small lens hats small overall lard sugar left har tes chest</pre>

■ The most commonly used commands, like Examine, Get and Use, are in the pull-down menus, and helpfully list only the objects that particular command applies to – no more messing about trying to GET PROSTHETIC and suchlike

duced Wonderland, a user-friendly adaptation of Alice in Wonderland.

It's liberally sprinkled with windows, icons and such like, so you should feel at home right away – er, in theory. You

begin

the game with absolutely no idea of what your goal might be, but you soon find out. Falling asleep and

#### "The control system is arranged to make playing the game as straightforward and intuitive as possible"

starting to dream, you leave your sister Emily behind on the river bank and wander off into a pear grove,

> where all the pears suddenly turn into lanterns. Pick a lantern – you need it later – and find the rabbit hole. From there on in it's a case of exploring, collecting and discovering.

What makes the game really interesting is that there are two ways of executing commands. You could play the whole game

simply by typing everything in as normal, or you could make use of all the accessory windows. Instead of typing EXAMINE PEAR, for instance, just double-click on the pear in the Items in Room window. Then if you decide to pick it up, drag its icon to your inventory window. It's as simple as that. If there's something in the graphic that looks interesting, click with the right mouse button on it to bring up its description. Everything has been arranged to make playing the game as straightforward

■ Not before time, *The Adventures of Alice in Wonderland* comes to your ST, albeit with a shorter title. Find your way through the twisted logic of Lewis Carroll's classic book, but be warned – there are many new puzzles to fox even hardened Alice fans

intuitive as possible. But be warned: although *Wonderland* is capable of running perfectly happily on a bogstandard 520ST, on this machine you have only the Session and Graphics windows available – there just isn't enough memory for the full range explained in the box below.

#### EFFECTS

A great deal of effort has been put in to make *Wonderland* look as attrac-



trol system, Magnetic Windows. This aims to give you a familiar working environment – with windows, icons and menus – which you are used to from the ST's GEM Desktop. These windows feature all the standard properties: you can move, resize, close them and so on

Session window – displays your input and responses. Scroll up to see a limited amount of past input. You load and save games or input common commands via pull-down menus Menu bar – provides a variety of functions, such as help, loading and saving a particular layout of windows and setting miscellaneous preferences

Inventory window – For a description of any object, double-click on it. To pick something up, just drag its icon from the Items in Room window to this window



Map – shows the places you've visited and the exits from them. Click on a location to move directly via the shortest route or see its graphic

and

Items in Room – this window – er, displays the items in the room. For a description of any item, you can simply double-click on it here Exits – a quick visual indication of which directions are available from where you are. Click on a highlighted arrow to move that way

# OOER – MAGIC MUSHROOMS AND SHE

The puzzles in Wonderland usually aren't too taxing, though in the spirit of the book they're not always strictly logical. Hardcore Lewis Carroll fans may

ТЦ Graphics File O. K. You' look Giant mus The most this mush certainly c seeing one in the field is a caterpil his arms fo long hooka 

Wandering past a walled garden - wonder what's in there? - you come across this extremely laid-back caterpillar sitting on a huge mushroom. A quick examination reveals that he's smoking sherbet from a hookah - that dubious-looking device - and that if you get him some more he may very well help you

tive as possible. There is a graphic of some sort for almost every location and most of them are very well drawn. Animated scenes are scarcer but always excellent: streams gurgle smoothly by and frog henchmen



If you ever do get really stuck you can always resort to the built-in help feature. This offers hints in varying levels of significance, from a fairly cryptic clue to the complete solution of a problem. However, it's not a good idea to rely on this too much. Naturally, the game keeps count, so the more you access the feature the more your score suffers

march up 'n' down. You can even choose between four fonts and many sizes of text, though you really need to be in high res for the best text output - and this means sacrificing the colour graphics. It's a boon to find sound in Wonderland as well, though

make playing the game more manageable, though there are still times when it's quicker to type in a command than fiddle about with icons. There is an initial familiarisation period during which you must accustom yourself to the system

the occasional sound-chip tunes can

VERDICT

It's quite a brave step for Virgin to

attempt to introduce a new adven-

ture environment

could not only

have screwed up

the story but

also the new sys-

have succeeded

with both. The

windows aren't

just a gimmick -

tem.

they

they

Thankfully

seem to

genuinely

best be described as adequate.

be disappointed: most of the time it's just a case of finding the right object from an area you haven't explored yet to solve a problem elsewhere



Luckily, you just happen to know that there's a sherbet fountain not too far away. It's the work of a moment to click on the map to get there, but to your dismay you find you can't just take any sherbet from the fountain. Try rummaging through your inventory to see if there's anything useful. Aha - a saucer ...

> and arrange your windows as you like, but once you're past that you can concentrate on the game. Having the map and being able to move

#### "There's a well-drawn graphic for almost every location, and animated scenes are excellent"

tedious typing; however, there is a

tracted and spend more time playing with the windows than with the game itself.

One of the major drawbacks is the constant pause for disk accessing which grows almost unacceptable when a long graphic sequence is loaded. Hard drive users should be pleased to hear that the whole game may be installed - uncompressed graphics

and all - onto one partition, but the vast majority of game-players don't

take a quick trek back to the hippie insect and offer

him the powder. That seems to do the trick, because

he's wandered away with it, muttering interesting

hints about the mushroom and leaving it to you.

Now if you can only find something to cut it with ....

As adventures go, Wonderland isn't terribly difficult - and even if you do get stuck there's always the help function (if you can bear the guilt). On the whole, then, a success, but not quite in the FORMAT Gold cat-

Doubtless egory. there will be improvements to Virgin's Magnetic Windows adventure control system, and maybe future Virgin adventure games might make the grade once these have been implemented. For now, a sound and highly absorbing first attempt.



BMAT

**ED RICKETTS** 

GRAPHICS SOUNDTRACK INTELLIGENCE **INSTANT APPEAL** 8 LONG TERM INTEREST 9 OVERALL 85%

Wonderland is playable in any of the ST's three graphic resolutions. Each one has its pros and cons, so the mode you finally choose to play in may probably be completely different from the next person's



Low res is the best mode for those who want to see the pretty graphics, because it offers you the ST's full range of 16 colours on-screen at one time. The only problem is that it's very difficult to fit all the windows onscreen in the limited space available



Medium res offers far more scope for arranging your windows, though here too there are drawbacks. The graphics are only displayed in grey scales, not colours, and some of the fonts look too tall because of the odd proportions of the medium res screen



High res is ideal for those serious adventure buffs who hold no truck with these new-fangled graphics but like to see a lot of text. The fonts look about a hundred times better and you can fit most of the windows comfortably - and legibly - on-scree

have this luxury.

with such a wellknown theme as Alice in Wonderland - there's the chance that they straight to a location cuts out much

danger that you can become dis-







#### LEISURE

# **PSYGNOSIS £25.99**

emmings. Aren't they stupid? Famed the world over for throwing themselves off high places for apparently no reason whatsoever, they're the losers of a the animal world.

Unfortunately, in the game of the same name, you've got the task of rescuing them. You do this by endowing certain lemms with

#### **THE LEMMING'S GUIDE TO ICONS**

Along the bottom of the screen are the icons you use to control all the individual lemmings. The number above the icon shows how many times you can use it for this level sometimes you can't use it at all.



201	Decrease flow of lemmings – though not below the inital rat
	Increase flow of lemmings – though not above 99
105	Climber – give a lemming the ability to climb vertical surface
201	Floater – enables a lemming to fall for long distances
	Bomb – explodes a single lemm after a countdown. This is the only way to remove Blockers

Blocker - er, makes the chosen lemming block the way, dunnit

Bridge Builder – this makes a lemm build an upwards-slanting diagonal bridge of 12 steps

Basher – this makes a lemm dig horizontally through a surface





ause – pause. Gives you time to explore and plan strategy

Nuke – blows up every lemming. Useful for hopeless situations (and great fun to watch)

> Map of the whole level

special powers. If, for SI example, there's a hole in their way, you have to get one of them to build a

bridge over it, or otherwise the rest of them blindly stumble over the edge because they're so brain-

less. The aim on each level is to get the specified number of lemms home safely by any means possible.

Hazards are many: fire spews from the walls, lemming that falls into it (lemms, as any fule kno, can't swim) and time is running out. But soldier on - the lemms are depending on you.

EFFECTS

Considering the size of the lemmings sprites it's quite amazing that they're so well animated - literally only a few pixels high, they display more character than most silicon heroes ever do, even down to the way their hair flies about when their heads turn. Keeping them small means being able

to animate more on screen at once at a reasonable



If you ever get stuck in an unwinnable situation, use the Nuke icon. Bang go chasms yawn on all the lemmings in a pretty spectacular every side, poison display of animal pyrotechnics. If you're goop threatens to really bloodthirsty you can even do this engulf the unwary just to watch their little heads explode

want to retain a modicum of sanity.

#### VERDICT

speed, though there is some

doubt whether it's possible

to see them clearly enough

if you're playing the game

on your grandad's 1952

spectacular too.

It's the same old

sound has sadly

the game, you get

option

choosing between

moronic repetitive

tunes or simple

beeps and clicks the latter is

preferable if you

though:

forgotten.

you play

of

televisiongram - only a good

story,

been

the

When

monitor really does them justice.

Some of the backgrounds are quite

Lemmings is damn near perfect. It has all the ingredients of a classic game: simple rules, massive playability, enjoyable graphics and that indefinable something that draws you back again and again. The only major drawbacks are the lack of sound and the potential illegibility of graphics, but neither of these makes the game unplayable. Get into the world of Lemmings and you'll never want to come out again.

ED RICKETTS

. Make one lemm

build you a bridge



Do you think you've got the poise to control up to 100 suicidally stupid lemmings all hell bent on throwing themselves off the nearest cliff? Here's your chance to prove it in Lemmings



Even after you've sussed out a level you may still find it hard to complete. It's easy to run out of time 'cos it takes a while to set everything up - and damn frustrating to have to do it all again



Here there are two solid walls in your way. How do you get through them without any Bashers? Simple - place a Blocker right next to a wall and blow him up. He takes the wall with him

and a superior the second s	
GRAPHICS	9
SOUNDTRACK	4
INTELLIGENCE	9
INSTANT APPEAL	9
LONG TERM INTEREST	9
OVERALL 94	%

Lemmings is arranged into four stages - Fun, Tricky, Taxing and Mayhem - each composed of 30 levels. Though you could go straight to the Mayhem stage, it's best to start on Fun, 'cos the earlier levels are very easy and guide you through the complexities of the control

Several bridges have to be built here, until there's just a tiny gap for the lemms to fall through. They don't die because of the protruding wall

method. Complete a level successfully and you're given its password - invaluable when you want to play level 30. On this level from the Tricky stage (over two screens wide), you have a full crew of 100 lemmings on the loose and you must get 93 of them home - not many to waste!

9. Put a Blocker here

to stop them falling off



mean you can only dig one way - fortunately it's the right way. Use a Basher lemming to burrow through it more bridges over here and they're home and dry

just dig straight down here - the platform's solid steel

1. Lemmings

drop from here

# **GREMLIN £25.53** ercars 2

emember that abusive driving arcade game where you were rated a granny if you didn't come up to scratch? Supercars 2 shows that this genre is still going strong. It's a straightforward racing game played on a variety of techie gadgetry.

all - Easy. Medium and Hard - and each level has seven circuits of increasing difficulty. You don't get just plain driving surfaces either snow, rocks and sandy terrain can

really hamper your abilities as a pro driver. What's more, there are plenty of other drivers who'll stop at nothing to grind you into the gruesome characters who throw questions at ground - literally. You start out with a lim- goes off in a huff with your money - but you ited arsenal: simply a couple of missiles, which you activate by pushing your joystick either forward or backwards.

If you manage to qualify for a race, then you can gamble your winnings away in the communication

part of the game - a character appears in the display and asks you a question.

Select the correct answer out of the three provided and you can make a hefty bonus on your earnings. Give a wrong answer and you lose your cash. If you've got anything left, you can do some on-the-spot repairs, buy yourself some



winning money in races in game with a few novel extras. Earn cash for your order to spice up your car skill and wipe out your driving enemies with a grim with all manner of helpful arsenal. The better you get, the harder the courses become, complete with bridges, crossovers and There are three levels in other perils - including a sprinkling of crazy drivers

or invest in some armour to lessen the effect of collisions.

You can get homing missiles that gently remove the opposition, or super missiles which spin about your

car and destroy anything in their path - even mines! Unfortunately the other drivers all have access to the same gizmos. This trendy butch feminist is one of several Racing just isn't what it used to be!

> There is also a simultaneous

two-player mode which uses a split screen display - you can battle with a mate and laugh manically as you drive him to the edge - and over it.

#### **EFFECTS**

The circuits Supercars 2 are very attractively designed and the scrolling is smooth enough.

Even so, the car sprites, while well animated in themselves, are decidedly bland. Even in two-player mode the other drivers. There is far too much disk

tween races as well, which slows the whole pace of the game down. The communication screens seem totally out of place and rely

more on luck than skill - a bit of an unfair way to treat a driving fan who's just there for the thrills of the race.

Supercars 2 is still attractive, though, because it introduces a fun combative element into the game without ruining the basic idea of racing. It doesn't claim to be anything stunningly original, but at least it doesn't call you a granny when you come in last.

#### **DAN GOODLEFF**



It doesn't take too long to get the hang of the controls. Just push the joystick left or right to rotate the car and press the Fire button to accelerate. However, you can only have two offensive weapons per race, so choose carefully.

weaponry for your car

you between races. Get it right and you can

double your earnings. Get it wrong and she

can then blow up a few cats to irritate her...



On the Easy level at Bagley Marsh and there are five laps to do! You've just launched two missiles at a driver who's going to regret coming so close



You made it! Now it's on to the inventory screen where you can make repairs and select armaments for your car. Protective armour is also available



Now you're at Bwlchyddar with six laps to negotiate. You're using the super missile which destroys anything within the radius of its rapid swing

issue 24-JULY-91



Supercars 2 is far more enjoyable with two players. The split screen display works very well most of the time, although in a hard race it can get confusing

there are no distinguishing features to highlight other drivers - just the same drab grey car sprites. The other racers could have done with a hell of a lot more personality. Sound is poor - no samples, just burbling rev noises and an irritating intro tune.

#### VERDICT

The two-player mode is this game's saving grace. It makes up for the general lack of individuality among





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#### GRAPHICS

GR2021 Tex 6 Pack GR2027 Font Master GR2029 Publishing Partner GR2033 Star NL10/NC10 Font Designer GR2253 Neochrome Master GR2254 Megablit GR2255 Master Painter GR2256 Artist (mmr) GR2264 Studio and Vangogo GR2269 Eplan

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#### LEISURE

Welcome to the Hill Street Precinct, I'm SGT Esterhaus. I will process all the criminals



ESTERHAUS: "But first I'd like to take this opportunity to thank the team that made it all possible: my agent from Film Flatfoots Incorporated, my scriptwriter and my wife, whose years in the SWAT team gave me so much material to work with"

LSTREET

"Hill Street Blues

difficulties a real

copper must face"

ife is tough in downtown Chicago. There's a mugging every five minutes in the Hill Street Precinct, serial killers roam the streets hunting for prey, and

drug dealers peddle their wares on the sidewalks. In Hill Street Blues you take the role of Captain Furillo, the mild-mannered and

perpetually troubled police chief responsible for law and order in the

Precinct, and under your command you have nine officers to do the leg-work opens your mind to the for one block on of capturing criminals. However, your brief is broader than just nicking the bad guys. You must

not only keep the streets clean but do it without the general public even being aware of the continuous battle against crime. Ordinary Joes cannot be delayed by wailing Black-'n'-Whites

clogging up the traffic, and Mrs. Mahoney doesn't want to see bullets flying when she's out buying her apple pie. It really is a tough life! The game fea-

tures a control system rather like that of Sim City and has a similar (but more detailed) map, criss-crossed by long

straight streets intersecting at 90 degrees. There are around 150 "blocks" in the Hill Street area, all

under your jurisdiction. At any one time there is room the screen, so the whole city is rather large and difficult to cover. the

Below

street display are the main control icons you use to direct your officers. To the left is the radio operator who passes on the details of crimes as they are reported. Using her infor-



BELKER: "HQ? This is Belker. I've just found a whole bunch of stolen patrol cars in a car park off Bellevue Drive. What should I do?

FURILLO: "Belker! Learn to read a map, ya dumb hick! That's the Police parking lot and I can see you from the window of my office. Sheeez!"

# KRISALIS £25.53

51

If you combine the complexity of the TV series and the depth of Sim City, what do you get? A sprawling game with 150 blocks of ceaseless criminal activity, that's what you get. Neil Jackson tries out life in Captain Furillo's office

mation you can decide which cop to assign to each crime and where to send them.

To tell your officer where the destination is. you use a map of the whole city which you select using one of the icons. Assign an officer to specific

office and a yellow finger appears on the map pointing at the appropriate block. Select automatic mode and the officer travels to the location under his or her own steam, or you can direct your personnel by hand in manual mode.

Depending on the distance from the Hill Street Station House,

an officer can either walk or drive. Walking is a much better idea if the scene of the crime is within about five blocks, since Hill Street has a rather frustrating one-way system which slows down vehicular travel.

When you've got there, it's time to hunt for criminals among the Hill Street population who appear on the street display. If you have a description of the miscreant and he happens to be in visible range, then a set of red arrows shows the guilty party. If he's an unknown assailant, things

are less easy. You must wander up to passers-by and take a good look at their faces. You can radio a description back to HQ, then compare them to the mugshots you may have on file. If you're pretty sure you have your man (or woman) then you can either issue a warning (sometimes effective with small-



a ■ HUNTER: "Bleep, bleep, fsssst, this is Hunter, at the junction crime, of Fourth and Main. Have located the old lady whose dog was enter it into the fouling the park. I've got her surrounded and the SWAT team is computer in your standing by. Er, is it shoot-to-kill or what this week?

time hoods) or make an arrest and drag the perp back to the cells. Wrongful arrest doesn't do much for your reputation, though, so make sure you get it right!

Assuming you manage to find and arrest the right people, the case may still not be solved. If the criminal act was murder or drug-related, then

the defendant has to go to trial. The officer responsible for the arrest must be free for the day to appear in court and identify the suspect. If he's out on another case, or messes up the ID parade, that's it. The suspect goes free and cannot

be re-tried for the same offence. However, most criminals usually reoffend, and you may be able to catch them later - but next time, our felon may be a little less likely to "come quietly" and might attempt to



HUNTER: "Yes, gentlemen. This is the headquarters of my counterpart in Hill Street, and you can see the ventilation shaft at the top. The Paveway Laser-Guided bomb will penetrate through here and ... er, what? Oh. Sorry. Wrong game .... "



escape, this time perhaps even using weapons to help him.

For real tough cookies, Officer Hunter has a hotline to the SWAT team. You can cordon off the block while they go marching in to dislodge the holed-up hoodlum - then call in the paramedics to clear up the mess and scrape the innocent bystanders off the sidewalks.

#### EFFECTS

Hill Street Blues is a difficult game to master, and even more difficult to succeed at. The odds are stacked against you and you need very quick reactions to deal with many crimes at once. You can multi-task between all nine of your officers at once, which can make things a bit confusing. Who nicked whom? Where is he now? Who's next in court? And so on. Graphically the game isn't up to a whole lot, but it is interesting from

#### "The odds are stacked against you – you need quick reactions to deal with so much at once"

an "ant-farm" point of view. Cars whizz by, pedestrians wander around and motorcyclists tear down Main Street. The animation is smooth enough, but there are some occasional sprite-collisions which leave you wondering whether it really is possible for a biker to get side-wiped by a police car and survive.

Controlling the game is simple enough, once you commit the menu system to memory and know how to get to the various sub-menus. However, the mouse-click action seems to be frustratingly delayed sometimes, and some functions are selected by the right button rather than the normal left one. Why?

The opening soundtrack to the game is a rendition of the Hill Street Blues melody, but it's a bit lifeless. Some of the original tune's countermelodies and subtle discords

do not sound very pleasant when rigidly pushed through an ST soundchip.

#### VERDICT

Hill Street Blues is an absorbing game, for several reasons. Like the TV series, it really does open up your

mind to the difficulties high-ranking

feeling of being (almost) in control of a real, living, breathing metropolis, which in turn makes the game a little on the addictive side. Doubtless, Hill Street Blues isn't

everyone's cup of tea. There are no high-drama action scenes or jazzy sound-effects to amaze you, but there is a solid game which gradually

coppers must have to face in their

day-to-day lives. The unceasing activ-

ity going on in Hill Street, both crimi-

nal and legitimate, enhances the

unveils its many secrets as you play it through. Worth a look if you found Sim City even remotely interesting. **NEIL JACKSON** 

GRAPHICS	8
SOUNDTRACK	5
INTELLIGENCE	8
INSTANT APPEAL	7
LONG TERM INTEREST	8
OVERALL 83	%

#### EASONS



Hill Street is a vast place, with oodles of space to lose criminals in. To help you, here's a map of the area surrounding the precinct house - about a quarter of the whole game area - with the placenames used by AJ, the radio dispatcher



# **KRISALIS £24.99 Jahangir Khan's world** championship squash

quash is (a) a very silly game, (b) played by yuppies and (c) now available on your ST in the form of Jahangir Khan's World Championship Squash. Jahangir, in case you're wondering, is the World Squash Champion six times over so he's pretty good.

The rules of squash are quite simple. You and your opponent must wang the ball at a certain height against the end wall of the court and not let it bounce more than once on the ground. Playing it well, however, isn't so easy. You need to be reasonably fit to position yourself and return the ball in such a small court. You also need to hit it accurately.

Playing this simulation isn't easy either. For the first few games you run about like a decapitated chicken and only after some heavy practice do you start to anticipate where the ball is going to end up. Squash gives you the chance to play isolated matches against single players or to take part in a Tournament. You can also just watch matches if you're too tired to play even simulated squash. Tournaments come in two sizes: a Club version, in which the local lads take you on, and a Championship version in which you become Jahangir himself. Squash clubs are apparently arranged in rungs on a ladder, with each rung consisting

IN PLAY

Jahangir Khan's World Championship

Squash - a game where you hit a small

rubber ball against a wall. Then your

of a certain number of players. The more you improve, the higher up the ladder you climb. Strange people. these squash players.

#### **EFFECTS**

Let's face it, there isn't very much opponent hits the same small rubber you can do visu- ball against the wall. You hit the ball ally with a game back again. And so on. Can you wait?



If you have trouble hitting the ball correctly, try the Easy control method which takes the stroke for you. If you have trouble reaching the ball in the first place you might as well give up



You thought squash was simple, didn't you? Just two overweight businessmen giving themselves a heart attack in a small plastic cage. Well, you're wrong. With these options in *JK's Squash* you can choose to have a coronary too.



The Options screen enables you to set ball bounciness, number of games in a set and whether you want an old or

interesting, but fans of the real thing would turn their noses up at it. So within the limits of the framework,

The game features everything you might want from any sports



matches, see some statistics, or alter your player's name for the Tournament sim, so even if you're not a squash

nut you might find it absorbing enough to while away the odd weekend. Overall, then, Jahangir Khan's World Championship Squash is (a) a good simulation, (b) quite fun to play and (c) still a very silly game.

**ED RICKETTS** 

7
6
5
9
7
%

smoothly and bounces in a realistic fashion. Sound isn't too bad either there are some sampled claps and bounces which create a suitably squashlike atmosphere.

player you're trying not to trip over

during the course of the game. It also

enables you to watch a single match

#### VERDICT

Krisalis couldn't really have done a better simulation of squash without sacrificing gameplay. authenticity for Attack of the Amoeboid Squash

main game screen looks pretty much like a squash court and the options and intro screens are competently drawn. The players aren't wonderfully animated - they're a bit jerky and static - but the squash ball moves



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# MILLENNIUM £24.99

# Stormba abilities - even

fter a long wait, the subject of our A Game is Born series is here fresh-faced, eager and ready for review. Does it live up to expectation? Does it fulfill the original spec? Does it make the tea? Read on...

Stormball is set in unspecified time in an resembles somewhat

hockey. It's played on a pitch with two halves, one half per player, and each game is divided into four quarters. At the beginning of each quarter, the ball drops into the centre of the pitch and is propelled towards one of the players. He must then catch it with his baton.

This player now has a limited amount of time - called the Timeout period - to return the ball into the other player's half. You do this by varying the power of your shot. This is indicated by the rising bar graph in the scoreline area. Press the Fire

> button and the bar rises. Release the Fire button when the bar shows the strength of shot vou want



the future and simulates Stormball offers plenty of fun, excitement, cash, lies, betting, a fictitious sport that cheating, spherical objects and tiles... except, er, there's no cheating - or lies, actually, so, um, it's mainly a futuristic 3D sports sim, really

> and the ball is instantly released into the playing arena.

> The aim of the game is to make the ball pass over as many scoring

tiles on the pitch as you possibly can before the other player can catch it. These may be high score which tiles. give you from The practice droid is as good as you want it to

ten to 300 be. Note the Power tile that's highlighted in the points. Multipliers, or start to seriously kick his metal particulars

Bonus tiles. These enable you to blast your opponent or paralyse him temporarily. There are other less helpful ones - bar-

rier squares, for deflect instance. the ball and null squares zero your score for that throw.

x2

You can also change virtually all the game's parameters - the Timeout period, the length of the quarters and so on. You can practise against a droid, vary its skill to suit your own

and the 3D effect works well. When you turn left and right, the pitch moves smoothly and fairly rapidly. Perspective is fine, and often the

0004

background - whip the ball over that and you can

design your own

pitches. If you

get really cocky

via the serial port.

computer's

and beat all the

nents there's always

the opportunity to link

EFFECTS

viewed from a position

just behind your player,

oppo

ball shrinks to tiny dot а with only the bonus scores rising in the distance to remind you of where it is. Fortunately, there's also a huge arrow that follows it

around all the time. The players are slightly wooden though - everything floats above the pitch so they just glide about. A

cop-out graphically, perhaps, but it's justified by the futuristic setting. The sound is nothing

special either - no samples and only a few sound-chip tunes and effects.

#### VERDICT It's doubtful whether Stormball has

up your ST with friends interested after the first few games. The betting options and the The Stormball arena is

ability to improve the rank of your character may help, as may the pitch editor, but in the end there just doesn't seem to be enough here to generate that important just-onemore-go feeling. You can't deny that the overall presentation, program-



If you don't like the in-built pitches, design your own. You can't put all the high score tiles in one half though -whatever you do affects both halves

ming and design are top-notch - it's just that the gameplay seems to be lacking. A game is born, but it's unlikely to grow up.

#### ED RICKETTS

GRAPHICS 8 SOUNDTRACK 6 INTELLIGENCE 7 INSTANT APPEAL 7 LONG TERM INTEREST 6 OVERALL 71%

enough variety to keep you really

Once you're good enough to laugh in face of the practice droid, you can then think about challenging a human opponent. They range in ability from the frankly pathetic to the type who can win by 200 points with one leg tied behind his back. Choose your opponent carefully and prepare to do battle in the arena



This screen shows you what you're up against. The contestants aren't arranged in any order of competence you simply have to click on them to find out what level they're rated at



This ugly hombre has a familiarsounding name - Carruthers. Can't quite place it. Anyway, he's pretty hopeless at everything, so he's a safe bet for your first Stormball challenge



After you choose your opponent you can bet on winning against him with Dexter Sinister, the local wideboy. The amount you win depends on how good your opponent turns out



When you reach the arena he's just as bad as you thought - in fact he's completely useless. Bonus points ahoy as you swiftly punt the ball across the special tiles and rack up your score



# SIMPLY ADDICTIVE



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# UBI SOFT £25.99 lenn

Although the joystick controls in this 3D tennis sim are simple, it is going to take you a fair while to master the tactics enough to win a major tournament

ver fancied grunting and sweating your way to the top of the tennis circuit? Well, now you can with Pro Tennis Tour 2. Sport sims have always been popular - tennis especially -

and Pro Tennis Tour 2 is a very well-produced version featuring a 3D court and 3D player sprites. You can coach your player through friendlies or practise with the ball

machine before taking on the ultimate challenge, the grand slam.

After a pleasant piece of digitised music you're presented with some less than pleasing 7 chip music and the main menu. From here you can access a wealth of options. You or your ST can control up to four players, each with individual characteristics - but you need a special adapter (there are several on the market) if more than two of you want to play.

You can choose the sex of

rackets and girls with pink but if you want to play mixed doubles you need to have at least 1MByte of memory. You can adjust the strengths of

00000

"You cannot be serious!" This is the threevarious strokes player mode for the masochistic tennis buff

Mixed doubles, anyone? Up to four can play - if you have 1 meg of memory





You have a couple of seconds to aim a target circle before firing off your service. The target shows roughly where the ball is going to land when you finally release it



You can choose the sex of The programmable ball machine can sharpen up your players – boys with blue your stroke – or run you swiftly into the ground

and there are options to save and load players later on. After a games few really vou begin to identify with your player's struggle to reach the top.

The joystick control of your player is straightforward, but can take a while to master. First you must move your player into the position you want to take a shot from. When you press the Fire button, the player stops moving and prepares to play the ball. The longer you hold the button down, the harder the shot. At the same time

you can move the joystick to determine the direction of the stroke. Release the button and you make your shot. This control method makes it possible to chip, lob and smash as well as place the shot - ideally as far away from your opponent as possible.

To ease you into the game a junior option enables you to concen-

trate

on hit-

ting the ball

while your ST moves you around.

Frustration can set in as your oppo-

nent blasts ace after ace past you.

The game comes into its own when

decent rallies get going and you start

to wrench the joystick around des-

perately trying to return the little yellow ball. The trick is to place your player for the return while keeping your eye on the ball. As in real tennis, players change ends and service, although they don't get any barley water in between.

#### EFFECTS

The fixed perspective view of the court doesn't lend itself to flashy graphics routines, but a lot of effort has gone into the presentation. The 3D effect is excellent - the graphics are slick and the sprites generally move around smoothly.

Great use is made of sampled effects - each game opens with a ripple of applause, the umpire calls "Fault!" a lot and if you have 1MByte you even get the score read out. The menu screens could be better and the chip music soon has you reaching for the volume control. Overall, though, the effects complement the gameplay very well.

#### VERDICT

Pro Tennis Tour 2 is a highly polished simulation. The initial difficulties controlling your player soon give way to addiction as you battle for every point. Even if sport sims aren't your bag, this is worth checking out. When you've mastered the ST-controlled opponents you can try and thrash your friends. It's a game that grows with your skill and should have you coming back for more when you've tired of your shoot-'em-ups.







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with the fearsome array of weapons at your disposal, are needed equally to overcome the enemy...



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Amiga, ST, PC



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## **GREMLIN £25.99**

# He ro Ques

ime once again to daub your face with dirt and wander around dank dungeons in search of treasure. Hero Quest is an ST recreation of The Best Selling New Game of 1989, a board game that doesn't leave you bored. But does it survive the translation from board to screen?

You select new characters before you start. Up to four players can play, though you can control all four characters if you want. The game is played in turns, and in each turn a player can do two things: move and perform an action. This



Bulge yer biceps - you're going to need them in this adventure game. Hero Quest casts you either as one of those supermacho heroic Conan-style male bimbos, or as a weedy bespectacled wizard with dismal dandruff. Stereotypes? What stereotypes?

# OH DEAR – ALL THIS VIOLENCE It's not long before you start doing what you came here for – fighting. Find

a slimy twisted goblin or troll (no offence to either - some of my best friends, etc), tap him on the shoulder and ask him if he spilled your pint.



Aha! Here's one. Oh – there's two of them. Best make your apologies and leave the room - but it's too late, he's already heading for the combat screen. You've got no choice now but to fight him to the death. Ho hum ...

can involve fighting, searching (for treasure or hidden doors) or casting a spell. However, you can't do more than this in one game turn. The num-

ber of places you can move is determined by a spinning coin (which replaces the dice of the board version). This coin spins until you stop it - the number indicates how many squares you may then move.

Combat

Between quests you get the chance to buy equipment from El Dwarfo's Used Battle and Scuba Diving Equipment Emporium, using any gold you managed is to pick up during your previous quest

controlled by the ST and your success depends on your character.

Each player rolls the combat die a number

This is the combat screen – just you, your opponent and two concrete flagstones. He's only a pathetic little everyday goblin. He shouldn't pose a problem. And indeed, one tiny blow and he's gone in a puff of sulphur

of times - one for the Wizard, three for the Barbarian - and this determines the attacking and defending strengths of the combatants. To cast

> a spell you must select which spell to cast and where to cast it. You can also find various helpful potions and objects simply by searching rooms.

#### EFFECTS

Considering the limitations adapt-

ing a board game imposes on the graphics, the display isn't half bad. The rooms and passages do tend to repeat themselves somewhat, but this doesn't detract from the atmosphere. Character graphics are instantly recognisible and quite detailed - although the jerky animation spoils the effect. Creatures look nasty enough to fit the bill, though they too don't vary all that much. The intro sequence sports

some really atmospheric and well-drawn graphics, not too cartoon-like yet not too serious. Sadly, you're let down by the sound - an annoying chip tune and no samples during the game.

#### VERDICT

One major disappointment is the animation. When you end up searching a room, for instance, a message tells you that some loose tiles have fallen on your head. Instead of seeing an

animated sequence, nothing at all happens. A good opportunity to improve on the board game has been missed. The same is true for the combat sequences. No matter what opponent you're fighting, the same move is always shown - a basic whack in the face.

There seems little point in playing the ST version unless you want relief from tedious dice-rolling. The other major criticism is that you can



LEISURE

quite absorbing - more so than you'd think if you were watching someone else playing it. The 14 quests aren't too difficult - at least, not at first and because you can attempt them in any order there's plenty to keep vou interested, especially with the promise of further data and scenario disks to come. Give it a go - you might find you like it despite yourself.

#### **ED RICKETTS**

GRAPHICS	7
SOUNDTRACK	5
INTELLIGENCE	7
INSTANT APPEAL	8
LONG TERM INTEREST	8
OVERALL 789	%

#### **ICONS ARE FOR WIMPS, NOT HEROES**

Yep, there are hundreds of these incomprehensible little icons for you to click on if you want to get your character to do anything. You spend the first hour staring blankly at the small open door with a question mark and wondering what the hell it does. So much for user-friendly icon controls..



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# **EMPIRE £30.64**

# Regaraveller for ages.

The formation of the second se

MegaTraveller begins with an excellent first section in which you choose characters for your forthcoming quest. You can select a party of four with predetermined abilities, or the program can create new characters using the traditional dicerolling methods.

You choose a healthy, stronglooking set of statistics (for strength, dexterity and so on) and then attempt to develop them further. By clicking on various menus you send your character into the forces (Navy, Marines, Scouts, Merchants or Army) where he or she receives training. Years pass and your characters earn skill points which you can use to



■ This kind of top view is used to show your party roaming around on planets. They're not exactly advanced 16-bit graphics, but they do at least do the job of showing you where everything is

develop actual skills – piloting, communications, use of a weaponry and so on. When all your team are as strong as you can get them, it's time to move on to the main game.

Immediately after you learn what you're supposed to do, the game



Reminiscent tales of adventure and intrigue fill the air as you and your friends share drinks and relive memories in the famous Three Aces Tavern. The sound of laughter is silenced when a woman rustes through the entrance. Barely able to catch her breath, beads of perspiration pouring down her face, her terror filled eyes focus on you and your companions. Feverishly pushing through the crowd, she approaches your table, glances quickly toward the entrance, and begins to speak.



■ As soon as you begin *MegaTraveller 1 – The Zhodani Conspiracy*, you get to meet this charming young lady. She fills you in with all the information you need to get started with, but watch out for the bloke who's chasing her. He's huge, he's got a massive weapon, and he's brought his mates along for a spectacular showdown

kicks into its overhead graphic view mode where you find yourself under attack. If you're quick with the mouse you might get away safely. Moving around the screen is simple – just point the cursor where you want to go and click on the mouse. This isn't simply a *Gauntlet* game, though. It's made up of many separate parts which all require different strategies.

You spend a lot of time on planet surfaces, in space, in buildings and in ground vehicles and all these are represented by different graphics and layouts. You must also ensure that all your more able characters are employed doing the jobs that are most appropriate for them. In space, for example, computer-operators, pilots and gunners all affect the performance of their respective equipment, so you must position them carefully if you want to make the most out of the hardware. With a sensible amount of forethought, you can fly around, load programs to navigate, jump into hyperspace, and



■ You navigate between the stars using this screen – directional controls are on the right. Once you're out of orbit, the tiny screen changes into a larger scale map full of tiny coloured dots

operate the laser for a bit of deepspace pirating.

In the early part of the game you are trying to obtain enough cash for a more powerful jump drive so that you can fly to a further star-system. You can raise cash in several ways: kill for profit, gamble on slotmachines, go bounty-hunting, race spaceships, pirate – or simply collect and sell artefacts.

#### EFFECTS

MegaTraveller is not as satisfying as it could be. The graphics are a pale reflection of old 8-bit games and the sound-chip effects are dire. Many of the skills offered when you're character-creating are not yet implemented in this episode. It's good to know there are plans for expansion, but it's possible to waste your skill points on abilities which are effectively useless.

Even navigating is tough. A tiny screen shows the position of your craft in space, with pixel-sized dots of colour to show planets, moons and ships. TV owners are going to go mad trying to work it out!

#### VERDICT

MegaTraveller is fairly true to its older role-playing form. There's plenty to see and do. It is nowhere near as slow and complex to play out as the board versions either. MegaTraveller aficionados won't be disappointed.

Because of laughable graphics and poor layout, however, it's going to take you days to get into. Even if you overlook the shortfall in graphics you eventually find the gameplay becomes staid and formulaic. If you need something to fire your imagination, you won't find it here.

**NEIL JACKSON** 

Sec. 2
2
2
8
5
8
%



THE RIGHT MAN IN THE RIGHT PLACE You can't get very far in *MegaTraveller* 1 without a group of hardy characters to crew your ship. Select the appropriate skills for each, place them at the technical posts on your spacecraft they're best suited for – then start exploring the cosmos



■ You create characters by selecting from the appropriate menus – they offer all the broad areas of skill you need. The program picks a random skill from the various sublists below and then credits it to your character



The inventory screens contain all the info about your characters. You can swap weapons around, hunt through your backpack and keep an eye on your health from here. You can also analyse items and reload your guns



On board your ship, you select the stations you want your characters to operate. The computer screen on the right shows the navigation, targetting and jump-drive programs. The pilot's view only shows things at close range

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# **Screenplayextra**

"Golly, Gerald, what's that game? I didn't see it in ST FORMAT." "Oh yes, Alan, it was in Screenplay extra – that bit for all the games they can't fit elsewhere." "Well I never." "What, never?" "No." "Oh."

#### **PROJECTYLE** Electronic Arts – £10.99



Another re-release in EA's Star Performer budget range, *Projectyle* is a futuristic sports sim that's actually very good. Three players can take part but there's

players can take part but there's no concept of teamwork – just score as many goals as possible. Five separate pitches are joined together in the form of a cross, three with a narrow colour-coded goalmouth. To score a goal against a particular player you must hurl

the projectyle into the goalmouth with his colour. The fourth pitch has goalmouths for all three teams, so not surprisingly it's known as the Frantic Zone.

Various tokens appear during a game to improve your performance, and you get the chance to train your team too.

Projectyle has

you can't – it's my *Projectyle* and I'm the captain, so go away." Cue floods of tears

Aw, please can I play?" "No.

some eyescorching graphics – the pitch whizzes about smoothly and at phenomenal speed. The player graphics are nicely drawn as well. There are some superb sampled themes, though sound during play is fairly limited. *Projectyle* is another excellent budget buy. It's fun, fast and fantastic.

#### STF Rating - 91%

#### DISC Infogrames - £24.99

Remember that bit in *Tron* when they started throwing those Frisbee-style affairs about? That's what you have to do in *Disc*. Two players can play, standing on either side of a chasm. Behind each player is a wall made up of eight tiles, each with a symbol on it.

One player throws the disc at the other, who must either catch it or dodge it. Catch it and you can throw it back. Dodge it and it hits one of the tiles behind you. The symbol on the tile determines how many times it can be hit before the corresponding floor tile in front of it disappears – in the case of a circle, this is only once.

Thus, you have three ways to beat your opponent: hit him with the disc until his shield expires, trap him on one square by eliminating the others or try to make him fall off into the chasm. Everything happens so fast, you need plenty of practice – but once you get into it, *Disc* is very enjoyable. Graphics are well animated, particularly the characters, and there are some effective sampled screams when someone dies. The sampled music in the intro sequence is the best l've ever heard in any ST game. A sure bet for many hours of glued-to-the-screen gameplay.

#### STF Rating - 89%

#### FLOOD

Electronic Arts - £10.99

Flood was one of the most popular games last year and now you can pick it up for just a tenner. It features Quiffy (currently appearing in the Bullfrogs' assembly tutorial on page 95). He must wander over platform levels collecting the trash and avoiding things that bounce. slither and wobble about - Psycho Teddies, for instance. As if that isn't enough, there are also several running taps scattered around. You can dive underwater for a short time before having to come up for air, but the longer you take, the harder it gets to collect all the items. Luckily there is a sizeable arsenal of objects lying around to help you - grenades and time bombs, for example. You can even grab a spacehopper and bounce over dangerous areas.

Flood is an immensely enjoyable platform game. The graphics are detailed and humorous, and there are some excellent watery samples and sound effects. It's very easy to get into as well. At this price you really can't go wrong.

#### STF Rating - 87%

#### SUPER SKWEEK Infogrames – £24.99

That strange creature is back in the follow-up to the surprisingly named *Skweek*. You're a round fluffy yellow creature who wanders round a playing area made of tiles. Each level has a specific goal – to rescue the Skweekettes, for example. You can fire at the ubiquitous monsters and collect bonuses which enable you to increase your

■ "All right, mate, here's your plate, get ready for the main course." "Blimey, the service in this restaurant is terrible. I'm off down the *Disc*-o"



■ Look, it's quite simple. I'll go through it just one more time. You follow the arrows up, then left, then right, down, left and right again until you reach the fried egg, then it's third right to find Super Skweek

firepower. Other bonuses give you extra lives, energy and so on. If you manage to complete all the levels (and there are 225 in all) you can make your own with the construction kit.

Skweek is weird but fun. Some excellent graphics complement the beefy sound effects as you're frantically trying to cope. Typically French – garish, noisy and making no sense whatsoever – it's a mindless challenge which should keep you occupied for a long time.

STF Rating - 81%



■ Flood – a smile, a drip, and a thousand disturbed teddies. It's more fun than wading through a paddy field wearing nothing but a loin cloth, probably

#### ENCOUNTER Novagen – £20.42

A long time ago, Paul Woakes (of *Damocles* fame) wrote a game called *Encounter* for the old Atari 8-bit computers. Now there's his official ST version. You pilot a vehicle zooming across a landscape. You must shoot various spacecraft that come haring in at you and avoid the large cylinders that reflect your shots. At the end of each wave, you go into space and must avoid meteorites. Then it's back to the ground again.

To be frank, *Encounter* is boring. There's just not enough to do. Sure, the graphics are smooth and the sound's not bad, but simply roving over the ground endlessly shooting things isn't any fun. The game may have been lauded back in 1984 but nowadays we want something more. Wait for *Damocles 2* instead.

STF Rating - 58%





"There I was, officer, sat in my front room, when in walks this giant spider and these two largebreasted birds! You're not safe in your own home." A touching domestic scene from Lords of Chaos

#### LORDS OF CHAOS The Software Business - £24.99

Another interpretation of an 8-bit game, *Lords* of *Chaos* is a fantasy strategy affair. One to four players can take part, each taking the role of a wizard. You play the game in turns and have a certain number of action points for each turn. You use these to interact with the game – most commonly for moving about the land. Alternatively you can choose a spell from the 45 available. The commonest form is the Summon Creature spell, which enables you to invoke anything from a giant spider to a golden dragon. You can then move these creatures in the same way as your wizard. You can also concoct various potions if you have the right ingredients – a Speed potion, for instance, requires sulphur.

When you move about the land, everything is shown from above in a simplified plan view. On your travels, you can pick up food or take useful items like swords, for use in combat. The graphics are large, colourful and unambiguous, and there's some competent animation. Sound is reasonable: a thud or fizz accompanies most spells and adds to the atmosphere.

Lords of Chaos is for the more studious game-player. It takes some time to work out what to do, and there's not much frantic action, but that doesn't make it a bad game – strategy fans and RPGers are going to enjoy it. This is a refreshing change from shoot'em-ups and wargames with ten-inch thick manuals.

STF Rating - 82%

#### SKULL AND CROSSBONES Domark - £24.99

Domark's latest Tengen conversion puts you in the role of a bloodthirsty pirate doing what pirates do best. Put simply, it's a slice-'em-up,



■ "Oi! Get off my yacht, you oik! This is a private party!" Mr "I'm with the *Skull and Crossbones* crowd" fails to get in. Obviously he hasn't got a tie and as soon as the game begins on your ship you must slice and dice your way through the opposition with your trusty sword. When a baddie dies, he leaves behind a coin which you must collect to increase your score. Along the way you scale ropes, climb ladders, walk the plank and generally have a swashbuckling time.

Sounds good? Unfortunately, it's a duffer of a game. The graphics are childish – simple line drawings with no character – and the animation is slow and jerky. The fights are limited because you only have extremely basic moves with which to attack and defend. There's just nothing here to make you want to play on. Don't waste your money on this. If you really want to play pirates, get one of those plastic eyepatches you find in Christmas crackers – they're better value.

#### STF Rating - 59%

#### HYDRA Domark - £24.99

It's not Domark's month. Licensing two Tengen conversions may have seemed a good idea, but the results aren't exactly top notch. In *Hydra*, you are in charge of a water-bound delivery service. Using your supercharged Hydracraft, you must deliver several valuable packages and

■ Er, don't look now, but someone's about to drop a lot of dosh on your super whizzo Hydra zmfh

Hydra craft vehicle transportation type affair thing. At least it's better than what the seagulls do

negotiate your way along crowded waterways. The enemy throw everything at you – buoys, helicopters, balloons and such like. Fortunately, you've got a super-duper laser you can use against them. Now and again the head honcho steals the package from you and the only way to get it back is to blow him up and recover the package from the water.

Massive fun! Endless hours of addictive gameplay! Just two of the things *Hydra* doesn't offer. But if you're looking for a plod through a jerky seascape with the occasional shot at a yellow blob accompanied by horrible bloops and burps, then *Hydra* may just be for you.

#### STF Rating - 55%

#### **TETRIS** Infogrames – £19.99

Tetris has been re-released because of massive international demand – so we're told. You're presented with a screen containing a background picture and in the middle, a well. Into this well fall different shapes. You must form as many horizontal rows as possible by manipulating the shapes so that they fall into the correct positions. When a row is formed, it



■ Wondering why this mound of coloured blocks is stood in a field next to the Ural Mountains? That's because it's *Tetris*, the game you can eat between meals without ruining your appetite – and it comes from Russia. Some commie plot, I don't doubt...

disappears and the other pieces drop down a row. As the pieces accumulate and the game progresses, you have less time in which to jiggle the pieces, so the game gets harder.

And that's basically it. There are a few options, such as variable difficulty levels, but at the risk of disagreeing with the entire world, it's not that good. Once you get competent enough to outwit the first few levels there's really not much point in continuing. *Tetris* may have been better re-released on budget, but for now it's only recommended for the serious puzzle freak.

STF Rating - 69%

#### BUILDERLAND Infogrames – £19.99

What happens if you cross *Rainbow Islands*, *Brat* and *Lemmings*? It may look something like *Builderland* – a cutesy platform-style game featuring a nameless hero marching on, regardless of your actions. Your job is to provide a safe route for him to take. If there's a hole in his path, for instance, you need to fill it with a block or he falls into it. He can't climb up either, so you need to place staircases in his way as well – and so on. The



■ No, mate, you've had cowboys in 'ere. Look at the state of that castle! Good thing you're in *Builderland*. I can do it for 400 – 700 tops. Tell you what I'll do, just for you. Call it 500, for cash...

graphics are of the Bright Childish Simplistic School a la *Rainbow Islands* and the sound could take the award for Most Horrible Tune Ever, but the game isn't that bad. It's somewhat frustrating, though, because you must work ahead to a great extent and if you don't see a hazard coming there's very little time to prevent a disaster. *Builderland* is certainly nothing to get overly excited about, but it's fun for a while and may appeal to younger users.

STF Rating - 71%

ST FORMAT 71

#### THE WINNING TEAM Domark - £29.99

This latest compilation contains five "classic" games. In *Klax* you have to catch coloured tiles in your flipper and wang them into one of five bins in the hope of making a Klax – an alignment of three similar-coloured tiles. You can only hold five tiles at once so you have to work quickly, but the graphics are decidedly 8-bit and the game doesn't hold your attention for long. In *APB*, you're a cruising policeman who must capture a certain number of offenders each game day. This isn't very good either – the graphics are small and badly-drawn and the game itself is dull. *Cyberball* is futuristic American Football for droids. It's got all the

#### COHORT Impressions - £24.99

Impressions are churning out strategy games and their latest is this follow-up to *Rorke's Drift. Cohort* doesn't pretend to be an impressive world-scale simulation of global warfare – it's the sort of thing you might do with toy soldiers on your desk. Although there are five scenarios – on a bridge, by a clifftop and so on – each one has the same goal: beat the living daylights out of the opposition. You can move individual units or whole divisions by clicking on them with the mouse and then clicking on the location you want them to go to. If they encounter any enemies, they start fighting until one side wins.

Sounds simple, and indeed it is. There are many options to mess about with – altering the composition of your army, for instance, or trying new formations. Everything a strategy fan could want is included even though the graphics are simple and the sound is strictly minimal. *Cohort* is bound to appeal to the hardcore wargamer because it's completely strategy-based. There are no pretty arcade bits like you see in *Betrayal*, but buy it if wargames are your bag.

#### STF Rating - 69%



■ Escape from the Planet of the Robot Monsters is a 3D shoot-'em-up, but the best thing about it is its long title – Escape from... what was it again?

usual offensive and defensive plays, laterals, blitzes etc etc. Gameplay too is reminiscent of Gridiron – frantic five-second bursts of action and hours of waiting. If you know what a Can-o-

#### SIM CITY TERRAIN EDITOR Infogrames - £15.99

This utility enables you to alter the randomly generated landscapes of *Sim City* and create some landscapes of your own. Facilities are also available to help you smooth out the edges between trees and land to create a more natural look. You can even create a random landscape by altering the size and number of tree groups, the curving of the river and so on. You can then load the finished landscape into the original



■ Radial City, 1921. Times are hard. Real hard. Folks don't even have enough money to build a house, a road, a multi-storey carpark – anything really. Thank God for the *Sim City Terrain Editor*!

FORMAT RATINGS T	HIS MO	NTH
How did they rate this issue? Here are all the game	s FORMAT reviewed	I this month
<b>Example 1</b>	page 51	94%
Projectyle	page 69	91%
Disc	page 69	89%
Flood	page 69	87%
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Stormball	page 60	71%
Cohort	page 72	69%
Tetris	page 71	69%
Mega Traveller 1	page 67	67%
Othello Killer	page 72	65%
Skull & Crossbones	page 71	59%
Encounter	page 69	58%
The Winning Team	page 72	56%
Hydra	page 71	53%
Sim City Terrain Editor	page 72	51%

Corn Offensive Running Play is, *Cyberball* is for you. *Vindicators* makes you the commander of a tank blowing up other tanks and collecting stars. The graphics are 3D (ish), but again it's something you might play for ten minutes before turning off. The only redeeming feature is *Escape from the Planet of the Robot Monsters*. You're a hero who must rescue humans enslaved by the Robot Monsters. The cartoonstyle animation is excellent, and gameplay is fast and furious with plenty of blasting. Overall, not much of a Winning Team – more a Winning Team member. You might buy it just for *Escape*, but £29.99 isn't exactly a budget price.

STF Rating - 56%

game and build over it at will. Nothing spectacular, and certainly not worth the asking price unless you really want every *Sim* program ever.

#### STF Rating - 51%

#### OTHELLO KILLER UBI Soft - £19.99

Othello, the game with rules that nobody understands, is now available on your ST. Each player takes turns to place a double-sided piece, black on one side and white on the other, on a board in such a way as to form a line horizontally, vertically or diagonally with another of his pieces. If there are pieces of the opposite colour inbetween, then you can turn these pieces over so that they become your colour. You then win those pieces. When the board is full or no player can continue, the winner is the person with the most pieces on the board.

Othello Killer offers you basic gameplay and a bit more – a robotic voice calling out whose move it is, for instance. Graphics and sound are simply functional, but if you're a member of the English Obsessive Othello Club, it's a must.

#### STF Rating - 65%

#### BARGAIN BUDGET BASEMENT BUMPF

Most major labels these days have a subsidiary company devoted to budget software, and often you can pick up many fine oldies on re-release for less than a tenner. Action Sixteen, for instance, have made **North and South, Sherman M4** and **Kult** available again for a very attractive £8.16.

**North and South** is a cartoon-style arcade/strategy game – 72%. **Sherman M4** is a sort of forerunner to **Battle Command** with 3D tanks engaged in blowing each other up (74%), whereas **Kult** is a well weird graphical adventure – 84%.

Respray is Domark's new budget label and they kick off with **Toobin'**, an arcade game featuring a gentleman floating down a river on a rubber tube – 57%. **Hard Drivin'** is basically the same as **Hard Drivin'** 2 but without the track editor and with loads of bugs – 68%. **APB**, which is also available on The Winning Team compilation (see above) – 55%. They all cost only £7.99.

Finally, in addition to *Flood* and *Projectyle*, Electronic Arts are re-releasing *Starflight*, a heavily *Elite*-influenced space exploration/trading game – 76%.
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<text></text>	Hard Drives				Dhili Calana	po 8833 Manitat
	We are now official stockists of the latest in high quality / low price ST hard disk drives from Protar. All Protar hard disk	With a FREE colour kit and colour n SPECIAL OFFER! For a limited CITIZEN PRINTER STARTER PACK	bbon until the end period only we ar with all Citizen prir	of May 1991. Te offering a Inters. The The ST Amiga	The Philips 8833 i colour monitor for computers. With it	Mkll is the perfect all Atari ST s stereo sound
approval       ************************************	REPLACEMENT warranty (no lengthy repairs!), a DMA through port, device number switching and Protar hard disk drives are the only manufacturer with	& PC; 200 sheets of fanfold tractor feed address labels; 5 tractor feed top of the price of the printer	feed paper 200 f	anfold tractor nly £12.99 on	shows off the full STE. The Philips 8 comes with 12 mo	capabilities of the 833 MkII also
Temovable tape streamersStreamers </td <td>Approval</td> <td>Citizen Swift 9 (9-pin) <b>*FREE COLC</b> Citizen 124D (24-pin) Citizen Swift 24 (24-pin) <b>*FREE CO</b></td> <td>OUR KIT*</td> <td>£199.00 £209.00</td> <td></td> <td>ble £249.99</td>	Approval	Citizen Swift 9 (9-pin) <b>*FREE COLC</b> Citizen 124D (24-pin) Citizen Swift 24 (24-pin) <b>*FREE CO</b>	OUR KIT*	£199.00 £209.00		ble £249.99
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#### **GAMES** roundup

## vak's favo



## Ace game-programmer Jeff Minter, llama fanatic and creator of the FORMAT Gold winning Llamatron, picks his fave Top 20 games of all time exclusively for ST FORMAT

eff Minter, or Yak as he prefers to be known, is a veteran of the games industry. He began writing games for the Vic-20 many years ago - he once wrote a complete version of Gridrunner that totalled an incredible 3K in size, and that included all the sound effects and graphic routines! He soon progressed onto bigger and more powerful micros, but his games always retained a distinctive flavour, often featuring mutant llamas,



STF 24: 95% £5.00 ☎ 0734 814478 Llamasoft

(Also available from PD libraries - see page 98) "Yes, it's one of mine, but it's not here just because I wrote it. I've always loved Robotron - in some ways it's really the ultimate shoot-'em-up. It inspired Llamatron but the latter has a lot more levels and weirder weirdoes than the arcade machine. It lets anyone take on the first few levels but can soon challenge even a hardened zapfiend\*\*



£24.99

STAmiga 4: 95% ☎ 0666 504326

Rainbird/Microprose "This 3D exploration/blaster gets a new lease of life in the Yak charts because it runs on the TT you want to see fast 3D? Then take a look at this. I love the idea of having a whole solar system as a gameworld for you to interact with. Saying that, it still suffers from the same major flaw as Damocles: there's a whole system full of worlds and objects for you to explore, but there aren't any people"

DEFENDER 2



£25.99	STF 24: 94%
Psygnosis	☎ 051 709 5755
"One of the best designed	games I've seen for

ages. I have always liked games which require a bit of lateral thinking. The idea of replacing the single player entity with a whole herd of wee shaggy beasties is inspired and it works excellently. If you value your sanity, keep your mouse balls clean for Lemmings. Accurate mouse control is paramount in this game" (See the FORMAT review on page 51)

VIRUS



STAmiga 2: 91% £24.99 T 071 7388199 Infogrames

"I like this because it's so damn strange. The Jarre samples were a bit of a letdown but there's a lot of impressive stuff here: the fractal flight sequences and especially the unnecessarily psychedelic warp sequence. The unique style of the Exxos graphics gives the game a weird atmosphere and sets it apart from other adventures. It might perhaps be a bit too weird for some but it's worth seeing"





lar. What did you expect? This has good versions of

both the original Defender and Stargate, as well as

a version of Defender 2 - complete with loads of

extra levels and weapons. This was the first game

where I got to grips with samples too. Defender 2

has to be loud. Weedy chip noise just will not do"

"This isn't because I wrote it, it's mainly because I'm nuts about Williams games - Stargate in particu-

ARC

STF 18: 88% ☎ 0753 33344 £19.99

Released June 1988

☎ 0666 504326 Firebird "I know Virus lacks depth, and you need a clean mouse and at least two days of flight training before you can even fly the thing, but stick with it and it pays off. When you can zoom and swoop to perfection, deal death to all those scumbag mutants and fighters, execute powered dives to get yourself out of trouble and pull out only pixels above the ground, it's excellent

STAmiga 1: 86%

## urite games

goats or sheep, and having bizarre titles like Revenge of the Mutant Camels.

His first game for the ST was a version of *Defender* called *Andes Attack* which substituted llamas for humanoids. *Super Gridrunner* soon followed. Since then he's had programs published both under his own Llamasoft label and by Atari's software arm, ARC – most notably *Photon Storm* and *Defender 2*, the best version of *Defender* ever produced for the ST.

A hippie and proud of it, Yak specialises in taking old game concepts like *Defender*, adding enhanced (and weird) graphics and sound, and improving the gameplay. His philosophy is that fancy graphics count for nothing if the game doesn't grab you. *Llamatron*, his latest effort, has been awarded a *FORMAT* Gold (see the review on page 98) and is available as Shareware, and an exclusive version is yours free on this month's Cover Disk – see page 38.

But Yak doesn't just write games. Ever since the early days he's been developing "light synthesisers." Beginning with *Psychedelia* for the 8-bits, he progressed to *Colourspace* for the ST and the radically improved and updated version, *Trip-A-Tron*, which took a year to write (see our video feature on page 34 for more info).

So what's next? Well, possibly more and even better Shareware releases – if people are prepared to show their support for *Llamatron*. But at the moment Yak's time is taken up with a certain new piece of hardware from Atari. Suffice to say its name isn't a million miles away from "Jaguar" and he's "getting to grips with its video chip." We should see some results by the end of the year. **stf**  
 SUPER GRIDRUNNER
 Released March 1991

 £9.99
 STF 21: 88%

 Action Sixteen
 \$\mathbf{v}\$ 0276 684959

"On the TT, this oldie gets a new lease of life. It runs flawlessly, is 20% faster than on the ST and doesn't slow down at all – even if there's plenty of junk on the screen while you're playing"



#### Released August 1988 STAmiga 3: 80% No longer available

"Technically flawless but only runs on the old TOS. Ridiculously simple as a game idea, this is just so playable and it's as addictive as flip"



US Gold © 021 625 3388 "This is a weird game that requires two of my favourite game skills: a good deal of logical thought and the ability to fly a ship well"



£24.95	STF 13: 94		
Novagen	☎ 021 449 9516		

"Damocles (the sequel to Mercenary) is incredibly impressive in scope, has a vast play area, and contains weird things like a small planet called Midas with nothing but 16 million individually-numbered pyramids on it. Unfortunately, just like Starglider 2, this game suffers a bit because it's totally devoid of life. Every planet is a bit like a kind of galactic Newcastle Emlyn on a Wednesday afternoon"



£29.99 Electronic Arts STF 19: 93% 2 0753 49442

"I'm not usually into wargames, but *Powermonger* by the Bullfrog team manages to get you instantly interested with its unique graphical representation of the gameworld. It's fun watching your armies wasting the enemy soldiers, looting, pillaging and stealing the women or raping the cattle. It's still a bit upsetting though because sometimes you have to eat the sheep in order to survive a harsh winter\*



*STF* 21: 86% ☎ 021 625 3311

"I liked this one because it's pretty close to the arcade original – it's even got all the samples. The ability to choose your character is far more flexible than *Gauntlet* too. You can have a party of up to four Wizards for example. The game is also a lot more technically accomplished. I really like multiplayer co-operative games – they're so few and far between, and *Gauntlet 2* is one of the best"

Kixx



Domark © 081 780 2222 (Also available in *The Winning Team* compilation – see the review on page 72)

\*\*Escape From The Planet of The Robot Monsters is a bit like a sort of 3D Robotron. This has a wicked two-player co-operative mode and is very playable. The graphics are amusing too – especially when you frazzle one of your own bimbos. No great tech wizardry – just a good and unpretentious zapper\* ELITE £19.99 Firebird Released October 1988 STAmiga 5: 75% ☎ 0666 504326

"I really enjoy this one. You could still do with a sense of 'being there' though. It's more like I'll just rotate that alien into the middle of the screen' than 'oh no, he's gonna toast my ass!"



"The best driving game for the ST. Some truly wicked 3D creates a very real world. It's a shame it doesn't want to run on my TT though"

DUNGEON MASTER Released April 1988 £19.99 STF: 93% Mirrorsoft © 071 928 1454 "This is excellent, not least because it encourages people who are usually bored by the standard RPG stuff to have a go. Great fun, especially with a group of you"

PLUTOS EN/A STF: 82% Microvalue/Tynesoft No longer available \*A really old game. Graphics aren't anything eveballwriting but it'r a better wortigel everylage

\*A really old game. Graphics aren't anything eyeballbusting but it's a better vertical scroller than many other better known games. It's even more fun with two players\*



Released April 1988 STF: 69%

Microdeal No longer available "A multi-directional scrolling exploration cum blaster game, with the emphasis on blasting at the higher levels. There are plenty of puzzles and there's even a sheep in it too"

 FLIGHT SIMULATOR 2
 Released Sept 1987

 £39.99
 STF: 75%

 SubLogic
 © 0494 728439

"Okay, so there are no lasers and you're usually just pootling about in a Cessna or Learjet, but it's fun to do silly things like fly upside-down under San Francisco's Bay Bridge"

THE HANDY HENDY BENDY MANDY "An amazingly-fast program that generates Mandelbrot sets, written by my mate Hendy the Mad Mathemagician. It's not finished, you can't buy it and it isn't strictly a game, but I play with it for hours"

MT SOFTWARE Greensward House. The Broadway, Totland, I.O.W PO39 0BX

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- QUEST FOR THE HOLY GRAIL: A zany madcap adventure which is 3 loosely based upon the film "Monty Python and the Holy Grail"; a must for python fans. Whilst walking in the fog you are suddenly transported to medieval England - it is 926AD the time of King Arthur. You must find the Holy Grail noble knight!
- **UNDERGROUND ADVENTURE:** written by Mark Welch. A futuristic adventure set in the year 2093. It is rumoured that there was once an underground complex of caves and tunnels where the elite few hid during the recent atomic 3 complex of cayes and tuniers where the enteries wind during the recent adding cataclysm. No trace has ever been found of these hidden politicians and millionaires. Your adventure starts at the bottom of a deep pit. This is the first of 68 locations and all is in darkness. You can just about make out the position of an old flashlight and the outline of what appears to be a short metal bar. Good luck, you will need it!
- THE PYRAMID OF MUNA: You have been studying the Myan Pyramids and 1 have come across information that leads you do believe that there are other, much older ruins in that area that may predate Myan civilisation. You have in your possession an artifact that was found in the Myan pyramids. It is a 6 pointed star with precious gems embedded in it. Writings in the pyramids seem to indicate that this star may be the key to unlocking the secret of the older ruins. Today is the day that you have arranged to visit the site of these older ruins. Are you ready to explore the 65 challenging leade that follow? challenging levels that follow?
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#### SHOOT-EM UPS GAMES - VOL 1

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- ESCAPE FROM THE TOMB OF RA: How did you get in, how can you 1 get out? Collect jewels to prolong life, seek out the secret passages but, above all get out alive, if you can! Joystick required.
- MUTANT: The reactor in the worlds first nuclear powered mine has gone out of 53 control. The workers have received high doses of radiation make them mutate. Only one person can get to the end cavern and destroy it; will it be you? Joystick required.

#### **ADVENTURE GAMES - VOL 2**

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- GHOST TOWN: this is a fairly large 88 location adventure written by E.L. A Cheney. You are a prospector searching for gold and adventure. Another old prospector has told you a story of a fabulous mine and an even richer old ghost town nearby. Whilst the town is supposedly deserted there have been rumous of strange noises, gunfires and terrifying screams coming from the place. You have valked long and hard for days only to find yourself lost in a trackless prairie with nothing but your with the order the first search and the search of the sear wits to save your life.
- **CRUSADE ADVENTURE:** you assume the role of Godfrey de Goodhead, a bold but impoverished Knight. King Frederick III has called upon you to rescue his only daughter, the beautiful Princess Ann from the dungeons of baron Von Evil's 5. castle
- 1 STAR PORTAL: by Michael Detlefsen this is a science fiction adventure based on the story entitled 'Ticket to Anywhere' in which you journey to the stars. You must search the martian deserts and commence your quest through this 177 location adventure.
- **ODIEUS'S QUEST FOR THE MAGIC FLINGSHOT:** you are 1 Odieus, son of Odielle of the anceint Winwood family. Coming from a line of sorcerers and enchantresses, you naturally undertake the preservation of your ancestral traditions. Your anch energy Blackwing has taken your Magic Flingshot, used for flinging maria angle, and word it had? magic spells, can you get it back?

#### **SHOOT-EM UPS GAMES - VOL 2**

- **CAVERNS OF NERAK:** Forced to land on the planet Nerak you must leave your ship and explore the cavems on your gravity sledge in the hope of finding Energy Pods. These are your only chance of replacing the ships depleted power supply and escaping from the planet. The Neraks have other ideas though. 1
- **KEY TO ATLANTIS:** Excellent scrolling shoot-em-up. Collect as much treasure as you can (keys, goblets, necklaces, chests) as these will prolong life. Beware of the bubbles and watch those clams! Joystick required. 2
- **HAUNTED MONASTERY:** Only you, a lone monk, can find the treasure vault, you must fight the ghostly guardians but remember, all is not what it seems!!
- WIZARD: It was a mistake to take a short cut home through the wizards domain. 3 Now you must face his wrath and see if you can survive
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#### ENCHANTED LANDS Thalion

**Becky Lindbourne** of **Bath** proffers this tip for everyone struggling with this really rather good game. Try typing TCB RULES FOREVER on the intro screen. Do it correctly and the screen flashes. From now on pressing F2 and the Spacebar simultaneously takes you to the endof-level baddie.

#### EXTERMINATOR Audiogenic

Improve your pest control with this handy tip from **Kok-Wai Yam** of **London**. When you're in the kitchen of a house – remember, not every house has a kitchen – shoot at the top half of the fridge when it opens. You have to be quick because it only opens for a split second once during a round. Succeed and you're rewarded with a bonus of 275,000 points as well as being warped to the next house.



■ Yeah, mate, you've got an *Infestation* of roaches there... bit bigger than normal, though... actually, a lot bigger... um – have you got a mallet at all?

#### INFESTATION Psygnosis

**Scott Wolf** of, er, **America** (that's the only address he gave) offers this tip for this game which has recently been included on the Monster Pack compilation. Start the game and bring up the HUD scratch pad. Type I AM NOT A CHEAT, press <Undo>, then <Help>, and finally <Escape>. When you restart you possess the elevator card, the screwdriver, the datalink/ compass, quarters key and IR scanner. Additionally, pressing <Escape> displays the final screens. There is a drawback, however: games saved with the cheat mode active are subject to unpredictable malfunctions.

#### INTERNATIONAL ICE HOCKEY

Impulze When your team scores a goal, press F1 to pause and wait until the music has finished. Then release the F1 button and your goals increase. A pucking good tip from Jon Hill of Dorset.

#### LOTUS ESPRIT TURBO CHALLENGE Gremlin

Peter Lynch of Somerset has discovered some interesting things to do in this game (not that the game itself isn't interesting, oh no, certainly not, that's not what I meant at all, Officer). Type player one's name in as

ANGEL DARK and player two's name as HAR-VEST HOME for some help with the race. If you get bored with racing, however, type player one's name as MONSTER and player two's as SEVENTEEN. Now you can play a vertically scrolling shoot-'em-up instead!

## PRINCE OF PERSIA

Prince not cooperating? Then try this advice from **Alex Carmichael** of **Glasgow**. WARNING! It involves making changes to your saved game file. Make a back-up of this file first – we are not responsible if you screw up your disk.

Using a disk or file editor (such as MEMFILE

2.0 or DLII, both yours free on FORMAT Cover Disk 22) you can edit the first four bytes of the file to gain extra time and suchlike. Set the first two bytes to F6 10 (hex) to reset the time remaining to 60 mins. The next two bytes are the level and your energy: change byte three to 01-0C (hex) for levels 1-12, and byte four to a suitably high hex number such as 44. Then simply reload the file into the game and you're away. Be careful not to change anything else in the file, though, because the game may not then recognise it.



ing, oh no, certainly not, that's **Cities, eh? Who needs 'em! Nasty, dirty, smelly things, full of putrid** not what I meant at all, Officer). Type player one's name in as

#### SIM CITY Infogrames

At last! We've got a tip from a Mr Man! Well, all right then, **Jonathan Man** of **Middlesex**. Set the game speed to PAUSE and type FUND (in upper case letters). Save the city, set the game speed to FAST and reload your city to see what happens. (Cue maniacal but friendly laughter...)

#### TREASURE ISLAND DIZZY Codemasters

Another quickie from **Paul Rhys-Thompson** of **Lancashire.** When the game starts just type EGGSONLEGS to become invincible.



■ No really, Officer, all I wanted to do was get my sword and pile of bones in order to murder the evil Vizier. I'm a *Prince of Persia*, you see – and I can explain about the pyjamas, too, honest

# & "FM"

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#### **TURRICAN 2 Rainbow Arts**

Yo, er, man! Beat those monsters to a small lump of pulsating jelly with this guide on how to kill the baddies from Peter Stock of Suffolk.

• Level 1-1: stand in the middle of the screen and aim your Surround Beam at its head. When the bits of cavern fall down, aim your Surround Beam at them.

• Level 1-2: turn yourself into a Gyroscope. hold the joystick to the right and press the Spacebar twice.

• Level 2-1: aim your Surround Beam at its eye and jump. Duck to avoid its laser.

• Level 2-2: destroy its lasers, then aim your Surround Beam at its eye in the centre.

• Level 3-1: try not to get Bounce or Multiple weapons, just the laser. Shoot the eyeballs.

• Level 3-2: destroy its lasers, shoot the side sections and finally the middle section.

• Level 3-3: when it splits in half, shoot the middle section and then shoot the other sections, avoiding its bullets.

• Level 4-1: when it opens its mouth, jump its bullets and keep firing at its head.

• Level 4-2: when the Giant Walkers run towards you on the conveyor belt, all you need to do is jump over them.

#### VERMINATOR Rainbird

Go into the shop and buy a hammer. Then sell it for 50 credits. Go up to the till and you'll have bought the falcons for 50 credits. Sell these to make some serious money.

#### X-OUT **Rainbow Arts**

Go to the shop (what, another shop?), buy the shield and throw it away instantly. You get 500 points for this. Repeat indefinitely - until you either fall asleep or your hand falls off.



And now, FORMAT proudly presents more excerpts from the extensive portfolio of hints and cheats of Scott Wills (he of the West Midlands).

#### **ACTION FIGHTER**

Microprose Type ZBACKDOOR into the high score table for infinite lives and energy.

#### AMC Dinamic

Access codes you might like to try:

a: NOSTROMO c: ENTERPRISE e: REPLICANT g: METROPOLIS **b: DISCOVERY** d: DAGOBAH f: KRULL



"Hello. You may not need this Titanium Plated Supercharged Astro Marine Corps Photon Blaster right now, but think of the future. With just a few easy monthly payments it could be yours forever to treasure in your own home," etc etc ...

#### **CRAZY CARS** Titus

Get up to 240 mph, then press F10 to pause the car. The game slows down but you can still control the car. Press "Fire" and move left and right and you can easily avoid all obstructions.

#### DYNAMITE DUX Activision

Type CHEAT on the title screen. Then you can just press F1-F6 in the game to skip levels. Type NUDE to go boxing.

#### **E-MOTION US Gold**

On the title screen type MOONUNIT, then press these keys during the game: F1 – advance a level

F2 - advance 10 levels

F3 – go back a level

F4 - go back 10 levels.

#### Some E-Motional Tips:

Level 1: don't use your thrusters too much and don't use the game's wrap-around effect Levels 2 and 3: don't turn right. To help

yourself, use the flip Level 4: fail this level! Sit around collecting

all the orange orbs and leaving the blue ones until last



There's a golden opportunity here for a cheap joke about balls and suchlike, but I wouldn't stoop to such depths in a family magazine. Cor, look at the size of them orbs! Oops - sorry ...

#### HAMMERFIST Activision

On the high score table type in TAEHC OT TNAW I. Then during the game press F7 to advance a screen



Do the Hammerfist shuffle - it's easy! Just take off all your clothes, pull on some kinky boots and follow the droid! A-one, a-two, a -one-two-threefour... (I don't know, Max. Think it'll catch on?)

#### **HELTER SKELTER**

#### **Audiogenic Passwords:**

Level 21 - FLIP Level 41 - GOAL Level 61 - TWIN

Lever	11	- SPIN
Level	31	- BALL
Level	51	- LEFT
Level	71	- PLAY

#### POWERPLAY Arcana

A completely pointless tip. Take Disk 2 out of the drive and replace it with a blank disk during

play. The result? You're asked the same guestion all the time. Nanoseconds of fun!

#### **PUFFY'S SAGA UBI Soft**

When your health reaches zero, pause the game. Run your fingers over the keys from F1 to F7. You now have four keys, four goms and 2,000 health points. If you have two magic goms press F6 and F7 simultaneously to see a map of the present level.

#### SILKWORM **16 Blitz Plus/Mastertronic**

During play, type in GORGONZOLA. Press C to get more credits, up to a maximum of nine.



Lesson 1: Never Wear Your Shades Whilst Skateboarding Lest Your Ass Encounter The Ground In An Unexpected Falling-Over Style Situation (Pause...) Er, no, you can't have your money back. That is the lesson. Sorry. We're on the skidz ...

#### SKIDZ Gremlin

Hold down "Fire" and <Alternate> together. While doing this tap C to activate the cheat mode. Alternatively, you can hold down "Fire" and <Alternate> and tap M to skip a level.

#### STREET FIGHTER **US Gold**

On the title screen type in STREET CHEAT. In the game press <Help> to advance a level.

#### **TURBO OUTRUN US** Gold

After the countdown type WEARAPEEPEL. Now use these keys:

- B begin again keeping your score
- D renew Turbo
- F see the end sequence

G - remove credit

continued on page 83

**ST FORMAT** 79

issue 24-JULY-91

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## THE FINAL BATTLE

Not quite sure exactly how we came by this 50-step complete solution - all that's known is it's by Karl Buckingham and Richard Hewison. The directions are short and to the point, but useable. Remember: to "operate," double-click. 26 Inside the shack: get wooden key from top of

1 Inside the cell: Operate on the bench. Up.

2 On the bench: Open the grille. Up.

3 In the air vent: North.

A Inside the air vent: open the grille. In.

5 Inside the cell: out. South. South. Open drawer. Take rusty key. Operate rusty key to clean it. North. North. In. Operate chain. Use polished key to free Jerub. South. South.

6 Corner of the passage: east. Operate door.

7 Inside the chamber: attack humanoid with your hands. Get his knife. Jerub should operate Crysella's rope to free her. Steroff should operate on Pagan's manacles to free him. Operate the railing with the rope and send Jerub down.

8 Down the well: take the tinder box, as well as the backpack and the necklace. Up. Take the rope. Out. Up.

9 Inside the main hall: attack the humanoids with the knife. Out.

Outside the main hall: down. West. Turn the wagon over (double-click). East. East. Attack door. In.

1) In the guard house: operate the rocks to reveal a trap door. Open the trap door. Down.

12 In a darkened tunnel: light torch. South.

Bottom of the stairs: throw an object at the spider's web. Get gold key. Get Crysella to examine the walls to find a niche full of arrows. North. Up. Out. South.

Alongside the well: drop the bucket down the well (double-click). Ensure that Crysella has the gold key. Operate the niche with the gold key to open it. Take the yellow crystal. Up.

15 Alongside the well: up. West. In. Up. Get the silver ring from the table. Attack the chest to remove the rust. Open the chest. Get the bottle of oil and the axe. Out. Down.

Outside the tower: open door. Out. East. Out (through the gates which were forced open by the wagon).

Doutside the ruins: SW. Up. North across the gap (but only if it's daytime).

13 Inside the small cave: in. Operate the rocks to reveal a skeleton. Take the vest. Out. South. Down. East.

At the foot of the tower: East. You fall into an animal trap pit. Take the sword. Attack snake with sword. Take cloak. Up. SE.

20 Beneath the willow tree: operate the ground in front of the tree. Take white crystal. West. Get gold ring from the hole by the dead hunter. Wear gold ring. East.

2 Beneath the willow tree: East. East. East. East (to broken bridge). Wait until bird arrives. Throw an object at the bird (if it's day time). Take the diamond. Attach the diamond to the ring ie. operate ring with diamond.

22 At the broken bridge: West. North. Wait for wild pig to appear. Attack pig with sword. Run north. Run NE.

23 Along the forest path: attack bandits with sword (to rescue Jack the lad). NE. NE.

24 Outside the wooden shack: move the water trough (double-click) to reveal a trap door. Open the trap door. Down.

25 In the cellar: take small key from the dead man. Unlock drawer with small key. Open drawer. Get antidote. Up. Open door. In.

cupboard. Unlock cupboard with wooden key. Open cupboard. Get the food. Take hammer. 2 Inside the shack: use the Goto feature on the

map to return to the broken bridge. Attack tree with axe. SE.

23 At the river's embankment: SE. Give Jack a knife. Send Jack up the tree. Throw the knife at the window to kill the wizard. (Note: if you didn't run to rescue Jack in the forest he might well miss or collapse from his injuries at this point. For extra insurance, make sure he is wearing the robe from the animal trap pit where the snake was.) In.

29 In the Wizard's study: down. Open door. Get rest of party in tree. Up. Jerub should cast the detect spiritual matter spell. Open the chest - someone should be wearing the necklace. Take claw from chest. Remove the grey crystal from claw.

1 In the Wizard's study: get silver key from dead wizard. Unlock drawer with silver key. Open drawer. Get scroll from drawer. (Note: there are two scrolls - Jerub should only take one of them and examine it. One is a spell, the other kills him.) Out. Out.

In the forest: NW. NW. W. NW. (Note the location of the cave - you must return here once you have found the other spell scroll, as detailed in points 32 onwards.) NE. E. Either throw a heavy item at the cliff wall and then take the fossil or just take the fossil from the ground.



"That's right, bend over! Now pull down - oh, are we on? Er - let's just put this bench over here, shall we? Good. Okay." (Embarrassed silence)

At the foot of the cliffs: SW. S. NE. NE. N to the three way junction. Go NE to find the boat. Operate the boat with a hammer to mend it. In. (Note: only one character can fit in the boat.)

Sailing upon the lake: NE. South. Out. South. Operate the mechanism with the bottle of oil. Operate mechanism again. North. In. South. Out. Wait for Hermit to appear. Wait for Hermit to awaken. Talk to Hermit. Give Hermit fossil. Look in tree hole. Take pouch. Get green crystal from pouch. In. Take staff from bed. Break the staff to find a spell scroll. Out. South. North. Use the game map system to return to the cave entrance.

34 Outside the cave: attach the rope to the large boulder. Pull on the rope to move the boulder and reveal a hole. Down. Light a torch with the tinder box. North.

3 At the edge of the pit: Jerub must cross the pit. He must also have all eight spells available to him. If he's not brave enough to cross then get him to cast the bravery spell repeatedly until he is. North. North. Cast the Destroy Serpent spell (the last spell) to kill the serpent and reveal stepping stones.

36 Inside the huge cavern: North. Cast Detect Underworld spell (second spell). Look in the column of flame and take the blue crystal. Use map system to return to the cave. Out. Use map system to return to the wagon in the forest.

37 Along the forest path: NE. North. East. East. Up (the mechanism chain). Up (only when it's night. Don't carry a lit torch either!) East. Unravel the vest (double-click) and give it to Crysella. Get Crysella to shoot an arrow at the rope bridge. East (across the mended rope bridge).

Outside the Suzar's castle: in. Get Jack to go up through the gap at the top of the door. South. Pull the lever. In. Pull the lever. Out. Out. Get the metal key from the dead humanoid. Use the man system to return to the Courtyard.

39 Corner of the Courtyard: North. Unlock the gates with the metal key. Open the gates. Get Crysella to shoot three times at the target. Take bottle of fruba. SE. Open the trap door. Down.

40 Within the mucky sewers: South (if water level is not high because of excess rain). Up (through the toilet!). Open drawer and take iron key. North. Jack must bend the iron key first. Unlock door with iron key. In. Talk to man. Attack man and kill him. Get black key from dead body. Out. South.

41 In the guard house: South. East. Up. North. West. Take ivory key from the hook. Unlock door with ivory key. Open door. South. West. Open door. Attack the humanoids with a weapon. Take the shiny key from the dead humanoid. In.

12 Inside the great hall: get Crysella to examine the walls. Up. Open doors. North. Attack humanoids with sword. Get the glove from the dead humanoid. Wear the glove. East.

43 End of the passage: use the glove to dispel the barrier. East. Attack the door twice to break it down. In.

(4) In the bedroom: look in the bucket and take the magical staff. Move the painting. Unlock chest with black key. Take magical shield and magical sword. (Note: do not take the black crystal - this damages the magical staff if you try attaching it). Down, one character at a time.

45 At a three way junction: take platinum key from the dead body. W. S. W. N. Up. N. E. N.

46 Within the passage: unlock the door with the platinum key. Open door. In.

47 In the dining hall: operate the mechanism. Down. Take food. Out. W. Operate the statue to open the doors. In.

13 Inside the great chapel: attach all five crystals - yellow, grey, blue, green and white - to the magical staff. Open the curtains. D.

(1) In the secret tunnel: drop the magical shield to trigger the trap. Get shield. E. Open the sarcophagus lid. Throw a lit torch at the mummy. Get the glass ball from the coffin. Break the ball by dropping it. Get the red crystal. Attach the red crystal to the magical staff. Attack the giant sphere with the magical staff. In.

1 In the depths of Hell: attack Suzar with the magical sword three times. Now run to the cave at the foot of the basket or the bridge before the castle collapses! (Use the map system and the Goto feature).

THE ENDID - But be here next issue for some general tips to help you get through the battle in one piece!

## I Think... ...Therefore Impressions

#### **COHORT – FIGHTING** FOR ROME

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demo of



BB1

DE1

DE2



#### <u>Home Based</u> BUSINESS

31, PILTON PLACE (STF 24) KING AND QUEEN STREET, WALWORTH, LONDON SE17 1DR



LIFE continued from page 79 N (plus a key 1-9) - go to that level T – extra time

#### **VENUS THE FLYTRAP** Gremlin

Press the <Undo> key and keep it held down

#### **CARRIER COMMAND** Mirror Image

Since this exceptional game has just been re-released, we thought it was worthwhile to reprint some tips for new players.



Collect the grapefruit before slicing the dwarf in two at point A with the harpoon after you've used the knife-sharpener you bought from Derek the Abnormal Grocer - oh sorry, wrong caption

#### MANTAS

Have all of your Mantas individually armed: Manta 1 should have one missile, Manta 2 a laser gun and a missile on each wing, Manta 3 a bomb pod and two missiles, and finally Manta 4 a long range comms pod and four missiles. In flight, set the Mantas' altitude low so that they gain speed. As you're travelling between the islands send Manta 4 ahead of you to attack the island you're heading for.

#### AAVs

Never send a Walrus AAV out without adequate air support. Use an AAV fitted with a laser to destroy the enemy's defences and then attack the Command Centre.

#### THE CARRIER

Remember, you get maximum speed when travelling only by withdrawing all the inflatable drones and only then when you're in deep water. It's best to have only the Engines, the Repair Systems and the Superstructure on high priority repair. Make a stockpile after conquering every two or three islands - that way you don't have to wait too long for all the stock to be transferred between islands. Fuel priorities ought to be: Ship - High, Manta - Medium, AAV - Low.

#### ATTACKING AN ISLAND

There are basically two ways to attack an island. The easiest way is to send in a Walrus armed with a Virus Bomb to subvert the island's command centre, assuming you want to keep the same type of island. You must make sure you have a diversion of some sort, though, or otherwise your Walrus gets destroyed before ever reaching the island.

The other way is to destroy the Command Centre altogether. You can do this from the safety of your carrier by backing up to the island (not too close or you activate the defence. missiles on the island) and using the surface-tosurface missiles from your ship. It takes about seven missiles to destroy the Centre.

Bottles of champagne to Sammy Simpson and Eric Ketts of Bath. 

until the words CHEAT ON appear. You now have infinite energy.

Level codes:

MANDTIDS - Frozen Wastes CICADAS - The Dead City PSYLLIDS - Wood World PIERIDS - The Kaverns

SATYRID - Death Valley LYCAENID - Creeping Swamp

**OR!** instead of entering the level codes type: JUPITOR for infinite time PLUTO for infinite ammo FREEPLAY for infinite credits LISTEN for a sound test.

NOFI

NXIS

VONK

VDTM

14

10

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350

600

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800

### IP'S CHALLENGE **US Gold**

**34 CYPHER** 

35

36

37

LEMMINGS

SEEING STARS

LADDER



Right. No messing about now. A certain N H Crowhurst of Stockport has completed the whole darn game and has level codes for every

one of the 144 stages. So here we go...

LE\	/EL NAME	CODE	CHIPS	TIME	42	в
1	LESSON 1	BDHP	11	100	43	L
2	LESSON 2	JXMJ	4	100	44	R
3	LESSON 3	ECBQ	4	100	45	Μ
4	LESSON 4	YMCJ	9	150	46	TH
5	LESSON 5	TQKB	0	100	47	PI
6	LESSON 6	WNLP	4	100	48	Μ
7	LESSON 7	FXQO	3	150	49	PI
8	LESSON 8	NHAG	1	100	50	D
9	NUTS AND BOLTS	KCRE	9	400	51	15
10	BRUSHFIRE	VUWS	0	80	52	TH
11	TRINITY	CNPE	3	300	53	TF
12	HUNT	WVHI	652	400	54	G
13	SOUTHPOLE	OCKS	0		55	P
14	TELEBLOCK	BTDY	4	250	56	D
15	ELEMENTARY	COZQ	12	250	57	S
16	CELLBLOCKED	SKKK	0		58	L
17	NICE DAY	AJMG	46	100	59	H
18	CASTLE MOAT	HMJL	0	600	60	S
19	DIGGER	MRHR	146	210	61	RI
20	TOSSED SALAD	KGFP	15	400	62	SI
21	ICEBERG	UGRW	9	150	63	BI
22	FORCED ENTRY	WZIN	8	300	64	SI
23	BLOBNET	HUVE	88	500	65	A
24	OORTO GELO	UNIZ	48	550	66	VI
25	BLINK	PQGV	28	600	67	CI
26	CHCHCHIPS	YUYJ	170	366	68	E
27	GO WITH THE FLOW	IGGZ	6	200	69	B
28	PING PONG	UJDD	22	300	70	N
29	ARTIC FLOW	QGOL	5	400	71	C
30	MISH MESH	BQZP	36	600	72	BI
31	KNOT	RYMS	118	29		
32	SCAVENGER HUNT	PEFS	3	600	Tha	at's
33	ON THE ROCKS	BQSN	9		mo	nti

38 SAMPLER BIFA 1 500 GLUT ICXY 29 20 39 FLOORGASBORG YWFH 200 40 0 I.C. YOU GKWD 60 250 41 EWARE OF BUG LMFU 27 300 OCK BLOCK UJDP 0 200 TXHL 300 EFRACTION 32 ONSTERLAR OVP7 0 300 HREE DOORS HDQJ 14 250 IER SEVEN LXPP 300 4 UGGER SQUARE JYSF 6 300 ROBLEMS PPXI 23 200 IG DIRT OBDH 16 350 SLIDE IGGJ 13 750 HE LAST LAUGH PPHT 2 400 RAFFIC COP CGNX 0 500 ZMGC BRAIL 68 350 OTPOURRI SJES 30 100 EEP FREEZE FCJE 8 250 TRANGE MAZE UBXU 35 400 OOP AROUND YBLT 9 600 BLDM IDDEN DANGER 8 400 COUNDREL ZYV 12 294 RMOW 16 INK LOW MO TIGW 300 0 LOCK FACTORY GOHX 7 500 POOKS IJPQ 41 600 MSTERDAM UPUN 51 500 ICTIM ZIKZ 12 300 HIP MINE GGJA 28 700 ENY MINY MOE BTDI 52 650 OUNCE CITY NLLY 0 300 IGHT MARE GCCG 0 199 ORRIDOR LAJM 23 500 LIND ALLEY EKFT 35

's the first half - last 72 levels next h (if you're good).

### WE WANT YOUR TINTS AND HIPS

Yep! Tints, hips, peaks, chokes - all those silly words you type in to get infinite blancmange and higher scores - we want them all! If you've got a tip, a cheat, a short cut, an infinite lives poke, a password, a map - anything at all you've found that helps you get more from your ST game-playing - we want to hear about it! That way you can share your information with well over 60,000 fellow ST enthusiasts, and possibly win FORMAT's monthly prize of £50. It doesn't have

_		(
I		5
	he a co	

solution or anything - whatever you've got could be the answer to a fellow ST game-player's prayers!

Address

Daytime phone

Brief description of tip

Please complete this form and send it, along with your tip, to: Gamebusters, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW.

## SHADOW OF THE BEAST

Psygnosis

#### Old game it may be, but since it's just been included on the Monster Pack compilation, here's the complete solution for all newcomers to this horizontally-scrolling arcade adventure shoot-'em-up... from Michael Attisha of Hull.

Go left until you reach the treehouse and enter. Once inside, go right, jumping the fireball, and go down the ladder in the floor. Keep following the passage until you kill the blue creatures and drop down off the ladder afterwards. From there, take the left ladder down and then go down the ladder after the bridge. Go right, killing all the creatures, then down the ladder. Now left until you reach the creature holding the blue ball. Go right up close to it and duck. Whenever he stops breathing fire punch the ball as many times as possible. Eventually the ball should disappear and you're left with a superweapon. Backtrack to the right, go up one ladder and down the next before going down the next two. Proceed left, taking the top passage; take the key at the end. Return to the same area in which you got the super-weapon and enter the transporter.

In your new surroundings, go up the left ladder and continue right. A block appears behind you, barring your way, and a huge grey cart starts trundling toward you. Using the super-weapon, shoot the cart over and over again, ensuring that it doesn't touch you – if it does you're dead. After you've destroyed it run right and take the first ladder up. Go left, past the ladder, until you come across the switch that says "Don't touch." Touch it. Return right and go up the ladder you passed just now.

Walk right (yes, right through the wall) and duck and punch the two chests, which break open to reveal strength potions. Collect them



 "Ere, can you do this?" (Raises arms.) "No, but I can stand on one leg for three hours without moving." "Oh. Nights are drawing in, aren't they?" (Pathetic End To A Caption Number Seventy-One)

and run left as far as possible, avoiding the Hydra, to collect the key. Work your way back down the two ladders and walk right. Keep following the ladders and passages past the bomb-dropping bees and down the ladder. Go left as far as possible, then up the ladder and right, collecting the Power Punch. (By the way, the "Don't Touch" switch you touched earlier negated an energy field around the bottle.) Go left and down the ladder to the bottom and walk right until you reach the dinosaur. Using the power punch, hit it repeatedly until it dies. Continue right through the door. One of your keys is used and you emerge in the well. Climb up the iron rungs and get out.

Run right, punching the stone blocks and collecting the bonuses, until you reach the castle. Collect the torch to the right of the door and enter. Climb the ladder to the left and follow the passages and ladders until you come to two passages going left and right. Go right and collect the spanner, then left until the end. Keep following the tunnels again until you drop off a ledge to the right which puts you back at the entrance. Run left following the passage again. Eventually you should fall off a ladder onto a bridge. Run left and punch the chest. Collect the gun, run right and walk into the laser beam. Your remaining key and the spanner are used, disabling the beam. Go up two ladders and run right. When you come across the three-headed dragon, shoot it in the head(s) by jumping while shooting. It flashes white when you hit it.

Fly along the tunnel until you reach the creature at the end. It has two faces: destroy each one and you're through to the next part. Keep running right, killing all the creatures as you go. Hitting the gravestones results in either a strength bonus or a penalty. Finally, kill the Beast at the end by striking his foot and avoiding his club, and that's it! You've mastered the Beast! Nothing to it, really... **stf** 

atari

atari

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#### **Gravis MouseStick**

Gravis MouseStick			
MACHINE: ALL STs			
<b>PRICE:</b> £69 + £1.50 p & p	- 19		
FROM: RC SIMULATIONS			
CONTACT: 0272 550900			

e're all used to the technological advances which make your ST a special machine, so why do we still use a switch joystick - a device created some ten years ago? The standard joystick's limitations demonstrate exactly why the Gravis MouseStick is such a neat idea.

Inside any ordinary joystick are five on-off switches. One is linked to the Fire button and simply indicates whether the button is held

down or not. The other four are placed around the joystick's central shaft, one on each side, and these open and close according to the position of the shaft. Push the joystick forward and one switch closes, leaving all of the others open. The software can then work out which direction you're indicating, and react appropriately. Simple, but effective.

However, a switch joystick cannot give the software any indication of how far you're pushing the stick - all it knows is that you're pushing in a specific direcyou re pusning in a specific direction. It can't even tell how quickly joy and less stick you change direction. The soft-

ware has to do this by setting up timers and repeatedly checking the stick to examine your speed of movement - processor-intensive stuff.

The Gravis MouseStick is different. Inside, it has a number of analogue-to-digital converters, rather like those in a mouse. These can tell just how far the stick moves. Rather than indicating simply "Up is selected," it can show that the stick is "35 units Up" for instance. You can program the two main axes, horizontal and vertical, to have a scale suitable for virtually any mouse or joystick-compatible software.

The system comes in two parts: an interface box, which has a lead with a standard 9-pin D-type plug for inserting into the ST's mouse or joystick sockets; and an analogue joystick, which plugs into the interface using a tiny connector. Both are moulded in grey plastic which blends reasonably with your ST. The interface is the key to the system. Its microprocessor handles the decoding of the analogue stick and outputs user-defined, ST-compatible information. It indicates its current set-up via an LCD display and enables you to redefine your own.

You do this using the joystick. Select the configuration editor mode and various headings appear in the display. You can store or recall a MouseStick set-up, program one of the three buttons, change the output mode from joystick to mouse or change the scaling in any direction.

While it may not appear easy to use or set up, the procedure is in fact very intuitive. Altering the scaling on an axis affects the rate at which data is sent back to the ST, effectively changing the responsiveness of the stick. Programming one of the buttons enables you to emulate any of the standard mouse buttons. provide a trim (for precise adjustment of the direction) or a vector (for maintaining the same

Most new joysticks are just old sticks in crazy cases. Neil Jackson looks at one that really does give you more

> direction, regardless of stick position) as well as create turbo-fire control.

> Joystick mode enables you to mimic a standard mouse mode enables you to use the MouseStick in

the mouse port. If the idea of setting up your MouseStick every time you load up a game sounds complicated, fear not. There's a programmable startup mode which is automatically selected on power-up. This can be one of the main presets or one of your own set-ups - it's entirely up to you and takes only seconds to change. Obviously this auto-preset can't do everything, so there are three other programmable "slots" for your favourite configurations. You can be up and running with very little fiddling about - or leave the MouseStick plugged in and it could save you from having to hunt for those ridiculous ports under your ST!

under

contro

Mechanically, the MouseStick is obviously built for long life and hard use. It has a padded handle, adjustable stick tension (eight settings), and enough weight to stand upright on its own. You may have trouble holding the base in one hand - it's better left on a table-top - but it does have rubber feet to stop it sliding around.

The MouseStick is a versatile device that opens up plenty of possibilities. Many games already cater for it, and as the device grows in popularity more programs are bound to feature enhanced control modes. Then you can experience what's been missing from even the best flight sims - true feel and total response.

For your money, you also get a manual, a handy record-sheet of presets and an excellent note from RC Simulations providing all the set-



eight-way joystick, while The Gravis MouseStick is the kind of control device your ST has been waiting for. With this remarkable device, you can achieve unprecedented accuracy in flight sims, driving games, even art packages and spreadsheets

up data needed to interface the MouseStick to a variety of games - including Falcon, F-19 Stealth Fighter, MiG-29 Fulcrum, and F-29 Retaliator. Full marks to Gravis and RC Sims for this excellent device. It may be a wee bit expensive. but it's worth every penny. I'm giving up my faithful Kempston Pro, which has served me well since 1981, so it must be good. stf

FORMAT RATING	GS
GRAVIS MOUSESTICK/£ RC Simulations/0272 55	
Features More modes than a kitchen blender	95%
Speed More responsive than a joystick and m precise than a mouse	<b>96%</b> ore
Ease of Use A little tricky at first but simple once m	85% aștered
Results Flawless! No compatibility problems, no just total control	<b>98%</b> o quirks,
FORMAT VALUE The price is a bit steep, but it's definite worth it for all these features	<b>90%</b> ly

There's nothing comparable, though certain com panies are working on variable joysticks for the STE

# Over £1,000 of software must be won!

Tired of your ST's boring old Desktop? NeoDesk from Electric Distribution does a much better job. Enter our competition and you could win this and much more – in all, over £1,000 worth of software!



t's a winning combination! The biggest-selling DTP package for the ST, *Timeworks Publisher ST, plus* the professional ST word-processing package, *1st Word Plus, and* Utility of the Year 1990, *NeoDesk 3* – that's the fabulous first prize in *FORMAT's* really easy to enter competition.

GST Software Products' *Time-works Publisher ST* and *1st Word Plus ST* together with Gribnif's *NeoDesk 3* add up to a great first prize – worth over £200.

And there's more! The two runners up will each receive a copy of 1st Word Plus ST and a copy of NeoDesk 3, and there are copies of NeoDesk 3 for the next 17 names out of the hat!

And finally... Electric Distribution have supplied 500 interactive *NeoDesk 3* demo disks – not available in the shops and including many features of the full version – free to the first 500 people who enter our competition! *NeoDesk 3*, which is available exclusively in the **UK through Electric** Distribution, combines powerful graphical features and drop-down menus. It can transform the use and appearance of your Desktop with personalised Desktops, automated Desktop operations and intelligent use of disks. We reviewed it in issue 18 and gave it a FORMAT

Gold, with the quite

line interpreter.

dazzling score of 95% – and it was voted Software Utility of the Year

1990 by none other than you, our

readers! The interactive NeoDesk

demonstration of NeoDesk CLI, a

complete window-based command

3 demo disk also includes a

HeoDesk File View Sort Options

NeoDesk Recoverable Trashcan

13/82/98

dtl

Confirm: Off

Warning

Info Qui

Items in Trashcan: \TOSLOAD.PRG

Select All Undelete Del

NeoDesk 3 boasts an exhaustive number of options, giving your humble ST's Desktop more power than machines costing ten times as much

### **THE RULES**

1. Employees of GST Software Products, their sales division Electric Distribution, Gribnif, or Future Publishing are not eligible to enter. Neither are their families. Nor is anyone called Malcolm Gribnif, regardless of whether he is Secretary of State for Scotland or not.

2. Entries must be postmarked 30 July at the latest. "Clocking" your own postmarking machine is forbidden and probably impossible anyway.

3. Anyone submitting multiple entries will not only be disqualified, but we'll also get Powergen to distribute some electric through your delicate bits.

4. No cash alternatives can be offered. Not that you'd be entering if you wanted mere money, right?

5. The Editor's decision is absolutely and incontrovertibly final. Probably.

## HOW DO YOU WIN THESE SUPERB PRIZES?

It really is so easy! To enter, just answer the following three questions!

- Which UK company is responsible for the development of *Timeworks Publisher* and *1st Word Plus?*
- What's so special about the trash can in *NeoDesk*?
- *NeoDesk* offers several disk formatting options. What is the *minimum* number of tracks you can format in *NeoDesk?*

Send your answers on a postcard or the back of an envelope before 30 July 1991 to: *NeoDesk 3* competition, *ST FORMAT,* 29 Monmouth Street, Bath, Avon BA1 2AP.



NeoDesk can transform your
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issue 24-JULY-91

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## What did Leonardo da Vinci have that you don't? Nothing – except a beard (probably), a penchant for ugly women and some wacky ideas about flying machines, that is. Ed Ricketts gazes in awe at your pixels

elcome once again to the *KKTFSPS:* more pixel punching from those magnificent readers whose brain lobe marked ART is, to say the least, not small. In other words, some more of your pictures.

"Yes, all very well," I can just about hear you cry if I listen very very carefully, "but aren't they all professional art bods who have spent thousands of hours slaving over a hot ST and a £400 colour monitor?" No, no and again no! (Er, except for the special feature below, in which case the answer is a definite maybe.) As we always say, you don't need to have any special equipment to produce a decent picture. An ordinary TV, your ST and an art package will do just fine. And just because many people use *Degas Elite* or *Deluxe Paint* for their work doesn't mean to say you have to – use whatever package you feel most comfortable with. It's the end result and how you got there that's important.

For a better chance of your work appearing on these hallowed pages, here's what to do. While you're drawing/painting/airbrushing/antialiasing/scribbling your meisterwerk, save the various stages of creation. That way you get a series of pictures that build up from a bare outline to a full-blown rival of the Sistine Chapel, which is good for you, good for us and good for the future of Britain (in an incredibly complex and inexplicable sort of way).

Then, when your artistic frenzy is complete, send a disk you don't mind losing (which, of course, must be virus-free and self-addressed) with the various piccies together with an explanation of what you did and how (either printed or as an ASCII file) to GALLERY, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW. And remember: never open an umbrella indoors – it's bad luck. **stf** 

## **HOW THE FLAMES OF FREEDOM CAN TRANSF**



And now: something a bit out of the ordinary. While we wait in breathless anticipation for *MidWinter 2: Flames of Freedom* to finally rear its head, we have some title screens from the game, drawn by Maelstrom's ace graphic artist, Andy Elkerton. Mike Singleton, head honcho, explains...

••Usually, an artist working on a computer game has many restrictions placed upon him by a combination of programming and memory requirements. The title sequence, however,





is one area where the artist has more freedom to splash out. The title sequence in *Flames* of *Freedom* is just such a case.

"Andy had three distinct elements to create before the programming team could put the full sequence together. First we needed *Flames of Freedom* lettering, preferably animated, to be displayed while the main game loaded. Then we needed an animated scene complete with moving solid graphic vehicles and a bit-mapped backdrop to run the credits over, cinematic style. As well as han-



dling all the normal bit-mapped artwork, Andy has spent a lot of time with our solid graphics system and has designed and coded all the solid objects in *Flames of Freedom*. Having an artist rather than a programmer doing this makes a vital difference to the final look of the vehicles – they tend to be rather less cubist than is customary!

"In the title sequence we used a total of four different vehicles, a biplane, a helicopter, a hovercraft and a balloon, each of which took Andy about two days to design, construct and





## **A GOLDEN GIRL**

**Suzanne Barberton** of **Wiltshire** used the PD program *NeoChrome* for her rather good-looking portrait. Suzanne doesn't say if it's drawn from life or her imagination – either way it's an excellent portrayal of an always difficult subject, the human face. It's all yours, Suzanne...

•I decided to draw a face because I was totally sick of drawing cartoon characters and mechanical things.

**1.** I began by using quite a thick brush to sketch the outline of the face in a neutral colour, using Fill to colour the face and background.

2. The same brush was used to draw the light and shade in solid panels. I find this is good practice for conventional art since it makes you look at an object as a collection of colours and shades, which makes it easier to draw.

**3.** Next I went over the whole picture to neaten it – correcting uneven lines, straightening the nose, and carefully redrawing the ears and eyes. To blend and soften all the harsh lines between the varying flesh tones I used the two sizes of airbrush.



**4.** The final touch was the hair, which was easy – I used the pencil and just scribbled blonde highlights over a dark background. The sea in the background was put in as an afterthought,

using the airbrush to texture the plain blue."

■ NeoChrome, a Public Domain program, is available from your nearest PD library – see FORMAT's comprehensive directory, page 100

## **ORM MIDWINTER TO THE SUNNY CARIBBEAN**





••The idea behind the Bay Scene was to provide a nice, animated backdrop for the game credits at the beginning of *Flames of Freedom*. I drew the picture using *Deluxe Paint 3* on the ST, but because different types of aircraft were going to perform a 'fly past' across the bay, I was restricted to drawing it in the palette which had already been chosen for the 3-D solid objects. If possible, I prefer to draw pictures like this straight from life, since it saves making guesses about how something really looks, so with the help of a handful of holiday brochures I set to work.

**1.** First, I tackled the background. I drew this purely to give me a rough idea of how the final layout of the picture would look.

2. Because the biplane and other vehicles were going to need lots of space to barrel-roll



and generally fly about, I placed the horizon line quite low down so there would be a predominance of sky, and then added the clouds in the distance to soften the dark blue line made by the sea. The areas of darker blue in the sea were used to create the impression of depth, or even coral underneath the water. The line of trees running along the beach was created using quite simple techniques. A long dark-green blob of colour provided the basic shape of all the trees, and then by using the stipple function I added two lighter shades of green to give a degree of shape and highlighting. The lowest area of each tree's foliage was left dark green to give the idea of shadow.

**3** & **4**. To give the picture more depth, foreground objects were going to be needed. Trees were the obvious choice! The foreground trees were drawn separately from the bay, because in the final picture they needed to be printed last so that planes are actually seen to be flying *behind* their branches and leaves.



**5.** To save time, the bush in the bottom left hand of the picture was drawn from four basic shapes, each of which I grabbed as a brush and then rotated through 90 degrees to add variation to each.

**6.** The line of clouds was made up using a row of varying sized circles, which I then filled with white and stippled the edges to soften them against the blue of the sky.

**7.** The three shades of blue which make up the sky colour needed to be stippled to show a more pleasing colour graduation.

**8 & 9.** All that's needed is to put all these different elements together and you've got a completed background. In the final picture here, the biplane is flying over the scene, complete with shadow.<sup>99</sup>

■ Deluxe Paint ST £49.99 from Electronic Arts = 0753 49442. Keep an eye out for MidWinter 2 sometime this year. Possibly. If you're lucky. \*\*\*\*\*

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92 ST FORMAT

VISA

## RAM IS AN ANAGRAM OF AR



he's this month's prizewinner. Keith says the winter's cold spell inspired him to produce his drawing, "Tram Stop." INITIAL LAYOUT







"I used Degas Elite with a Naksha mouse. A top quality mouse is essential to execute intricate pixel patterns, so Atari's model isn't much use. The whole picture took a total of around 30 hours to complete.

1. This illustrates how I positioned two carefully proportioned box shapes representing buildings in relation to the road-line and to two vanishing points (VPs). Placing two VPs too close together tends to distort the objects, so they were situated about 6-12 inches off the monitor screen.

2. I added two boxes to the originals and gave them all roofs. Note how I fixed centre points for the four roof ridge lines which were then projected, along with the garden wall and pavements, to their respective VPs. Your eye instinctively follows a left-to-right path across the picture.

3. Initial detail has been added. Most of the details were drawn from memory, though I had to draw some from life. The shop signs were drawn freehand, no suitably sized fonts being available. A major focal point, the trampole, was placed just off-centre. Four shades of grey were used to add contrast and depth, and a brick red wall and two darkish green trees to relieve the overall greyness. Next, dispensing

with outlines, I drew in and shaded various details using up to six shades of grey plus black and white. Sky/cloud effects were added to give a bright impression, and people were inserted, having been predrawn on screen two, sized, and pasted onto the main picture. Two of the figures were drawn depicting movement to increase interest.

4. Snow effects were added using the Stipple function set at 5 with a single pixel-sized brush for snowflakes and Magnify for more detailed work on the trees and buildings. Partially exposed cobblestones were drawn to add realism to the road surface, as were the vehicle tracks and footprints in the snow. Overhead wiring was added, its density being graduated to give the impression of fading away.

5. The eponymous tram finally arrives. This was also drawn separately and pasted into position, when the snow effects were added. I took extreme care to project the tram to the same VPs as the road and background buildings. Finally, after general tidying-up, the picture was completed."

Degas Elite £24.95 Electronic Arts = 0753 49442. If you want to save £5 on the Naksha mouse and get yourself a free drawing tool worth £7.95 to boot, turn to page 126



## MORE THAN A CAR-TOON

Marc Harper of Dyfed is obviously another car fanatic, judging by his pic of a Ferrari F40, which he did using Hyperpaint. Powerful and expensive cars seem to be the main subject for car art - what's wrong with drawing one of the many Minis or Volkswagens around just for a change? (Er, on second thought, don't answer that...)

"1. Using Draw, I created the basic outline of the car in red and used the Zoom function to touch it up. I then worked out the basic colour palette for the car - mostly reds.





2. Next the car was completely filled with a shade of red. At this point I created the logo in a different program, Fontkit 3 [a Public Domain program for editing and

producing fonts], because Hyperpaint didn't provide suitable fonts.



3. The bonnet of the car is subdivided into different shading areas using lines and then filled with various hues of red. I created the headlights by drawing a square and then elongating it with the Stretch

function. The most difficult parts of the car to draw were the hubcaps -I managed them by copying the shades of grey on a milk bottle top!

4. Finally, I filled in the background with black and finished off the shading. Overall, the picture took six and a half hours to produce."

Hyperpaint 2 (supports STE 4,096 colour palette and scrolling) £34.99 Atari 🗢 0753 33344



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#### **ASSEMBLY** programming

fter last issue's guide to getting the *Flood* character to respond to the joystick, we now have the chance to introduce violence. The first stage is to get our *Flood* character to move over the top of a background, thereby adding atmosphere to the game. Then we can take a look at how to kickstart our sprite into action by giving him the ability to fire. The way the shots work illustrates the kind of structures games use for their characters, bullets, explosions and so on.

#### Take a step backwards

The clear screen routine in the original program code has now been replaced with a background draw, mainly because it's difficult to make the shadows show up on a black background. A 64x32 pixel patterned block is repeated to make up the entire background. It's only drawn in two planes so that you can output it from Microprose's Art Studio using this method:

1. Set the BRUSH/SPRITE SIZE to 64x32.

 Draw the pattern in the first four colours only.
 Turn it upside down with VERTICAL FLIP (use the right button). The reason is explained later.
 Put it in the brush store.

**5.** Use CONTROL 1 to set number of lines to 0 (which means all of them, 32 in this case) and select file output.

6. Use CONTROL 2 to set the output byte to 3 (planes 0 & 1 only) and to select word format.
7. Left-click on OUTPUT, left-click on the brush you want to output and type in the filename.
Please note that the capitals above refer to the icon names in *Art Studio*.

If you're using *Devpac 2* you can INCBIN this file into the program at line 941. If, on the other hand, you're using *Devpac 1*, you need to use another program to convert the data into DC.Ls and INCLUDE it at this point. Alternatively, you can just stick the lines of data in the source file as we have done (lines 941-956) in order to keep the number of files down.

#### DRAWING THE BACKGROUND

#### **Do\_background**

Since the screen is 320x200 pixels and the background is only 64x32, we have to copy it across the screen five times and down the

#### LOAD IT UP!



You can find all the files you need to use for the Bullfrogs' assembly language tutorial this month on our Cover Disk (see page 38). To

find all three files for the series, double-click on the SIDE\_2 folder and then on the BULLFROG folder name. These files are compatible with HiSoft's *Devpac* 1 (given away free on Cover Disk 22. To find out how to get your hands on it, turn to page 138.) For those of you who've fallen head over heels in love with *Devpac* 1, HiSoft also sell *Devpac* 2 – soon to be followed by *Devpac* 3. Contact HiSoft  $\approx$  0525 718181 for more details.

The SPRITE.S file in the BULLFROG folder is the main file which you need to load into *Devpac 1*. SPRITE32.DAT and SPRITE16-. DAT are the data blocks which are called by the final assembled output file. Make sure these are in the same directory as your final output or it won't be able to find them.



The routines we're using in the Bullfrogs' assembly language tutorial form the foundation of Flood, their excursion into the cutesy platform game arena. Here you can see how manic the action becomes when vou introduce a handful of bad guvs keen on some shooting

the shots

In the third part of FORMAT's assembly guide, Glenn Corpes of hit programmers Bullfrog shows you how to add firepower to your sprites

screen six times to get the full screen. 6 multiplied by 32 is only 192 and the screen is actually 200 lines high, but for the sake of speed I'm not bothering to do anything on the bottom 8 lines – you can probably use these later on for the score or status bar.

The first thing this routine does is to point six address registers at the screen. Notice that a0 points to the very bottom of the screen because we are going to use the pre-decrement addressing mode to draw the screen backwards; a1 points to 32 lines above; a2 to 64 lines above and so on, while a6 points at the graphic data. The macro routine "doline" draws an entire line of the screen with just five Movem commands. The destination is the parameter of the macro. The data must be stored upside down (as explained above) because while the data is read forwards a line (or 64 pixels) at a time, it's laid down backwards.

#### **GUN-TOTING QUIFFY**

The main addition to this month's demo is the ability to shoot. There's nothing to shoot yet but the structures and routines for moving the shots are similar to those for moving any aliens/monsters in a game, only much simpler. You must create the shot, move it and then kill it off.

#### The shot structure (defined line 53)

Every shot has eight variables, all of which are word sized because we've got bags of memory. This means that each shot takes up 16 bytes of memory. In *Powermonger* the people structures are 50 bytes long and any variable that you can squeeze into a byte takes only a byte. One thing, though: these variables tend to slow down the code slightly – they must be extended to a word before you can use them. In *Powermonger* this saving is important because there are up to 512 people active on the map at any one time and the whole program takes up about 508K!

The variables for the shots in our cut-down version of *Flood* are:

SH_MODE	the mode of the shot,
	currently only $0 = not$ in use or $1 = in$ use
SH_X	the x coordinate of the sprite
SH_Y	the y coordinate of the sprite
SH_Z	the z coordinate of the sprite
SH_VX	the x velocity
SH_VY	the y velocity
SH_VZ	the z velocity
SH_FRAME	a counter for how long the shot lives,
	also used as an animation frame
SH_SIZE=	16 the size of a sprite stucture

The other variable names are there for clearer use of movems:

 SH\_ALL
 all of the variables

 SH\_XYZ
 the x, y and z coordinates

 SH\_VXYZ
 the x, y and z velocities

It is always a good idea to stick in an extra label for this kind of thing because when you try and read your code several months or even weeks later you may not see the relevance of:

MOVEM.W SH\_X(a0), d0/d1/d2 hut

Adding helpful readable equates and labels does as much for the readability of a program as decent comments. It's a good idea to have

#### **ASSEMBLY** programming

virtually *no* numeric constants in your code. All right, so there are plenty of numbers lurking in the demo – but that's just because we're lazy.

The memory for the shot structures is located at the end of the program (line 1,007) and this illustrates another very good reason for using equates.

_shots	ds.b	MAX_SHOTS*SH_SIZE		
		the shot structures		

MAX\_SHOTS is the maximum number of shots active at one time. Note that if the number of shots or the size of the structure changes then you don't need to change this line. You need to do this however if it said ds.b 16\*16 which is in fact the same thing.

#### The birth of a shot

A shot is made when you press the Fire button. In this instance, <u>\_\_init\_\_shot</u> (line 258) is called and it looks through the shot structures until it finds one with a mode of 0 (inactive). If it can't find one, the shot doesn't occur. If it does, it sets the shots mode to 1 (active).

The shot's coordinates are set the same as those of the player. The shot's velocity is also set the same as the player's, but with the last valid joystick movement added to the figure. It then sets the shots counter to SHOT\_COUNT (256) which indicates the number of game turns the shot is going to be alive for.

The Bullfrogs take time out from programming *Populous* 2 to show you how easy it is to program in assembly

#### The life of a shot

At every game turn, the routine \_move\_shots (line 282) is called. This looks at all of the shot structures in turn. If one of them is active it moves it by adding the x, y and z velocities to the x, y and z coordinates. The z velocity is decreased to simulate gravity (line 320) and it checks (line 295) to see if the z coordinate is negative. If it is, then it inverts the z velocity to make the shot bounce and decreases the x, y and z velocities to simulate a bit of friction and make the shots slow down. Eventually you find that they stop bouncing.

 $SH_{FRAME}$  is decreased and killed off when it reaches 0 by setting  $SH_{MODE}$  to 0. You may like to try adding more modes to the shot. At the moment there are only two options –

In Powermonger there can be as many as 512 people active on the map at one time. To be able to hold the necessary data for all these people, you really need to squeeze all your information into just a few bytes



0=inactive and 1=active – but you can add mode 2=bursting. Just write a piece of code that sets the SH\_FRAME to a small number (say about 10), and then add some graphics for a bursting bubble. This code (which can't really be called a routine) needs to similarly decrease the SH\_FRAME.

When it reaches zero, SH\_MODE should be set back to 0 and the sprite killed off. This makes it available to \_\_init\_shot when it is called at the next press of the Fire button. Exactly the same method is used for processing the people in *Powermonger*, but instead of only two or three different modes they have 92!

#### **Drawing the shots**

The \_draw\_shots routine (at line 216) draws all, of the shots after the main character is drawn. For each shot, it first draws a shadow at ground level according to its x and y coordinates and then draws the shot itself at the same coordinate but minus its z coordinate. The shadows are essential to create the impression that the shots are actually bouncing.

The problem with this routine is that the sprites are not sorted out at all. You may like to try and fix this by drawing the shadows first and then sorting all the shots according to their y coordinates. This can be a very slow process and there is a quicker way by using linked lists. Unfortunately it involves a major programming change. Go for it if you're sure you know what a linked list is!

#### Some constants to play around with

There are several constants at the beginning of the file which you can adjust in order to make some simple changes to the program.

#### ISOCONTROL

Remove the semicolon from the very first line in the listing and the control changes to a sort of pseudo-isometric. It doesn't really have much effect – but since the background graphic suggests isometric anyway, this succeeds in making it feel even more so. It also illustrates the use of conditional assembly (line 437).

#### RAPID FIRE

Remove the semicolon from this line and the joystick automatically auto-fires when you hold it down. This is also achieved by conditional assembly and turning it on removes the code that checks to see if the Fire button is held down on the previous game turn. A shot is fired every other game turn and you can see the demo slow down from 50 frames a second to just 25 frames. This is because the sprite routine has to do an enormous number of shifts to draw each sprite, and shift is embarrassingly slow in 68000.

#### MAX SPEED

The maximum speed of the player's sprite in pixels (multiplied by four). Make this number larger and the sprite zooms faster around the screen.

#### MAX\_SHOTS

The maximum number of shots active at any one time. Try changing this to something like 128 with RAPID\_FIRE turned on and see the demo really slow down. You can make the num-

#### "The structures for moving the shots are similar to those for moving aliens in a game"

ber of shots even larger, but remember each extra shot takes an extra 16 bytes of memory. This isn't so much of a problem because 10,000 shots only takes up around 160K!

#### BOING

This is the speed that the shots bounce at. If you increase this the shots bounce higher. Decrease it and they bounce lower and eventually just roll across the floor.

#### SHOT\_COUNT

The length of time that a shot exists for. Not much point in changing this but you can if you feel you must!

That about wraps it up for this month. Next month, we get some simple monsters running around the screen and provide the code to make the shots collide with them. We can then put in some kind of scoring system to fill up those eight spare lines at the bottom of the screen, turning this into a very simple game. Be here and learn how it's done! **stf** 

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#### GAMES GAMES GAMES GAMES GAMES GAMES GAMES

#### LLAMATRON Llamasoft (© 0734 814478)



So wicked, it's saintly. Strictly Shareware rather than PD – which means that if you keep it you should send Jeff Minter  $\pounds 5$ . *Llamatron* is like *Robotron* but

with Llamas. This shoot'em-up has everything: frantic gameplay, stonking graphics and the kind of addictiveness which only Mr Minter seems to be able to sprinkle into his games. There are corking samples, mad Mandlebrot monsters and besotted beasties. If you can buy a game of this quality for a fiver, it says buckets about many of the so-called "leading" software houses. Someone give this man a lifetime contract to keep him in yaks. Divine.

STF Rating - 95%

#### BOXING CHAMP MT Software

Although the graphics are a tad on the "naive" side, this is an enjoyable game. There are two sections on the way to becoming a champ: you must first train your boxer with some punch-bag duty, and then enter the fight proper. Here you see a side-on view of your boxer and your opponent. You must slug each other a bit until one of you falls down. Fail and it's back to the gym for a bit more Rocky-style inanimate object hitting. **STF Rating - 65%** 



Oh no, it's the attack of the green toupées in Bumper Jack! Bounce, headbutt and avoid – with the emphasis on the last word for this game

#### DITCH Goodmans PDL – Disk GD1166

Ditch is an adventure game set in a college campus. Written with the TASS adventure creator, it's a fluid little game and fun to play. It's a shame the descriptions are the wrong side



■ Trigger-finger-blistering shoot-'em-up Llamatron. Doody in extremis! Don't just gawp at it, go play our complete Cover Disk version *now* – then show your appreciation by sending Jeff Minter a fiver

of sparse, though. The parser is moderately intelligent and can understand such sentences as "search all," for instance. Some graphics might have been nice.

STF Rating - 62%

#### BUMPER JACK TruST PD – Disk GAM64

STOS meets the Mario Brothers in this bashyour-head-on-the-platforms-'em-up. The idea of the game is to bounce little green sponges and then jump on them. If that doesn't sound too thrilling then you're not far wrong. While the programming is polished (for "polished" read "written in STOS"), the game's about as addictive as early morning Jobfinder repeats.

STF Rating - 57%



■ If all you want from a game is to improve your eye to hand coordination, then check out *Gunner*. Personally, I find counting the tiles in the local public lavatory far more enjoyable

#### GET RICH QUICK, THE ST WAY

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7. Convince Boy George that true mental enlightenment can only be found by combining worship through Krishna with a good blast on *Xenon 2.* Then flog him your ST for five grand

8. Sell some STEs to a hip-hop group, so that they can hang them round their necks. Then sit back and wait for the kiddies to follow the latest fashion

9. Buy up all the DIY double-sided drive kits in the country and then convince the software companies to stop producing software for single-sided STs

10. Construct a wet suit for STs which leaves the joystick port free. Then teach the world's fish to play *James Pond* and swap loads of Fishy Bundles for heaps of clams

#### GUNNER Trust PD – Disk GAM62

Remember when light guns first appeared and there were all those tedious "aim and blast" games with dreadful gameplay? You do? Well this is an "aim and blast" game, but without the light gun. Objects such as balloons, rabbits and fighter planes whizz across the screen and you have to click a cross-hair on them and then press the mouse button. Erm, that's it.

STF Rating - 46%

## Don't be a clown!

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Captain's log, Radio Ham Date - erm, today. I've yet to learn morse code, so all those blips and bleeps mean nothing to me. Maybe this Amateur Radio Disk can help. Then again, maybe not...

#### **AMATEUR RADIO DISK** Floppyshop - Disk COM21

Champions of the 20-foot garden aerial are going to love this disk. It's crammed full of 16 utilities to help the radio ham hobbyist, dealing with such baffling subjects as beam headings, DX graylines, resistor colour decoding and coil turns. In addition, a log book and a satellite locator are included and these make beaming in The Simpsons a lot easier. A minority flavour disk, but well programmed and useful to someone, somewhere, possibly.

STF Rating - 75%

#### HARDUP Caledonia PDL - Disk AU\_0067

Hard drive backup utilities are a bit like bicycle pumps - they may be a bit of a pain but you're going to regret not having one. This is a fully featured utility - just specify your source drives and your destination drives and then let the utility do its work. While backing up your hard drive is a considerable pain in the proverbial, it's useful to have archived disks nestling safely away in your disk box. Practical and efficient.

STF Rating - 82%



#### **REVENGE DOCU-MENT DISPLAYER TRuST PD - Disk UTL58**

The ST Desktop document display is weedy and useless. This document displayer is a jolly good piece of programming. Once it's

#### want to view, scroll up and down with the mouse and perform a variety of functions on the text block edits and searches for example. A useful utility if you're not using a Desktop replacement.

loaded, you can simply specify the text file you

#### STF Rating - 74%

#### ine Kevenge Document Displayer Version 2.01 (Feb 17 1991) File: DISPLAY.TXT Size: 00018993 bytes 00491 lines 00008 pages

- Goto the lop of the Alternate B - Goto the bottom of the document.
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Alternate N - Find Next Occurrence of a phrase. Searches the document for the next occurrence of the phrase that you originally searched for using ALT-F. IAA98 - AA119 lines

Revenge Document Displayer has sophistication, style, mouse control and the kind of gosh-darngolly good looks you just don't see these days

#### **GERMAN TRANSLATOR** Sphinx Software - Disk UTI94

A large percentage of PD arriving in this country originates in Germany. The main problem with this is that the documentation is in German and thus useless to the vast majority of ST owners. This translation utility could prove useful. It reads a text file, translates it and then saves the translated file. German to English or English to German translations are possible and the program is very swift. Even so, the quality of the translation is highly questionable. You can gleam some meaning from the text, but don't expect much - it doesn't speak German very well.

#### STF Rating - 65%



A cheap, effective way to stop you slinging your ST across the room by its SCSI lead with Hardup. Even if you are hard up, you can afford this PD backup utility to safeguard your hard drive data

#### ART & MUSIC ART & MUSIC ART & MUSIC

#### **DEGAS CONVERTER** Floppyshop - Disk ART36C

Because most DTP programs operate in high resolution, the vast majority of illustrations (namely those drawn in low resolution) are normally of little value. This utility sidesteps the problem by converting those low-res piccies into a lovely two-colour hi-res IMG format. You can then import them into your DTP package.

#### STF Rating - 78%

#### **DEMO CREATOR Riverdene PDL**

All right, the demos you create won't look like the Care Bears' latest efforts, but if all you want is a scroll-text, a piccy, a sprite and some chip music, then give it a bash. Be warned though, the whole thing is in French. However, if you can



Never let it be said that ST FORMAT can't take criticism on board. This glorious effort at demo creation in Demo Creator is FORMAT Gold for sure

command a smattering of schoolboy franglais then you should be able to work out what most of the menu options are (Editeur de texte. for instance, isn't exactly impossible to suss out). Fun and frivolous.

STF Rating - 83%

#### The FORMAT PD directory

Where to go for Public Domain software - demos, games and utilities for around £3 a disk (or even less)! Note: if you write to any of these PD libraries for a catalogue, remember to enclose an SAE

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Senlac, 14 Oaklea Close, Old Roar Road, St Leonards On Sea, E.Sussex TN37 7HB = 0424 753070 Shoestring Software, 78 Carmarthen Road, Waun Wen, Swansea SA1 1HS

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Wizard PD, 178 Waverley Road, Reading, Berks, RG3 2PZ. © 0734 574685

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#### BUYER BEWARE: Inclusion in this directory does not imply that ST FORMAT endorses or recommends any individual PD Library in any way. Our aim is to make this directory as complete as possible.

If you run a PD library not listed here and would like to be included, or if you are already listed and want to amend any details, then send full details and a copy of your latest catalogue to: PD Directory, *ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW

#### DEMOS DEMOS DEMOS DEMOS DEMOS DEMOS DEMOS

#### MEGABLAST **Riverdene PDL**



There's something of a trend occurring in the demo world. New coding groups are releasing high quality sampled music demos with

little in the way of graphics. Megablast is a perfect example. The sample comes from the song by Bomb the Bass which accompanied the excellent shoot-'em-up Xenon 2. This is a very high quality sample which sounds excellent when amplified through the stereo – in fact it's almost CD quality. ■ 3-2-1, Thunderbirds are go! What's more, The French New Year What's more, this is no 15 second splice you get a good two-and-a-half minutes of Bomb the Bass. Speaker bruising.

STF Rating - 92%

#### AWAKENING OF THE GODS **Riverdene PDL**

Kruz definitely know what they like musically. The Awakening of the Gods demo consists of four screens with chip music and suitably (or should that be unsuitably?) satanistic imagery. The one sample edit in the demo is very short but clean and well spliced. Graphics are smooth but uninspiring at times. Nothing special.

STF Rating - 70%



Demo gets the ST FORMAT vote for the worst reset demo ever

#### SLAY STE DEMO 1-4 MPH - Disk DEME10

The Slaytanic Cult boys return with this STE-only soundtracker demo. Judging from the scrolltext, the chaps are about to sit their A-levels and it shows - the disk looks half-finished. Gripes aside, there are four excellent tracker tunes here. The second tune is the best because it lets you monkey around with the bass, treble and balance of the sound. The Techtron demo which also appears on the disk shows off the STE's hardware scrolling to great effect. This is good enough to make any STE owner proud of what his machine can do.

STF Rating - 85%

ST T GOLD

#### **THE FRENCH NEW** YEAR DEMO **Riverdene PDL**

Don't know what it is about French coding groups, but they must have the collective IO of a comatose hamster - they insist on swearing constantly in the scroll-text. The Thunderbirds is a case in point. Come on, lighten up, guys! In any case, there's little to commend in this demo. Best spots are the two soundtracker songs. The graphic screens are pretty poor and the whole thing has one of the worst reset demos ever.

STF Rating - 66%

#### SHAMEN **Riverdene PDL**



The sampled song demo glut continues with this choice cut from Shamen. The Sirius Cybernetics Corp (two blokes from Canvey Island) have done an

excellent job with the Shamen's Progen song. In order to get the sample sounding better than a weedy transistor radio placed under a bridge, the bovs sampled at 44KHz, compacted it down to 22KHz and then again to 11KHz. As a result, the bass sounds like bass and the vocals are clear enough to sing along to. Exhilarating.

STF Rating - 92%



## **Public Dominator, Atari ST/STe software**

	•MP21 - system.
Public Domain software is simply software that is allowed to be copied freely, since the authors have decided to share their programs with all users, for this reason software can be grouped	•A138 -
together on disks which are sold at an equal price depending on how many you buy, when you buy any of the disks on this page	
you may copy and give them to anyone! each disk has a code number which is denoted with this symbol - • - what follows the code number is a brief discription of what is on the disk. all the programs are fully working and most come with documenation on the disk. We will also give as much support as is reasonable.	<ul> <li>MP8 -</li> <li>Master f</li> </ul>

#### **Abbreviations Used**

Throughout the advert the following abbreviations are used. CSR - Colour Screen Required. MMR - Monochrome Monitor. 1MB - 1MB RAM required. DSD - Double Sided Disk.

#### TELECOMMUNICATIONS

•A85 Infinity BBS this is the disk if you want to start your own Bulletin Board System.

A48 - Uniterm v2.0c. Its many features include: Xmodem, A25 - MMR. Font Master excellent document processor. Ymodem, Kermit, VT100, VT102, VT200 and much much more. Includes a full manual on the disk. A45 - Star ML10/LC10 font designer v1.1.

Al66 - Vanterm v3.71. It many features include: Xmodem, Ymodem, Compuserve B, auto dial, fully configurable etc. •A176 - StarTerm V1.11 its many features include: VT52/100/102

terminal emulations, Viewdata, Xmodem etc. Includes manual on disk •A119 - Flying Start v1.04 1200/75 comms program for Prestel.

•A8 & •A118 & •A105 - Packet HAM radio software A93 - Txt v2.0a teletext program.

#### APPLICATIONS

•A190 - DataStore the excellent fully featured database system. •A49 - STSheet a good simple spreadsheet. •A72

- Personal finance - bank, building society accounts, standing orders etc. •BP1 - CSR. Electronic Bank Statement persoanl accounts

•A94 - Data handler v1.0 database. Context text editor.

•A96 - DSD Sheet v20 Powerful lotus 123 spreadsheet

•A108 - DSD. 1MB. B/Stat, sophisticated graph, stats analysis.

•A121 - Pools - Expert Results Predictor v2.5.

STWriter Elite v3.6 the only PD word processor •W5 - Micro-emacs v3.925 text editor.

#### Exclusive to **Public Dominator! Special Value Packs!**

### Each pack is supplied on 3 double sided disks for only £7.50! All software is fully working.

#### Home Business Pack

Two databases Datahandler and First Base, STSheet and Shee 2 excellent spreadsheets that include graphics and Lotus 123 compatibility. STWriter Elite the excellent word processor and Double Sentry the accounts package.All fully working and fully featured. Order code: MP7.

#### Education Pack 1

Many excellent programs full of colour and music for under 8's covering the following subjects: Shapes, Puzzles, Songs, Create Stories, Drawing, ABC, Mr Potato face, KidDTP, Graphs, Grids, Music, Notes, Piano and Spelling, A colour screen is required Order and MP15 Order code MP16

#### Education Pack 2

Many excellent programs for over 8's covering the following subjects: Understanding Algebra, Understanding Geometry, Understanding Ratio, Understanding Trigonometry, ShipWreck a adventure scenerio for teaching maths at all levels, World a quiz about most countries and their capitals all over the world, Chemical Structure interpretor, Elements Periodic Table, Maths Test, Numerical Go Round, Number Maze. Also included are Quizz and Study 2 study aids. A colour screen is required. Order code MP17

•Starter Utility Pack• This pack was compiled with the new ST user in mind, to enable you to get just about all the utilities you may ever need, plus a wordprocessor. 2 databases and a graphic package. The pack wordprocessor, 2 databases and a graphic package. The pack includes: NEOMaster the excellent graphic package, STWriter includes: NEOMaster the excellent graphic package, STWriter Elite the brilliant word processor, Firstbase and Datahandler the 2 databases plus the following utilities: ARC and ARCShell the brilliant file compresser. Private Eye the system info utility, intaSect RAM disk, Printer Spooler. BIG colour emulator for monochrome monitor owners and Monochrome emulator for colour screen users, Virus Killer 2,picture converters, extended formatters to get more space onyour floppy disks, time and date setters, clocks, RAM free, autoGEM for STFM owners who want to autoload GEM applications and loads of other utilities. Colour screen required. Order code: MP1.

#### Graphics Pack 1

ANI ST the excellent animation package, fully working allows you to create your own animationsl. Pearle the ray tracing package with full examples, MiniPaint the excellent fully featured painting package, NEOchrome the excellent painting program, and picture convertors. Colour screen required. Order code: MP4.

#### •Graphics Pack 2•

Master Painter the excellent fully featured paint package that includes multipy screens, ColourBurst II the 800/3200 shades on screen at once paint package. Fine Line the drawing program. Fractal Zoom the most comprehensive fractal generator on the ST. the Atari IMage Processor (1MB), MegaBlit the paint package Studio and VanGogo2 excellent paint packages.

Colour screen required. Order code: MP5.

A 8 disk pack for £20.00

DSD 1MB Onus v210 powerful spreadsheet

Double Sentry v0.00 small business accounts

Network a simple network system.

#### FONTS

wing font packs are exclusive to Public Dominator. GDOS GEM Font Pack contains 171 fonts, the GEM Font ont editor and a PD version of GDOS special pack price

lowing Calamus font packs each contain 3 disks • MP9 - Calamus Font Pack 1 contains 40 fonts only £7.50!

- MP10 Calamus Font Pack 2 contains 32 fonts only £7.50!
   MP15 Calamus Font Pack 3 contains 34 fonts only £7.50!
- MP12 Signum Font Pack 1 contains 73 x 24 pin printer fonts.

This is a special 3 disk pack for £7.50! DSD. MP13 - Signum Font Pack 2 contains 68 x 24 pin printer fonts.

This is a special 3 disk pack for £7.50! • MP14 - Publishing Partner Font Pack contains 19 fonts for use

with Publishing Partner. A special 3 disk pack for £7.50!

•A63 & •A64 - FontKit v3.31 an Epson, ST screen and Degas font editor.

#### EDUCATION

BP17 - CSR SPLASH is an art package for young users. Age 3 to 10. Being icon-driven, it is extremely easy to use and condusive to artistic creativity. All usual functions such as draw, line, fill, palette, disk, cycle, etc.. are available. Ideal as an introduction to computer art.

- CSR. DSD. FUN TIME 1 and 2. Age 3 to 6. This disk is crammed with delightful tuition on many subjects: shapes, clock, BP10 - CSR, Classroom Maths for students age 7 to 12.

•A188 - CSR. NOTSTE. Chemstry for all V2.0 •A178 - CSR. NOTSTE. Can you spell.

#### UTILITY DISKS

•A15 - STSWitcher will split an STs memory into 2 seperate parts allowing you to use 2 programmes at once. Autocopy - copies files into RAMdisk.

•A31 - 1ST Word printer driver files

•A40 - Hard Disk 1: Directory counter, GEMsoft a 40 folder fix, HardAuto, SBackup, Turtle backup v3.01 and UnTurtle restore v1.1.
 A52 - Hard Disk 2: Folderxxx a 40 folder fix, an excellent directory lister, hard disk install, hard disk autoboot and other hd utilities.

A172 - Hard Disk 3: The Vault excellent hard disk backup program. A41 - Monochrome Emulator v5. CMFonts converts MAC fonts to

•G105 - Tile Games v2.0. ST GDOS format. •A59 - Spell v2.3 spelling checker, Magic Shadow archiver - store,

•G107 - Patience an excellent card playing game includes golf, little spider, calculation, siege, raglans and elevens. backup and create other disk formats including Atari ST, MSDOS and CPM

•A88 - DCFormat v3.03 THE ST disk formatter features extended formatting, MSDOS boot sector, and much more, Meg a •G109 - Stumped the cricket game. •G110 - Yahzee the dice game Minute Elite v2.1, 1MB a minute HD backup, Megamatic v1.195 -•G111 - Stocks and Bonds a stock market simulation. •G112 - Upstart a shoot the cherries up arcade game. excellent! boot utility.

•A90 - Superboot v6.0 THE ST boot program allows specified •G113 - Spaceballer an platform excellent game. •G114 - The Rush is an excellent platform game. picture, auto run programs and lots more. Screendump24 v2.0 •G115 - Bumper Jacky a great platform game. •G116 - Zoltar a massive shoot 'em up. •G116

Abt/Help screen dump to Epson LQ800 or compatible.
 Abt - File Selector v6.0 replacement GEM file selector. Virus Killer v2.01, Filespy v1.0 file displayer.
 Apr - MMR, Sticker III. THE disk label program.

•STW 41 - FSelect v3/1989 by Martin Patzell the excellent •G119 - NOTSTE, Bunny hunt, alternative file selector. ICone allows you to design icons and assign them to a file, so that each file can have its own icon •G120 •G121 - Top of the Pops record company simulation. Alog - Quick Disk, Quickfind v1.5, Quickindex v1.5, QuickST v1.2, •G122 - NOTSTE. Heads and Hammers. •G123 - Fuzzball and Bounce out 2 platform games.

Quickview v1.3, Quickinf v1.3, Quicklabel v1.1, Quickprint. •A111 - Headstart v1.1 GEM auto booter.

•A120 - Copiers: copy beef, super copy, copy v2, copy track, disk copy, thibbler and others. accent.

A128 - Recover, Bootinfo allows you to put any text on screen at boot up. FSCK v11 the file system checker and repairer. Dvorak keyboard changer. GEMlabel v3.0, RateHD a hard disk performance checker. Undelete will undelete file that have been deleted

when you reset your ST. The Formattor v1.21, Graf Tool, Chart gives 50p to the author and there is no more to pay. All these

#### **Why Public Dominator for your PD** software supply?

1. We have been trading in this field for over 5 years so (unlike the majority of PD libraries) we know what's what when it comes to PD, this is proven with regular orders from every corner of the globe. 2. Huge selection from over 800 disks!

- 3. All disks Virus free!
- 4 All disks copied with verify flag on.
- Order by telephone or post with same day dispatch. 5
- Pay by Visa, Mastercard, Cheque, PO or Cash. Government orders welcome.
- 8. Expert advice. Got a question about our software? Telephone and ask for the Technical department
  - For a reliable, fast and friendly

expert service try us!

DSD. MMR. TeX the document processor and typesetting maker, BootB a drive B booter. GOACC allows you to select desktop acessories

The British Telecom Inland Call Calculator v1.02 A136

A157 - Custom Formattor, Boot Sector Storage.

 A158 - CSR. The Complete Amateur Astronomy Guide.
 A163 - DSD. Gemini desktop replacement. Excellent all English version of a replacement desktop similar to NEOdesk. Includes the PD version of GDOS.

•A167 - BIG Colour Emulator very good colour emulator for monochrome screens,

A168 - ABCGSH v21a really good shell for any program

 BP8 - CSR. Music Cassette Label Printer.
 A173 - ARC v6.02, ARC shell v1.98, LHarc v0.5b and v1.13, Turboarc, ARCit auto arcs and unarcs entire disks. Also unarc,

unarcit and unzip. •A174 - Dcopy v3.12, Bigscreen allows you to use GEM windows larger than the actual screen. Deckey how to plug in a dec

keyboard. Filespy v1.2 file browser.
A180 - MMR. DSD. Electrics disk contains lots of programs written in fast basic for students doing the BSC electronics course at Keele University.

•A181 - Interprint2 the ultimate printer controller. Printplus v1.1 prints 1ST Word documents.

A182 - Expander expands a single sided disk to a double sided MedRES STE a fix to the medium res bug on STEs. Turbo ST speeds up your ST.

•A186 - DocDisp the best document displayer on the ST includes the feature to load picture file and a non case sensitive search facility. FCopy 3.

•A190 - Datastore v1.0 an excellent database. Toxic Formatter v2.0. Batch the CLI. •A191 - Video Manager v4.0 allows you to catalogue your videos.

GAMES

ALL games require a colour screen. We have got hundreds of excellent games disks which are detailed fully on our diskcat only £1.00!

•G85 - Skate tribe. A very good skate board game.

•G100 - Escape from the Tomb of RA platform game.

•G103 - DSD. Pop Eyed a 60's music trivia strip quiz. •G104 - Nova an excellent galaxians type shoot 'em up.

England Team Manager football game.

- DSD. League Soccer football game

•G132 - DSD. Ditch Day Drifter a text adventure.

•G124 - Motor cycle a good arcade type motocycle game. •G129 - Snakes and Ladders the game.

•G131 - 1MB. Anagrams, you enter a word and it will show all the

**BUDGIE GAMES** 

The Seal of Reliability

- MMR. Risky Construction Set v1.5. you create a fictious

•G86 - DSD. Tennis excellent full graphics tennis game. also on

disk are card games: patience and poker. •G93 - Jitterbug you move around a large area picking up things

G93 - Jitteroug you move around a nand killing things.
G95 - Chance a good shoot 'em up.
G96 - Mutant platform game.
G97 - DSD, IMB, The Star Trek game.

•G101 - Overlander good shot 'em up. •G102 - Key to Atlantis good shoot 'em up

•G106 - The Name Game.

•G117 - Flight Simulator.

possible anagrams

'world' and have wars etc.

•G118

•G133

•G108 - First Serve a tennis game.

•G98 - Tracker shoot 'em up. •G99 - Haunted Monastry platform game

## Public Domain, Licenseware, Shareware

games work on all ST/STEs and require a colour screen.

- •B1 Damonoid a good space game •B2 Football 88 league simulation.
- •B3 Blitz III action shoot 'em up
- Othello reversi board game •B4 •B5 Pro Darts 501 down.
- •B6 DR Boris defuse the TNT bombs before they destroy you!
- •B7 - Ball Zone the breakout game.
- •B10 Moneyspinner the slot machine. •B11 Maelstrom vertical scroll shoot 'em up.
- •B12 Ace invaders a master implementation of Space Invaders. •B13 Zenith arcade space battle.
- B14 Goldrush multi level platform game
- •B16 Word puzzle generator.
- •B17
- Make a break trivia quizz where you play snooker by ring the questions.
- B18 Parabellum brilliant platform game
- Tri Heli a mega must have faste game. Bandit the one armed bandit. •B19 -
- •B22
- •B23 Space Blob excellent platform game. Slippery Sid great maze game. B24
- B24 Sippery Sig great maze game.
  B27 Psicotic if it moves shoot it! Mega space game.
  B30 A quest for galaxia a master implementation of Galaxians.
  B34 Safe as houses Monopoly game.
  B35 Hostile reception Xenon type shoot 'em up.
  B40 District Lizzu concerned houses Pagman and houlderdach

- •B40 - Dizzy Lizzy across between Pacman and boulderdash. •B41 - Exodus superb graphics arcade game.
- •B48 XWPuzzle.

#### B50 - Space Invaders and Detonator. B52 - 1MB. Douglas Rockmoor the greatest ever impletation of Boulderdash ever! Brilliant!

•B53 - MMR. From Little Acorns

CSR. BERT the SQUIRT An 80-level game solely different frequencies. designed to help Bert get fatter.

•B59 - CSR. G-ORB explore inhospitable galactic cells. Use your •M22 - DSD. Quartet samples disk 1. FDM space mallet to activate cosmic levers. 80 levels

·B60 - CSR. GUIDED MISSILE A two-player game in which each

Player guides his missile towards enemy sites. •B61 - CSR. A WINTER'S TALE This is Dizzy Lizzy II with the •W1 - CSR. Type It! The brilliant touch type tutor. same addictive gameplay and 40 more levels. Set in a serene •W4 - Proff v1.0 very powerfull text formattor Christmas atmosphere

•B62 - CSR. COLONY An excellent scrolling "missile command"

•B62 - CSR. SPACED WELLER Your aim to create coloured format. ISTW2PS as above but including 1st Word plus graphics B63 - CSR. SPACED WELLER Your aim is to create coloured format. ISTW2PS as above but including 1st Word plus graphics lines upon a madical grid. Points are awarded for every such lines. very flexible. Snapshot - outputs hires screen to PS printer, choice and examples of Postscript source code and lines upon a magical grid. Points are awarded for every such lines. very flexible. Snapshot - outputs hires screen to PS printer, choice Spheres of different colours have different effects. Beware of of size, angle etc. and examples of Postscript source code and chain reactions

•B64 - CSR. CASTLE FRANKENSTEIN As the title implies, your ultimate goal is to create a Monster out of a pile of bones that has gone missing. The bones are scattered throughout the first 19 levels of the game, and all you have to do is get them to level 20, Best of the gaine, and an you have to do to get hain to be the where you pull the odd lever and stick them together.
B65 - CSR. DOUGLAS II - 1/2Mb version of B52.
B666 - CSR. MISSILE ALERT! Destroy each and every wave of

BOD = OCH HINCELE
incoming missiles and planes.
BOT - CSR. PACO A Boulder Dash type game where you have to

dig to find the diamonds etc

•B68 - CSR. Black Scar Mountain A good adventure that includes graphics. •B69 - CSR. Tablit II An excellent word game where each player

has a set amount of letters with each letter being worth a certain •D158, •D159 & •D160 - CSR. DSD. NOTSTE. Batman the Movie amount of points, and you have to create words end to end

#### GRAPHICS

•GR1 - CSR NEOchrome Master v2.1 excellent graphic package. •GR6 - Degas disk - 155 fills, 10 brushes, 7 fonts, printer driver files

DSD. 1MB. AIM v2.31 of the Atari IMage processor gem •GR7 based

•GR14 MMR. Public Painter v0.1

•GR15 - DSD. 1MB. MMR. JIL2D CAD drafting program. •GR17 - Picture Convertors. Print Master/ Degas convertor, NEO/ GRI7 – Picture Convertors. Print Master/ Degas convertor, NEO/ •D202 - DSD. CSR. NOTSTE. Predator demo by The Islander.
 Degas/Tiny/IFF /Spec512 to NEO/Degas/IFF convertor. IMG/AIM •D207 - CSR. Snowman demo the 1/2MB RAM version. Excellent!
 convertor IMG/AIM to postscript, Mac GIF stripper, Spectrum 512 •D210 - CSR. 1MB. DSD. The Star Wars Walker I demo excellent.
 spc/spu to GIF convertor and Spectrum 512 spc, sps and spu •D213 - CSR. 1MB. DSD. The Star Wars Walker II demo. slide show •D236 - DSD. CSR. Inner Circle Decade damo. •D240 - DSD. CSR. Star Trek The Enterprises leaves dry dock

 slide show.
 •D240 - DSD. CSR. Star Trek The Enterprises leaves dry dock

 •GR18 - MMR. Eplan an electrical circuit cad program.
 •D240 - DSD. CSR. Star Trek The Enterprises leaves dry dock

 •GR19 - DSD. Fractal Zoom v3.1 the most comprehensive fractal demo, also 2 excellent animations of the Reliant flying in space.
 •D247 - CSR. The Lost Boys Life's a Bitch demo.

 •GR20 - JMG utilities. 1. convert2img v0.9 converts any degas
 •D249 - CSR. DSD. Animations: the juggling clown, lock on fighter

To order, simply quote the disk code number. Our DiskCat has **Disk prices:** ndepth details of all Send an A5 stamped SAE for a suitable for most graphic and desktop publishing packages. Subjects covered: Fruit, Herbs, Meat, Arrows, Special 800 disks only £1 o all disks are priced equally depending Ocassions, Vegetables, Kitchen Utencils, Cups and Glasses, FREE! on how many you buy: FREE with any 5 disks copy of our printed catalogue. Shows 1 to 5 are £3.00 each, 6 to 10 are £2.75 each concise details of the top 400 disks 11 or more are £2.50 each Free with all orders. All prices are fully inclusive. Please send a cheque or postal order suitable for most graphic and desktop publishing packages Subjects covered: More Art Deco, Babies, Boys and Girls, Lots of humourous, Illuminated A to Z, Scrolls, More Special ocassions and Calligraphic Ornaments. payable to Public Dominator ATARI VISA Credit MasterCard, P O Box 801, Bishop's Stortford, Herts, England, CM23 3TZ. **Card Hotline** 

Foreign Orders: All foreign orders must add 10% (minimum £1.00). Non EEC countries & Spain, Greece, Portugal, Eire & Italy MUST also add £1.75 for registered post.

format, tiny, neochrome, macpaint, spectrum compressed and marilyn monroe talking micrmag sunglasses and trukking. uncompressed to a monochrome img format. 2. img quick viean •D250 - CSR. DSD. 1MB. Animations: the barbers shop, walking foreman, channel 4 logo and unicycle. img file viewer. 3. the img slide shov1.1.

**STE DEMOS** 

•D228 - CSR. 1MB. AN COOL from The Care Bears demo. •D229 - CSR. 1MB. The Jungle demo!

•D230 - CSR. Movie shows off the stereo sound+the blitter chip.

•D231 - CSR. 1MB. BOING a bouncing ball with colours scrolling through it and the sounds of Axel-F

•D232 - CSR. 1MB. Fantasia! Sounds of the Cure and excellent

graphics. Press HELP for instructions. Note: this STE demo does

D233 - CSR. 1MB. 3D Scroller, sounds of The Cure and excellent

**NEW DISKS** 

We add dozens of disks every month to our catalogue, if you have we add dozens of disks every month to bal catalogue, in you have some Public Domain or Shareware that we do not, then send it in! We will swap any 2 of our disks for each 1 of yours. Please check

Your Second Manual

to the Atari ST

Having got your computer and read the manual that came with it,

you are probably still completely in the dark about the ins and uts of using the ST. The book Your Second Manual goes indepth in an easy to understand way about every aspect of using your .ST - what is a RAM disk? A BBS? How do I format a disk and

auto load my favorite program? It explains what a computer is, about the ST keyboard, mouse, disks and disk drives, the screen

and about games, graphics, word processing, DTR User Groups, GDOS and lots more. If you want to get more out of your Atari ST, this is the book for you!

Only £8.00

fully inclusive VAT, P&P. Order now! We

will despatch today! 1ST Class!

**Clip Art** The following 4 packs of clip art are disks that are filled with

black and white images that would be suitable with all graphic and desktop publishing packages.
 The Images are complete and copyright free.

Clip It! Volume 1. £12.50!

Hundreds of clip art images on 5 disks all in Degas format suitable for all graphic and desktop publishing packages. Subjects covered: sports, flags, animals, cartoons, humorous,

Xmas, Jewish, borders, Halloween, Valentines, horses, eyes, alphabets, hands, 1930's trademarks, zodiac, cars & more.

Clip It! Volume 2. £12.50!

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pointing hands, food & lots more.

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5 2

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Hundreds of clip art images on 5 disks all in IMG format

Here are some examples.

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Here are some examples:

•D234 - CSR. 1MB. Psychedelik House II By The Overlander.
 •D251 - The Black Cats STE demo excellent!

These demos will only work on an Atari STE

•D144 - CSR. The Official Atari France demo! •D214 - CSR. Sound OFF.

not work on STEs with TOS v162!

D252 - The 2nd French STE demo brilliant!

•GR21 - ANI ST the fully featured animation package. •GR24 - CSR. Pearle the 3-D ray tracing package.

- **PROGRAMMING LANGUAGES**
- L1 68000 Assembler, Xlisp, STLogo, Tiny basic
- STBasic
- •L3 Advsvs adventure writer language
- •L4 Forth83 programming language. L5 - PDC v2.0 compiler.
- •L6 Toy Prolog
- •L7 Xlisp v1.7
- •L8 Forth from bradley firmware
- .L9 ST lcon v6.3, based on Snobol4.
- L10 Little Smalltalk.
   D233 L12 C make. This is so like the unix make that you should read graphics! the unix documentation
- •L13 and •L14 Modula-2 development system v1.0.
- •L15 DSD. Sozobon c compiler •L17 - DSD. AGT v1.19 the adventure writer

#### MUSIC

M9 - MMR. Music Writer lets you create music on screen with •MI5 - The Accompanist V2.3 MIDI 16 voice sequencer by Henry that we do not already have the software before sending it in

Cosh

•M18 - DSD. Soundtracker player and Soundtracker modules converted from the Amiga. •M19 - DSD. Soundtracker player and Soundtracker modules

converted from the Amiga

•B53 - MIME trail and source the second seco

•M21 - DSD. Noizetracker

M23 - DSD. Quartet samples disk 2

#### WORDPROCESSING UTILITIES

•W9 - Newsletter maker - allows you to make a GEM disk

utilities to control printer

#### DEMOS

- All demos require a colour screen. •D122 DSD. CSR. NOTSTE. The Union demo! •D123 DSD. CSR. 1MB. The Amazing Snowman demo. •D125 DSD. CSR. NOTSTE. The Carebears Cuddly demos. •D129 DSD. CSR. The Watthewed demo. •D128 - DSD. CSR. The Wattaheck demo.

•D129 - DSD. CSR. The Swedish demo including sync and the

- carebears •BD1 - CSR. DSD. Mind Bomb the latest mega mega must have
- demo

•D149 & •D150 - CSR. DSD. 1MB: NOTSTE. Delerious Demo from the Alliance

Demo. Excellent 3 disk full colour digitised demo of the film. •D221 & •D222 - CSR. DSD. NOTSTE. 1MB. Dragons Lair demo

by IRS animated scenes from the game.

•D243 - CSR. Trans Beauce Party demo •D244 - CSR. DSD. Phalanx Overdrive demo.

•D162 - CSR. DSD. The lord of the disks 'Dragons lair' demo excellent! •D176 - CSR. DSD. The Care Bears 'So what demo', excellent!

•D191 - CSR. DSD. 'Mini Run'. •D197 - CSR. DSD. Space Ace amazing graphic animation.

0279 757 692

Mon-Fri 9am-5pm





■ Face the facts: your ST can create incredibly detailed digitised images – and you don't have to spend a fortune to get the kind of results shown here

# Put yourself in the picture

Digitisers give your ST the chance to view the world as never before. Dave Burns gives you a rundown of the latest digitising hardware

## FULL-COLOUR DIGITISING ON YOUR ST

For colour digitising, you can either fiddle with coloured lenses fitted one after another to a camera, or use an automatic RGB splitter box. There are two currently available.

♥ Vidi-RGB is a hardware add-on that enables you to create colour pictures without using a camera. All you need is a video recorder with a perfect freeze-frame facility. This RGB splitter box automatically sorts out the required red, green and blue shots and then merges them together to produce a final colour image. The software has

everything you're going to need. There are plenty of options –

operated via the mouse button or by keystrokes. STF Rating – 82% Vidi-RGB is available bundled with Vidi-ST and Vidi-Chrome ST (£179 for all three) or on its own for £79.99. Rombo Productions ☎ 0506 414631

• Third Coast's RGB Splitter works on the same principle but incorporates a dial to select the colour you wish to digitise – red, green or blue. It's hard obtaining the right colour shade. STF Rating – 64% £129.99 Third Coast Technologies = 0257 472444



■ With a good digitiser package like Vidi-ST and almost any art program you can make your ST do wonders – lay your own text over a familiar digitised image, for instance, or modify the image itself. The only limit is your imagination (and taste)

igitisers are small pieces of hardware that slot into your ST's cartridge port and enable you to take frames from TV or video images and save them as *Degas* or *Neochrome* pictures. Once a frame is safely on disk, you can edit it with your favourite art package or use it directly in your own desktop publishing setup or with a word processor like 1st *Word Plus.* Within a very short time you could have an extensive collection of artwork, tailored to your own individual requirements.

Most digitisers are mono – they can create only monochrome images – but with the addition of some extra hardware it is possible to produce colour digitised images. Once you've invested in a digitiser, all you need is a bit of creative imagination and you can create a series of pictures to use in your own animations, liven up your videos (see this issue's special feature, beginning on page 30), or even try your hand at writing a demo. The creative possibilities are endless.

**The Realtizer** is one of the more expensive digitisers available, but it comes with everything you need for colour digitising: three lenses for use with a camera, the digitiser itself, a lead and a manual. The manual itself isn't too clear – at this price you'd expect better quality – but it does cover the basics. To use the digitiser, how-



#### BEST D = . THE OF THE • 8-D

Provide States	( PRICES	BU.
	I disks guaranteed virus free!	BU.01
	disk£1.99 disks + file box£15.99	BU.05
	disks + file box£24.99	BU.07
Price	es are inclusive, nothing to add!	BU.29
BG.	GAMES	BU.34
BG.01	Monopoly; The classic property trad- ing game. Plus: Chess,	BU.36
	Backgammon, American Football	BU.37
BG.02	simulation Haunted House; Professional quality	BU.39
	platform game. Plus; Daleks, Aggravation, Warzone, Connect 4	BU.42
BG.06	DGDB; Gauntlet style game. Plus; Stone De-Luxe, Breakanoid and Fruit	
BG.14	Machine simulator. Invasion Adventure; STAC produced	BU.44
DQ.14	text and graphics adventure. Plus:	BU.45
	Sherlock Holmes; Superb Cluedo style detective game and Paranoia Spooks; Super Pac-Man version.	BU.46
BG.17	Spooks; Super Pac-Man version. Pipe panic; arcade favourite!	BU.47
BG.18	Pipe panic; arcade favourite! Megaroids; Asteroids version. Plus: Line Up 4, Hangman, Explode.	
BG.19	Line Up 4, Hangman, Explode, Blaster, V-Kill; Virus Killer. Cards; Cribbage, Poker squares,	BU.48
50.15	Solitaire, Klondike, Blackjack. Plus:	
BG.20	Rubics Cube, Fun face Dungeon Master; Maps of levels	BU.49
	showing doors, treasure etc. Plus 40+ pages of information, hints, tips	DUISO
BG.24	Give us a break; version of the Pub Snooker/Trivia game.	BU.50
BG.34	Assassin; Excellent Graphic adven- ture written with STAC.	BU.53
BG.43	Wizards Tower; Superb Text and	BU.54
BG.44	graphics adventure written with STAC Zoltar II; Super Shoot-Em-Up game	BU.56
BG.45	with digitised sounds! Orbit II; Superior Arkanoid copy, origi-	BU.57
	nally free with STOS, now compiled and with digitised sounds!	
BG.47	Vegas Gambler; Professional Casino style games: Roulette, Poker,	BU.58
BG.55	Blackjack and Slot Machine! Froggy; Good version of the old clas-	BU.59
DQ.00	sic road crossing game. Plus: Caves	
BG.56	of Rigel; Maze type arcade game. Cribbage, Checkers, Joust, Target,	BU.60
BG.57	Yahtzee Dungeon Master - NEW Dungeon,	
	created using Dungeon master edi- tor! Original Dungeon Master game	BU.61
BG.58	required! Soko; Original addictive 50 level puz-	
BG.59	zle game. ST Format ****	BU.64
BG.39	Bubble Trouble; Addictive and smooth Pacman variation with sam-	BU.67
	pled sound. Jumpster; Q-Bert style game.	
BG.62	Millipede; very good version of the old arcade classic.	BU.68
BG.64	STumped; STOS produced tactical Cricket game. STOS not needed to	BU.72
BG.65	run!	MU.05
	Joust; Arcade game version. Space War; Space strategy game.	10.05
MG.01	BOLO; Arkanoid style game, but dif- ferent, paddle can move all over	
MG.04	screen, works in colour and mono! Bumper Jack: STOS produced	MU.07
	Platform game. Plus Yatzy; Dice game.	MU.10
MG.05	Mars Maze; another excellent STOS	MU.12
MG.08	produced platform game. Star Trek - Next Generation;	MU.13
	Encounter at Arcturus: Battle the Ferengi in this strategy game with	
	digitised sound samples. (NOT STE)	

## b, address bok, database etc. Assistant Chef; Excellent recipe database for the cooks... Pools; Expert results predictor includes large match database! Fractal Zoom; comprehensive fractal generation program GEM fonts; 60+ fonts for Hi-res screen and Epson printers ...MG utilities, convert Degas, Neo, Tiny etc. to .IMG format! Planetarium; Astronomy, view the stars from anywhere in the world. Mouse Pointer; design your own pointer! 50 shapes included! etc... Eplan; CAD program for design of electrical circuits, documentation on disk. Print out finished circuits! Home Accounts; up to 3 different U.42 U.46 Home Accounts; up to 3 different statements; 100 entries per state-ment. Regular income and outgoings ment. Regular income and outgotte feature. Typing Tutor; excellent English typing tutor. Includes exercises on Home Keys, Numbers, Capitals etc... GEM Font Master; super font editing program, use 3 resolutions! Opus spreadsheet + charting pro-gram - Quality shareware! (D/S) Amateur Radio utilities; Morse tutor, Grayline calculator etc. Your second manual to the Atari ST, invaluable reference book... ANI-ST (formerly Aegis Animator costing £79.90!) + GFA Raytrace demo! Gemoi FSelect; alternative file selector. Desk Manager; Choose Auto pro-grams & accessories etc... ZX81 Emulator; including 38 program files! Uses the original keyword entry system. Brilliant! BBC Emulator, Apple Emulator, accessories: CPanel & Disk Cache. Disk Toolbox; useful disk utilites! ZX81 Programs; 100 + files to use with ZX81 emulator (BU.59), 3D Defender, Pacman, Chess, 3D Monster Maze... Computing History! Fractal Landscape Explorer, Mandlebrot Show, Spirograph... Cardfile; Simple Name and Address database with search facility VDU v2.4; Virus Detection Utility... FSelect; alternative file selector.

UTILITIES

Neochrome: Professional quality

drawing program plus slideshow. Communications; Kermit etc. Use bulletin boards, transfer files.

STWriter Elite; High quality Word Processor. Fully documented! Label printing accessories; Address, disk and cassette labels.

B-Boot; Enables booting from drive B, address book, database etc Assistant Chef; Excellent recipe

Val.4 Virus Detection Utility... Magniwriter; ST Writer version with larger text! Ideal for use on TV for children or poor eyesight! STE Boot disk; Enables STE to boot up in Medium resolution! etc... Sheet v2.0; powerful spreadsheet with documentation and tutorial. with documentation and tutorial Lofus compatible, 1280 rows x 280 columns! Gemini: superb NeoDesk style desktop raplacement! German origin. BStat; sophisticated graphing and statistical analysis program Hard disk utilities; Invaluable aid to hard disk users... F-Copy 3; Superb copier, will even

backup some copy protected disks. Features: Fast Format, Virus Check, Scan Disk, Multiple Copy, Verify...

#### ..... EDUCATIONA

BE.	EDUCATIONAL
BE.01	Things to do with numbers; full work- ing demo, Kid Publisher, Alphafit,
BE.02	Stage II; drawing program, Gilbert Kidprogs; Kids Graph, Kids Grid, Kids Music, Kids Piano, Kids Notes
BE.03	Kidprogs; Kid Potato, Kids ABC, Kid Sketch, Kid Story
BE.05	Colourbook; Fun for the younger
BE.07	child, an on screen colouring book! Word Extract, word puzzle help Plus:
BE.08	Starchart; astronomy program. Geography quiz; good educational
BE.09	game, plus Maths made easy Spelling made easy, educational pro-
BE.10	gram that talks to you! Jigsaw; load any Degas picture as
BE.11	jigsaw puzzlel Great fun! KShapes and KShapes Plus; great fun for younger children, build up pic- tures' fuzzy felt style!
BE.12	tures 'fuzzy felt' style! Shipwreck; progress through this fun game by answering Arithmetic ques-
BE.13	tions. guillotine Man; Hangman. The Wolf and 7 kids; Superb multi- choice adventure game for the little ones. Race Cards; Give answers to
BE.14	addition sums to race cars. Great! Noahs Ark; Unscrambling letters to form names of animals, includes ani- mal noises, great educational fun!
ME.02	EZGrade; leachers student grading program, Molgraph demo; 3D molec- ular display and manipulation, Easel
ME.04	ST demo; loads desktop picture. Search; Historical study program cre- ated with STAC from the same author as The History File.
BC.	CLIP ART
BC.01	Small symbols; Seasonal, Flags, School, Cars, Disney, Cute creatures,
BC.02	Sports and Recreation, Big Cats Titles, Headings, Christmas, Easter, Halloween, Valentine, Winter sports,
BC.03	Golf, Riding, Water sports Logos, Trade marks, Symbols, People, Racing cars, Fish, Food,
BC.04	Magazine Titles, Symbols Alphabets, Christmas symbols, Lots
BC.08	of eyes, happy, sad, wierd Pictures of Garfield, Beano and Dandy comic characters. Picswitch
BC.09	enables easy viewing & printing! Viz Magazine; comic pictures, plus culinery; utensils, food
.IMG File MC.01	Boys and Girls; Pictures of small chil-
MC.04	dren at play (Clip Art) Illuminated letters; Fancy A to Z. Plus; Funny pictures
<b>SO</b> .	MUSIC
SO.01	Midi special; Steinberg switch. 32 track sequencer, Midi channel scope, Hi-Tech trivia

SO.01	Midi special; Steinberg switch. 32
	track sequencer, Midi channel scope Hi-Tech trivia
SO.02	Composer; enter notes from Midi keyboards or computer, Copy, trans- pose or output. Soundcomputer;
	allows the manipulation of internal sound chip.
SO.03	16 Voice synthesiser; multi voice record, filter of controllers, variable resolution metronome, works on all ST's and monitors and comes with
SO.05	comprehensive manual on disk! Alchimie Jr.' Powerful Midi Sequencer with features not found of many commercial programs. (Mono) (D/S)

#### HELP DA

<ul> <li>DA.01 66 Adventure game solutions! Including: Future Wars, Bards Tale, Indiana Jones, Hitchhikers Guide, Zork 1, 2 and 3, Fish, Pawn</li> <li>DA.02 62 Adventure game solutions! Including: Leather Goddesses, Kult, Ultimas 1 to 5, Space Quest 1 to 3, Trinity, Deja Vu 1 and 2</li> <li>BD. DEMOS</li> <li>BD.33 STE demo; See what your STE is capable of and be amazed! At last a demo as good as those Amiga ones</li> <li>BD.38 ANI ST; 2 excellent animations pro- duced with Ani ST (see: BU.57); Juggling Lamps and the Trash Can demo.</li> <li>BD.39 Teenage Mutant Hero Turtles; Excellent sample of the Turtles theme tune plus picture. Great one for kids!</li> <li>BD.40 Smooth Cyber Studio produced ani- mation featuring a Space Station revolving on a starry background!</li> <li>MD.15 Snowman; digitised animation and music. Brilliant! (Mb)</li> <li>MD.21 The Brilliant! (Mb)</li> <li>MD.22 UNION Demo 2; The Cuddly demol lots of amazing animations accesses by moving an arcade style jetman around the screen!</li> <li>MD.28 Whataheck demo collection, by the Carebears again, Stunning!!</li> <li>MD.29 Like a Prayer; Digitised sample of the Carebears again, Stunning!!</li> <li>MD.29 Like a Prayer; Digitised sample of the Madona song! (Mb)</li> <li>MD.30 Cyber Demos; Buzy Bee, Saturday</li> </ul>
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Madonna song! (Mb)
MD 30 Cyber Demos: Buzy Ree Saturday
Morning Workout, chasers - superb
Animated films from Cyber Studio. MD.32 STE Demos; 400 colour version of
the Amiga classic BOING demo.
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space probe slowly spinning in space
then moving around a planet.
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MD.41 Robocop; Digitised samples of some
of the more memorable sections of
the film plus digitised sound!
Approximately 7 minutes long and comes on 2 packed disks!
(NOT STE)
MD.42 When Harry Met Sally; The very amusing bit from the film where Sally
demonstrates to Harry how to fake
MD.43 Star Trek; Good sample of the open- ing sequence from the TV series plus
a superb Enterprise animation
MD.46 Scanners; Disgusting exploding head
MD.48 Sequence from the film! (Mb) MD.48 Jungle demo; Graphically superb
amusing cartoon style animation with
samples music and sound effects! (STE)
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■ Long distance digitising with the Vidi-ST and a little help from Sky TV Remember, let's be careful with our STs out there, guys

■ You can obtain colour images by using an add-on like the Vidi-RGB

Even Ernie can turn up on your ST... if you're not careful

ever, you do need to refer to it frequently, and you tend to obtain the best results only through a lot of trial and error.

The lead from your VCR connects to the top of the unit. Load up the software and you are presented with some drop-down menus that enable you to control the system. You can vary the rate of scanning from one fiftieth to half a second, depending on the shading you have selected. You can choose to display between two and 16 shades of grey.

After a while you can get satisfactory results with pre-recorded and home recorded tapes, but it does take some time fiddling around with the shading to get the image just right – and the more shades you use, the slower the scanning speed. On two grey shades the

"The Realtizer is one of the more expensive digitisers but it comes with everything you need for colour digitising"

monitor is a mere fraction of a second behind the TV screen. With 16 shades, the image takes time to build up on the monitor.

The supplied lenses are for use with a video camera. You shoot the image with each lens in turn, then use the software to mix the images to create a final image. (Be warned though: this procedure is not something to be undertaken if you are unfamiliar with the more serious side of your ST.) The final images can be saved in either *Degas* or *Neochrome* format in all resolutions, and you can then mess about with them using the supplied software or your favourite art package, so long as it can load these formats.

The Realtizer is a very impressive piece of hardware, but it is let down badly by the unhelp-

ful manual and you do need to spend some time familiarising yourself with it before you can begin to create images of reasonable standard.

#### STF: 76%

#### ■ The Realtizer £139.99 from Third Coast Technologies ☎ 0257 472444

The **Sam Digitiser** is one of the largest digitisers around at the moment, and gives you a scanning speed of 25 frames per second. Although the results are very high quality, you're going to need a lot of patience to get the most out of it because, like the Realtizer, this isn't the most user-friendly digitiser around. Backup and support for the package are very good, though. Unfortunately, at the time of writing, the Sam is unavailable – but Advanced Concepts are willing to provide further information about the Sam Digitiser over the phone. If you have any queries about the hardware, just give them a ring.

#### STF: 79%

#### ■ Current price unavailable. Contact Advanced Concepts ☎ 0243 671149



Vidi-ST is the best known of all ST digitisers and for good reason – this is the most userfriendly digitiser around. It can scan at 12 frames a second – great for animation effects. On

an ST with 1MByte or more you can store 25 frames and "grab" one frame at a time or a sequence – the advantage of the latter being that you can step through all the frames you've grabbed and select the best of the lot.

A lead for your VCR is included, but it is a little short. However, most electrical retailers can provide one at the length you require. The supplied software comes on one single-sided disk, including also a couple of example frames. The manual claims "you'll probably never need to read this manual again" – and it's true. The

software is driven by drop-down menus or single keystrokes and is very simple to use.

You can adjust the brightness and the contrast with controls on the digitiser, and alter the brightness via the software as well. The updated software (v1.29) gives you nine palettes, machine code so you can operate the Vidi-ST from within your own STOS program, a mono driver so you can digitise in high res, a Replay option to animate all the frames in store, and much more. There's a window option for cut and

#### "The Vidi-ST is definitely the most user-friendly digitiser currently available"

paste facilities. What's more, you can set a window and, while grabbing, update either inside or outside the window. You can even set a window for printing and print out just its contents.

You can save your images in *Degas, Neo* or GEM formats, either frame by frame or as a whole sequence of frames. You can even print the frames in memory or from disk with the printing software included. The quality of the printout is higher than you get when printing pictures using *Timeworks DTP*.

Vidi-ST, the mono frame grabber, comes bundled with Vidi-Chrome ST, which produces single frame colour pictures with a camera. You hold the supplied red, green and blue filters in turn in front of your camera lens and click with the left mouse button, then use the Merge option from the drop-down menus to unite them. You can then tidy the image up using the many options included and finally save the result.

#### STF: 96%

■ Vidi-ST with Vidi-Chrome ST £119.95; with Vidi-RGB as well, £179 (see p 104) Rombo Productions ☎ 0506 414631

## **IS IT LEGAL?**

Copyright rears its head again. All films and television programs are copyright, so any stills or frames you take from them are also copyright.

We all know it's okay to video record a TV program as long as it's for your own viewing, and the rules are probably the same when it comes to digitising. To be on the safe side, if you want to use your digitised pictures in a program you intend to sell or put into the Public Domain, always get written permission first.

THE FORMAT GUIDE TO	
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Ease of use	70%	68%	85%
Output Quality	81%	79%	87%
Software	73%	69%	99%
Value For Money	52%	77%	95%
FORMAT Rating	79%	76%	96%



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EUROPEAN DEMO. 2 disk megademo. BLACK DEMO.
# **3D CONSTRUCTION KIT** review



What would the 3D Construction Kit creators choose for their Desert Island Disks, we wonder? Probably anything by New Kids on the Block, The Colourbox or Phil Vectre

# **3D Construction Kit**

MACHINE: ALL COLOUR STs	
PRICE: £49.99	
FROM: DOMARK/INCENTIVE	
CONTACT: 081 780 2222	大

hree-dimensional games have been around for donkey's years but they're very rarely programmed by casual ST owners. When was the last time you saw something as good as F-19 Stealth Fighter in the Public Domain? Well, all that could now change because Domark and Incentive have come up with an exciting program that enables you to create not only your own 3D worlds, but your own 3D games too.

The guts of the 3D Construction Kit system were created for use in Incentive's own 3D games, Castle Master and Driller. Now they've been refined and given a user-friendly interface and editing system. If you can think it, you can build it - it's as simple as that. You can just as easily build a racetrack, complete with cars and grandstands, as a football stadium, a house, a boat - even a world with all of them in.

Inside the large black box you find, along with the disks, a comprehensive yet readable manual and a demonstration VHS video tape. The video is a fantastic idea and really worth its weight in gold. Okay, so the acting may be a bit wooden, but who cares? The point of the video is to give you a clear, easy-to-grasp tutorial and get you started with 3D Construction Kit. It does this very well. Even your normally cynical reviewer found it difficult not to switch on his ST and jump straight in. Some day all manuals are going to be written this way.

Once you have finished watching the video, you're already well-versed in the principles of 3D Construction Kit. The concept of building your world, area by area, with connecting doors, is crystal clear. All you need to do is think of what you want in your world and then use the editing functions to go and build it. This can be a bit fiddly - but then again, so are many game-creating programs. At least with 3DCK you can see immediately the results of any action or alteration. Its real-time display enables you to look anywhere at the touch of a couple of buttons, and knocking up shapes is child's play



Knocking up a shotgun shack like this takes a matter of just a few minutes if you follow the 3DCK tutorial video. The shack is made up of a simple collection of flat rectangles, a cube and a pyramid



To test your game you can use one of two preset panels. They're only standard Degas, Neo or IFF screens though, so if you want you can create another and use that one instead



There's even an underwater world in the demo game. You can swim about in it and change the fishes. Mind you, this shark's a bit of an old square, so he might not let you do it



"Ground Control to Major Tom. We're about to blast off and I'd just like to remind you to put the filler cap back on the petrol tank this time. I dunno, these rookie pilots ... "



What a load of old blocks! The tools to tame virtual reality are now with us. Neil Jackson takes a quick course in architecture and advanced interior design

when you can see them from all sides. But shape-building isn't the whole story. 3DCK can also help you create games.

As you'd expect, there are literally millions of different games you can design, depending on what you find challenging, interesting or amusing. It could be a simple "find the treasure" game in a weird world of your choosing, or a "kill the alien and then find the key to the giant spaceship" game, set in the middle of London after the shops are closed. It's up to you! The

FORMAT RATIN	NGS
3D CONSTRUCTION KIT Domark & Incentive/081	
Features A fantastic and versatile range of to	<b>96%</b> ols
<b>Speed</b> Not as fast as some purpose-built 3 such as <i>F</i> -19 Stealth Fighter, but pre-	
Ease of Use Simple, especially after watching the	<b>93%</b> e video
Results There's no other way to create game short of writing your own 3D system	
FORMAT VALUE Okay, considering the manual and vi	95% ideo included
The Competition	

STOS (£29.95, Mandarin = 051 351 2961) is far harder to use and not as versatile; Talespin (£29.95, Microdeal = 0726 68020) is a much more limited adventure creator



Recreate whole landscapes and then wander around in them. This should be familiar - it's Beachy Head, the huge cliff near Dover. Okay, so it's a little blocky, but this is only virtual reality, after all

important thing to realise is that 3DCK is merely a good tool (albeit a darn good one) - it can't make your game for you.

Fortunately, there is a demonstration world provided. This is remarkably similar to the demo ST FORMAT gave away on Cover Disk 23 (see page 138 to order a back issue), but there are more available exits in this version. In this world, you find a wealth of 3D bits and pieces, including several homicidal aliens and a huge Space Shuttle on a launch pad. There is a game element to it - you have to find the security pass to get close to the Shuttle - and as you'd expect. that's not an easy job. While it may not be the most involved game in the world, it certainly shows what's possible with the system and encourages you to push it to its limits.

The down side? Yes, there is always one, but thankfully it's not the end of the world. To make 3DCK understand what you want done with certain objects, you need to tell it. This is done via a programming language not everyone is going to enjoy. You can make objects in your 3D world without touching a line of program code, but making a game is a different story. Even so, there are only about 50 commands and that's less than most BASIC packages. 3DCK's command structure is as easy as BASIC too, usually relying on things like IF ... THEN statements to determine whether you walk into a door or fire a bullet. While this might alienate as many people as it attracts, it must be said that 3D Construction Kit is the closest you'll get to DIY Virtual Reality for the foreseeable future. Only a true square could ignore it! stf



The test game that comes with 3DCK has several locations and a good deal of puzzles. You can find this strange character in a small kiosk through one of many doors. Don't shoot him - he fires back!

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# File-o'-facts

Wondering what it's like to get your macros hotwired? Andy Hutchinson gets his hands dirty rooting around in sub-directories and reveals all

odehead are an American company who specialise in productivity software for the ST. They have just appointed a UK distributor and are now releasing updated versions of their most popular utilities. Take a look at these up-to-date programs and see the kind of useful features they have to offer.

# HOTWIRE

Finding the program you want to run among all those folders and drives is akin to finding a seat on the 5.30 tube from Chancery Lane - nigh on impossible. Codehead realise this and have developed a configurable hotkey program.

This nifty utility enables you to launch a program from Desktop at the press of a key. The program has its own menu page. To install a program you simply click on an empty slot and then show Hotwire where it can find it. There are 400 possible hotkey combinations, so you're unlikely to run out of choices.

Hotwire keeps track of how long you've spent using a particular program and reports back the information when you emerge from it. If you're worried about unauthorised use of your ST, then you can attach a password to any file. You can also move easily between the Desktop and Hotwire simply by hitting the right mouse button. If you forget the hotkey for a particular program, you can just zip into the file menu and double-click on that file.

This program is useful for floppy disk users as well as hard drive owners. Instead of rooting around through hundreds of disks, you simply insert the one that Hotwire asks for and it runs the program for you automatically.

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# CODEKEYS

Codekeys is a macro tool - a program that enables you to record a sequence of keystrokes and mouse movements and then play them back from within programs. Macros are especially useful in productivity programs such as word processors or desktop publishing because they can save you a lot of time.

Just activate the macro and perform the function you want recorded. It can even store the timing of mouse movements. As a result,

Hord Processing Protext File Sort	₽P F	√ AutoStart ✓ Warnings	
Protext to Mac Conv Word Flair II	BH L	Ledger External Ledgering Ledger Messages	
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Contractor and the second			Screen Saver

Hotwire's main menu enables you to view the hotkey shortcuts for your programs. You can also run the programs directly from this screen simply by double-clicking on the appropriate program



Maxifile's sub-menus offer you some very sophisticated search functions - you can search for a particular filename extension, for instance, or any wildcard you choose. The extras menu (signified by the door) includes the option to format disks to a very fast interleaved or true MS-DOS standard



Maxifile's dual drive display, showing both source and destination drives, makes copying and moving files around a cinch. You can scroll the two windows independently or swap them around by clicking on the arrow icon at the top left of the display. Of special note is the trashcan - it's recoverable

you can have a macro which loads in your WP workfile, opens the dictionaries, configures the display and finally places the cursor at the right point in the text.

With Codekeys, each program you use can have its own set of macros and you can play these back at specific times - macros can even call on other macros. Previously such programs have suffered from incompatability problems, but we tested Codekeys out on some very trying programs in the ST FORMAT offices and it didn't fall down once.

# **MAXIFILE 3**

When you're trying to manipulate hundreds of files (something hard drive users tend to do frequently), then you're going to appreciate the new approach that Codehead have put into their file management software.

Maxifile 3 uses names rather than icons for files. You get a split screen display which shows a source and a destination directory. You can copy or move files simply by clicking on the appropriate filename and hitting the copy icon.

However, the program enables you to do a lot more than just simple copying. Dotted

around the screen are 12 icons: eight perform one simple function, while the remaining four access submenus. These sub-menus enable you to perform complex searches, create folders and format disks (to true MS-DOS standard if you desire). One of the most interesting features is the disk graphic info section. This shows you visually and textually exactly how much space you have available on the selected drive.

The program can be run either as a normal stand-

alone program or as a Desk Accessory, so it's always available, even within other programs. Its capabilities outstrip other Desktop replacements by a long chalk, but it's likely to be of most use to hard drive owners. stf

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#### **TECHNICAL** advice

# SETTING UP

Mark Prout from Twickenham has a 520 STFM which he uses through his TV set and a Yamaha PSS480 portable keyboard. He wants to know if he can connect them together and use a sequencer to compose tunes. He also wonders whether he can interface the keyboard to a sampling package to change the sounds the keyboard makes.

First, you can connect the Yamaha directly to the ST using two MIDI leads (your local Tandy shop can supply these for around £2.95 each). With the power off on both machines, connect the MIDI IN on the Yamaha to the MIDI OUT on the ST. Then connect the MIDI OUT on the Yamaha to the MIDI IN on the ST. You can then use a number of different sequencing packages on the ST to control the keyboard. Accompanist, the Henry Cosh sequencer, is a good starting point if you're new to the subject of MIDI and you don't want to spend too much money. (It was yours free on Cover Disk 16 - turn to page 138 if you missed it!) It also runs in the ST's colour modes, which is important if you're using a TV set. When you've decided to go the whole hog, Trackman 2 is a brilliant sequencer, which also runs in medium resolution. (If you'd like to save yourself a massive £79 on Trackman 2, see Mail Order, page 126.) For full music notation, you are going to have to spend in excess of £300 for packages like C-Lab, Notator and Notator Alpha, which are high-resolution only.

On the sample front, sadly, there's bad news. The Yamaha PSS480 is not a sampling keyboard. Its preset voices are created using Yamaha's patent FM synthesis techniques not samples. This means that all you can hope to do is trigger the sounds stored in the keyboard. You can change these a bit, but you can never get perfect sample-quality sounds. There is a Desk Accessory called Midiman (Hollis Research = 0481 28286) which can be configured to enable you to control the Yamaha's control functions from your ST. This is about as close as you can get to altering sounds by remote control.

# PERSONAL REORGANISER

Users of Superbase Personal - the relational database from Precision Software - might find these tips from G R Miles of Nuneaton useful. First, if you ever need to reorganise your database file, it's worth remembering that Superbase limits you to a maximum of eight characters for the filename. Because it appends your new name to the original name, this limit is easily exceeded. To prevent this, simply rename your original file something short, like A1, at the Desktop. Now you can go ahead and reorganise without worry.

Second, if you experience a Superbase 200 or 201 error while printing out in table mode, you need to reorganise your database file. If it still doesn't work when you've done this, you're going to have to create another file with no data in it and then transfer the data across from your original. It may be a pain in the proverbial, but if it's the only possible way of saving your massive database file, then it's worth it!

# Deskto

This month, why not dig out a soldering iron and save yourself a few bob? Neil Jackson examines some easy-to-build add-ons which are worth their weight in gold

# COMPACT CONVERSION

If you're a user of TCB Tracker, the excellent music and sample sequencing package by The Care Bears, you may find this little tippette from C S Davies useful. Tracker's documentation states that the converter program does not work on 520 STs, because of the lack of memory. However, if you copy the converter to a blank disk and stick it in an AUTO folder, you can use it on 520s with no problems. It works safely on files up to around 50K! Howzabout that then? So breath- TCB Tracker - compatible with the 520ST? The manual says no, takingly simple, it's spooky ...



but ST FORMAT knows a simple way around the problem

# AN ACCESSORY AFTER THE FACT

If you own a copy of the PD file-copier FAST-COPY 3, you can turn it into a Desk Accessory simply by changing the filename from FAST-COPY.PRG to FASTCOPY.ACC. If the file is placed in the root directory (that is, not in any folders) it automatically loads up when you reset

your ST - though bear in mind that you can't have more than six ACCs loaded at one time. Now all you have to do to access the program is select it from the Desk menu. Thanks to Mark Smith from Liversedge, West Yorkshire for that helpful information.





Like many of us, Neil Everatt from Lincoln is on the lookout for cheap ways to make better use of his ST. He's managed to obtain (for next to nothing, we hope) an old Amstrad CTM 644 colour monitor and is trying to connect it to his 520 ST. He's wired up the correct connections: Red Video to Red Video,

Green to Green, Blue to Blue, Ground to Ground and V-sync to V-sync. However, it doesn't work too well. The vertical hold is a tad unstable, and the picture rolls at the slightest power surge. Even a disk access is enough to set it off. How can it be fixed?

The problem lies with the Amstrad's sync connection. This is not merely a vertical sync pulse - it's actually a composite horizontal and vertical sync, so the ST needs to send both these bits of information to make it work. Using a small OA202 diode (available from most electronics stores, for about 12p), connect both the ST's sync outputs to the Amstrad's sync connection. The diodes must be correctly orientated, with the white bar on the diodes nearest the Amstrad connection. For the full picture, see the diagram below.



# **TRAP THAT MOUSE**

Does your mouse pointer jump and rush about the screen for no apparent reason? Andrew Marsden from Retford suffered from this, until he developed a solution. To give your mouse a steadfast, stay-where-it'sput feel, simply open up the mouse by removing the two screws underneath and solder "piggyback style" a 10µf (microfarad) 16 volt tantalum capacitor to legs 3 and 12 of the LM339N IC as found in most mice.



The positive lead to the capacitor is clearly marked with a + symbol and is usually the longer of the two. Attach this to pin 3; the other leg goes to pin 12. This is shown in the diagram above. The capacitor must be connected the correct way round and you must make sure that when you attach it you do not accidentally join any of the IC legs together with solder.

You can obtain the capacitors from Maplin Electronics (= 0702 554161, order code WW68Y, price 28p), although they are readily available from most TV repair shops.

# **MAKING MUSIC ON THE STE**



Patrick Yates from Lancashire has been busy with his copy of STOS BASIC and has come up with a smart little routine for playing samples through the

STE's DMA chip, thus enabling you to take advantage of the STE's setreo sound. The routine is a modification of the BASIC routine supplied in the Mastersound manual, but with a few enhancements to get the best out of the STE's improved design. Here's that routine in full...

erase 1 rem \*\* reserve space for sample in rem \*\* bank one reserve as data 1,N rem \*\* n=length of sample bload "state.sam",1 rem \*\* get start of sample SAMPLE = start(1) rem \*\* get address of DMA DMA = \$FF8901rem \*\* get length of sample L = length(1)rem \*\* 'reset DMA chip poke DMA,0 rem \*\* set sample rate and mono mode rem \*\* 128 = 6.5 kHz rem \*\* 129 = 12.5 kHz rem \*\* 130 = 25.6 kHz rem \*\* 131 = 51.3 kHz poke DMA+32,128



Get a better sound out of your STE with this excellent sample player routine for STOS BASIC

rem \*\* set start and end poke DMA+2, SAMPLE/\$10000 poke DMA+4, SAMPLE/\$100 poke DMA+6, SAMPLE and \$FF poke DMA+8, SAMPLE/\$10000 poke DMA+10, SAMPLE/\$100 poke DMA+12, SAMPLE and \$FF poke DMA+14, (SAMPLE+L)/\$10000 poke DMA+16, (SAMPLE+L)/\$100 poke DMA+28, (SAMPLE+L) and \$FF rem \*\* play sample thru DMA rem \*\* 1 = normal play rem \*\* 3 = continuous play rem \*\* 0 = turn off sample poke DMA, 3

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# **TECHNICAL** advice

GET ON THE RIGHT TRACK, MAN

This one's a special DIY extravaganza for those of you with a copy of Trackman 2, the music/ MIDI sequencer available from Hollis Research (= 0481 28286). Trackman 2 has a facility to use up to 32 MIDI channels and can be controlled by special footswitches - providing, of course, that you have the appropriate hardware. You can buy the complete, finished items from Hollis Research directly, or (thanks to John Hollis himself) you can build your own at a fraction of the cost, simply by following these handy circuit diagrams.

John has kindly included two versions of the footswitch, both of which can be used for a variety of functions with all sorts of other programs. The switch is, after all, only a variation of the joystick Fire button. To patch it into *Trackman*, use the Footswitch dialogue box to set it up the way you want it.

John has also included two versions of the MIDI adapter,



■ Build a better MIDI control system with these funky DIY circuit diagrams – presented by John Hollis of Hollis Research, for all ST music-lovers



which works with some other sequencer packages as well the C-Lab series for The example. advanced adapter can be connected to some older, pre-MIDI devices (like the Roland TR-808 drum machine) for syncing up to Trackman. This is

done via an old version of a MIDI-style standard, known as Sync-24. It's outdated now, but there are still plenty of keyboards, drum-machines, sequencers and such like that are dirt-cheap and would work with this. There's also a quarter-inch jack clock, which you can program from the Sync Output window in *Trackman*. This is suitable for clocking even older music equipment like Drumulators, or as a gate trigger for ancient CV/GATE keyboards.

All the resistors you need to use in these kits are standard quarterwatt 5%-tolerance, and they'll set you back around 2p each from most electronics, TV repair, Maplins or Tandy stores. To make a suitable footswitch cable, you can cannibalise an old joystick or buy a joystick extender cable and simply cut off the unrequired end.

# **GFA Basic programmer's**

# **Y** Once again, Barrie Capel tackles some more of your GFA Basic programming problems

■ A quick apology to anyone who has written in about a problem but not yet seen an answer to it here. Space is limited, so it has to be "first come, first served." Please note that unfortunately we are unable to reply personally to letters, even if you do supply an SAE.

surger

# **SAVING PICTURES**

Let's start by killing two birds with one stone. Mr **G Kingston** of **Basildon** is writing his own art program, yet when he loads a previously saved picture back in, it seems to have "lost" the colour palette, although it works fine in high res. **Mark Jones** from **Kingswinford** has used the *Degas* load routine from last month's Surgery and asks if it can be used without seeing the picture actually load. Read on, both!

Mr Kingston's save routine goes something like this:

Sput Screen\$ Fileselect File\$,Fill\$,Fil2\$ If Fil2\$=""
Goto Finifile
Endif
If Len(Fil2\$)>1
Fil2\$=Left\$(Fil2\$,Len(Fil2\$)-3)
Endif
Fil1\$=Fil2\$+Rez\$

Bsave Fil\$, Xbios(3), 32000 The giveaway line is the last one – the Bsave. It tells *GFA Basic* to save on the disk, under the filename stored in the variable Fil\$, 32,000 bytes of memory from the start of the screen.

This 32,000 bytes is only "bit information" stating which pixels on the screen are set "on," and which are off. Colour information is not part of this data. This works fine in mono because there are only two states for the pixels to be – on or off. No colour!

In medium and low resolution, the fact that a pixel is on or off is not enough. In both colour resolutions, each of the pixels can be one of 512 colours (4,096 on the STE), but you are limited to the number useable at any one time in each resolution. Take a quick look at last month's Surgery for more information.

Because the 32,000 bytes of memory from Xbios(3) is only a "map" of which pixels are on and off, you are responsible for the saving of the colour data. The normal way to do it is to "tag" it onto the file just before Bsave'ing it. As explained last month, *Degas Elite's* palette is at the front of the file.

As long as your load routine matches your save routine you can put it where you like in your picture file, though some form of compatibility with other program "standards" should be encouraged. If you are the only one to be using the resulting picture files, and you never need to import from or export to a paint program like *Degas*, then putting the palette and resolution data at the end of the file is fine.

The big question is where to get the palette from at the time of saving. That is where the Xbios(7) call, setcolor(), comes in. After the line reg\_colour%=XBIOS(7, r%, -1) AND &H777 the variable reg\_colour% contains the value of

# **TECHNICAL** advice

the colour contained in register r%. The value is a word, and is made up of the red value #256 + green # 64 + blue - the AND &H777 bit just strips off the unwanted bits.

, So, the simplest answer to the problem is to get the current resolution with Xbios(4), the palette, and the screen bit data all into strings and join them together before plonking the whole lot on disk.

The following two listings are examples of a load and save routine for colour pictures and are written in *GFA Basic* v2.

# SAVE PICTURE LISTING – LOW & MED RES COLOUR

DIM reg\_colour%(15) ! 0 to 15 registers

rez\$=MKI\$(XBIOS(4)) ! Current rez as string SGET screen\$ ! Screen as string

,

FOR r%=0 TO 15

reg\_colour%(r%)=XBIOS(7,r%,-1)
AND &H777 ! Get register contents
palette\$=palette\$+MKI\$(reg\_colour%
 (r%)) ! Put into a string

NEXT r%

f\$=rez\$+palette\$+screen\$

! Join 'em together BSAVE "test.pic",VARPTR(f\$),32034 ! Plonk file on disk

#### LOAD PICTURE LISTING – LOW & MED RES COLOUR

(To load low res *Degas Elite* pics, replace the 32034 with 32066)

! Load pic into buffer

rez%=CVI(left\$(buffer\$,2))
 ! Get picture's rez

screen\$=MID\$(buffer\$,35,32000)
 ! Get screen bit 'map'

FOR r%=0 TO 15 ! Registers 0-15

# **YOUR BASIC SPRITES**

Without doubt, one of the most popular uses for programming with *GFA Basic* is graphics – and judging by the letters, sprites in particular. **Steven Harris** from **Bristol** is just one of many who wrote in asking about moving GET/PUT sprites over the screen without the nasty black rectangle around the sprite wiping everything out.

Preventing this is fairly complicated – it involves creating a special set of frames called "masks" and placing both the masks and the sprites on the screen in a special way. This, along with creating a reasonable animated effect, is possible with a paint program and *GFA Basic*, but the whole process is infinitely easier with a sprite creation package, where all the hard work has already been done for you. Most even have BASIC routines, written and supplied for you to use – though not all have *GFA Basic*.

Now, ST FORMAT have their own exclusive sprite animation package, Animaster, written specifically for GFA Basic users, and you really have no excuse for not buying a copy. It offers the facilities of a paint program, has automatic mask creation, the ability to test run and edit your animations and snapshot sections of pictures created with most commercial paint programs all without leaving Animaster! And if the Bullfrogs' ace programmer Peter Molyneux says it's good, who am I to argue? For information on how to order, see page 44.



With Animaster you can not only create your own sprite but the program automatically takes care of the masks!

reg\_colour%(r%)=CVI(MID\$(palette\$,r%
 \*2+1,2)) ! Get each one as a num
SETCOLOR r%,reg\_colour%(r%)
 ! Set the new colour
NEXT r%

SPUT screen\$ ! Show the picture

Note that although there are only four registers in medium resolution, you still collect and save 0-15. The file lengths are the same, and the ST just ignores the unwanted registers 4-15.

# **HALF A MOUSE?**

A number of readers recently have commented on the fact that their copy of *GFA Basic* doesn't run properly in low resolution – it insists on switching to medium resolution, and the mouse pointer can't go past the middle of the screen.

This is in fact normal. In order to fully display the menu bar at the top of the screen, *GFA Basic* "software switches" to medium res when the menu is on screen. This causes the mouse problem, which incidentally is "fixed" in version 3. However, as long as you load *GFA Basic* in



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low res, your programs always run in low res. "Oh yes," I hear some of you say, "then how are you supposed to run them if the mouse won't go anywhere past the centre of the screen and you can't click on RUN as a result?"

Easy! The menu bar is divided into ten sections, each with two options. Take a quick glance at your ST's keyboard and you notice there are also ten Function keys, numbered F1 to F10. Each F key corresponds to one of the *lower* entries on the menu. Holding down the <Shift> key and pressing the F keys accesses the *upper* menu entries, so running a program in low res is simply a case of pressing <Shift>-F10. Load is F1, Save is <Shift>-F1 and so on...

This should all have been stated in the manual on the Cover Disk, so if it wasn't, you can all blame the wally who wrote it. Er, hang on a minute... I wrote it, didn't I? Sorry...

# **MERGE NOT LOAD**

We're still getting quite a few letters from readers struggling to merge files together from *FOR-MAT's GFA Basic* Tutorial series (issues 19 to 21). We've covered it previously, so check back on the previous Surgery covering LOAD/ MERGE. But, again very quickly, you can only MERGE a .LST file without losing the file currently in memory. LOAD destroys the current program in memory.

If you want to merge two files and they are only on disk as .BAS files, load one in and then use SAVE,A to create a .LST file on disk. Then finally LOAD the other .BAS file in, place the cursor where the new code is to be placed and MERGE the newly created .LST file.

■ Well, it looks like space has run out yet again. Next month, all things being equal, we'll try to answer a few of your queries about drop-down menus and altering file attributes from within GFA Basic programs. Meanwhile, keep sending in your queries – or if you still haven't got into this BASIC lark, remember that GFA Basic v2 was yours free on Cover Disk 19. For info on how to order back issues, see page 138





## More timbre than a rainforest?

I have a Roland P-330 and the 360 Systems Pro MIDI Bass. Can more than one sound be played at the same time on either of these, or do any retrofits exist to upgrade them?

What you are, in effect, asking is whether either of these devices is multi-timbral. This is when a synth has the ability to play multiple sounds on different MIDI channels simultaneously. Turn to page 128 for a full explanation of what this means and a survey of multi-timbral devices.

Roland's P-330 gives you either 10 or 16 note polyphony, depending on the voice you are using, but it can only respond on a single MIDI channel – so it is not multi-timbral.

The 360 Systems Pro MIDI Bass is monophonic – only one note at a time – but you can split the MIDI note range into two "zones," then assign two different sounds and let the velocity value of the incoming MIDI note decide which one is triggered. The one below the threshold is called the "normal" note and the one above the "accent" note. So, you can select four sounds to play, but only one at a time. Again, no multitimbral capability. One thing you could do is set two sounds you like to the normal and accented notes of a zone and then use a sequencer to play notes with a velocity just above or below the threshold to switch between the two sounds. The term "multi-timbral" is not defined in

the MIDI Specification and has caused many

problems over the past couple of years. Some devices can have their MIDI note range divided into zones but only respond on a single MIDI channel – an arrangement typical of early samplers. These should really be called "multizone." Also, some devices can only assign a single note to each part, while others require you to set the number of notes being played by each part – in other words, they can't dynamically allocate their voices. Make sure the multitimbral device you buy can give you the performance you require.

#### **Getting through the gate**

I use Hollis Research's Trackman sequencer on an ST and have just bought a Roland Octopad. Playing a basic drum rhythm only seems to trigger some of the notes – and the faster I play, the worse the problem.

To understand the problem, you need to have a clear picture of how the Octopad works. To an extent, it is analagous to a keyboard: the first time you hit a pad, a MIDI Note On for the note value of that pad is sent out with a velocity proportional to how hard you hit it. When you release a keyboard note, a MIDI Note Off is sent – but how do you get a Note Off with the Octopad? The answer is via a Gate Time that you have to set. This is the length of the note at the end of which a Note Off is sent. If you hit the same pad before the Note Off has been

generated, a Note Off is sent, immediately followed by another Note On of the same value.

The minimum Gate Time varies depending on whether you have the earlier Pad 8 or the later Pad 80. The Pad 8 gives values between 1 and 60, apparently in units of around a 16th of a second. The Pad 80 gives values between 0.1 and 4 seconds.

This concept can cause problems with sequencers because the Note Off and Note On are so close together if the second hit occurs before the Gate Time for the first has expired. This would also explain why the situation worsens when you play faster.

The good news is that John Hollis of Hollis Research has now sorted out this problem and is currently having the improved software tested. If you use Trackman and have come across this problem, give him a call on  $\mathbf{r}$  0481 28286 for a replacement disk. **stf** 

# **BEAT THE MIDI BLUES**

Whether you're having trouble with your setup or your software, Vic Lennard can help answer all your MIDI queries. For only £34.50, you can join the UK MIDI Association (± 081 368 3667) and get UKMA's monthly newsletter *MIDI Monitor*, plus free on-line support and advice. Alternatively, you can take advantage of Vic's expertise by writing to MIDI Helpfile, *ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW. Remember to enclose full details of your MIDI setup and a diagram if you can manage it.

# THE KEY TO GETTING IT ALL TOGETHER

I have an electronic piano, equipped with MIDI sockets, and an Atari ST which I use as a sequencer. The piano is velocity sensitive, but has no aftertouch. I have recently acquired a sample playing keyboard with aftertouch and release velocity (whatever that is) which I intend to use as an expander, to enable several other non-piano type tracks to be recorded and played back using the ST sequencer. However, I cannot use the piano as the master keyboard to program in aftertouch for the tracks allocated to the sample player, and I always get the piano coming out as well anyway. How am I supposed to connect these three items together?

Without knowing exactly what items you have, I can only answer in general terms. If you are using the piano as your master keyboard, you



■ Diagram 1: This shows the setup you can use to connect problems. When you play the piano, keyboard and ST if the piano recognises Local Control Off piano into the sequencer and the

hear the piano sound each time you press a key. The only way around this is either to turn the volume down, in which case you don't hear the piano playing back from a track on the sequencer, or to use Local Control. This divorces the keyboard part of the piano from its internal sound source and effectively gives you a separate keyboard and sound module.

However, your piano may not have this facility. If you look at the MIDI Implementa-

tion table, it only shows if the piano recognises Local Control but doesn't tell you if you can actually turn it off via the piano. If it can

recognise the command but can't access it from the piano itself, st send it the following message via the sequencer:

Bn 7A 00

This turns the Local Control off and you can then use the set-up in diagram 1 (at left).

If the piano does not respond to Local Control, there are other problems. When you play the piano into the sequencer and the



■ Diagram 2 This setup, using a MIDI switch box (centre), enables you in effect to re-cable your setup whenever you switch keyboards

> sequencer is transmitting the notes back to the piano, you end up with the notes being played twice, once by you and once by the sequencer. Some sequencers get around this by enabling you to set an auto-off channel – which suppresses the notes on the MIDI channel on which the piano is receiving when you are playing the piano, so you hear only the notes you're making with your fingers.

> If you want aftertouch, you are going to have to play the notes in from the sampler keyboard. This entail re-cabling your setup each time you change keyboard, so I would suggest getting a MIDI Switch box (around £25) and wiring the system as in diagram 2 above.



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means using four different sound sources - one for each of the different sounds, including a drum sound module. Even though the total number of notes you need at any moment is probably less than the (say) 12 note polyphony of one synth, each synth can actually produce only one sound at a time - or can it? Many modern synths are multi-timbral,

meaning that they can play many independent sounds, or parts, at the same time. You can look at a multi-timbral synth as being several sound modules all built into one box, each controlled on a different MIDI channel - and from FORMAT's special introduction to MIDI in issue 19 you may recall that there are 16 of these channels. The first multi-timbral synth, the Roland MT-32, appeared about four years ago and has the capability of playing between 8 and 32 notes, depending on how complex the sounds are that are being used. This is because it creates sounds by combining bits of sounds for instance the attack part of a piano and the release of a violin. This Roland method of synthesis is called Linear Arithmetic or LA for short. A total of 32 of these "part-sounds" - or partials as they are correctly termed - are available



complex MIDI music, you need a multi-timbral synthesiser - one that can play several independent parts at one time. Vic Lennard explains how they work and surveys some of the best buys still available

nd C-mc white many

kay, you've found the MIDI sockets on the side of your ST and decided you want to make some music. The first step is a sequencing program - perhaps Accompanist, Henry Cosh's Public Domain sequencer (an exclusive version of which was yours free on FORMAT Cover Disk 16 - see page 138 if you missed it), or one of the budget commercial programs like Gajits' Sequencer One (£89.99, Gajits = 061 236 2515).

A sequencer "records" the timing of the notes you play on a MIDI keyboard attached to the ST's MIDI In, as well as other information like sustain pedal or pitch bend. It's not the same as recording onto tape - you don't record the actual sound, only the note information - and the sounds come out from a MIDI synth, connected to the ST's MIDI Out. So to create music you need a keyboard and a sound module - and here, unless you're careful, the expense starts.

Every synth has a "polyphony" - the total number of notes which can be played at the same time - and since a synth is not just like a piano, it is useful to have as high a polyphony as possible. You may wonder what the point is of having more than ten notes available - after all, we only have ten fingers - but once you start working with a sequencer, you inherit the ability of a family of octopuses (octopi?) and the worst thing that can happen is that notes start to disappear. This is called note-stealing, and it occurs when the number of notes being received exceeds the polyphony of the instrument. While it was usual for a synth to have a



"Multi-timbral synths can play many independent sounds, or parts, at the same time - like several sound modules all built into one box"

the first multi-timbral synth - can produce up to nine different parts at one time

within the MT-32, with a maximum of four being used by any one sound.

This system makes it very difficult to calculate the precise polyphony available at any moment. However, up to nine different sounds can be played at the same time - eight synth sounds and a full drum kit of 30 instruments. The MT-32's sound quality is reasonable, and though it is no longer manufactured you can

The D-110 - successor to the MT-32 - also uses the Roland system that creates sounds by combining parts of sounds



## **MUSIC** synthesisers

pick one up for less than  $\pounds 200$  through the classified ads in the music magazines.

Even though a multi-timbral synth appears to be the answer to writing a complete song from one instrument, there are some compromises. The first is that there are often only two outputs for left and right stereo. For many people, that can be an advantage in that you don't need to have a separate mixer to combine together multiple outputs, but the disadvantage is the lack of flexibility. Taking the example of the MT-32, all the synth sounds and the drum kit appear at the stereo outputs, meaning that you can't handle them separately - you can't add treble or bass to one sound without affecting them all. What you can do is to decide on their position in the stereo "picture" - the MT-32 enables you to position instruments in a 15-position spread between the outputs.

Another nice feature in most multi-timbral synths is the built-in effects like reverb and chorus. Again, there may be problems with tweaking only certain instruments, especially individual drum sounds. The MT-32 has the facility for having reverb on individual drum sounds, but you can't access that facility from the front panel of the synth, only over MIDI by special commands.

The Evolution EVS-1, rated a healthy 88% in ST FORMAT 15, is another good, all-in-one unit. Retailing at £310 (Sound Technology = 0462 480000), it gives you 16 note polyphony and eight independent parts including sampled drum sounds and a free visual editor for the ST. Yamaha's TX81Z (now discontinued) gives you only four parts and no drums, but can be picked up second-hand for around £150. Another favourite is Kawai's K1 range, which includes

keyboard, rackmount and stand-alone versions. Each of these gives you eight parts and can include drum sounds, since they use a similar synthesis to Roland's LA. These can be picked up second-hand at around £250 for the keyboard and around £180 for the other two types.

While the Yamaha PSS range of synths can play drums, bass, accompaniment and a lead line (see the special feature last issue), they aren't strictly "multi-timbral" synths and aren't designed to be used in conjunction with an external sequencer. But there is nothing to stop

# "With a sequencer you can produce as many notes as a family of octopuses – but if the number of notes exceeds the polyphony of your instrument, notes can start to disappear"

you from buying a cheap one simply to use as a keyboard – the PSS-680/780 can be found second-hand from around £70. Otherwise, you are going to need a keyboard to play the notes from, and another possibility is the Roland PC-200, which sells for £175 (Roland  $\Rightarrow$  0252 816181). This doesn't have any sounds onboard but is quite sophisticated and gives you five octaves of reasonable-sized keys.

Another unit worth looking for is Roland's U-110 (now discontinued). This uses preset samples, so a brass sound is real brass and a piano real piano. It offers polyphony of 31 notes, six part multi-timbral, reverb, chorus and six outputs. You should be able to find one for around £250, especially since it has now been superseded by the U-220, which is rather more expensive (about £730, though it varies from supplier to supplier). Other options include the Yamaha DX11 keyboard (discontinued, but you might find one for around £300); the Roland D-110 (the MT-32's successor), which has eight parts, six outputs and effects - about £600 retail but a second-hand snip for about £250 and the Roland D-5, a keyboard version for around £600 retail or £350 second-hand. You could also consider Yamaha's replacements for the TX81Z and the DX11 mentioned above: the TG55 weighs in at £499, and the impressive SY22 keyboard tips the scales at a hefty £839 (Yamaha = 0908 366700).

So, what should you look out for in a multitimbral synth? Polyphony – how many notes are available in total. There is little point having eight parts with only 12 notes or so when you are working from a sequencer. How many parts are there? How many outputs are there? What limitations are there on any effects – are they shared among the parts? Is there a rhythm part – how good are the drums? Can you easily edit the sounds or are you lumbered with the presets? Are there any card or cartridge slots for extra sounds? Can you dump the internal memories over MIDI to your sequencer so that you can edit sounds and keep the good ones?

To find one, try the classifieds in music magazines and mart papers. You can find real bargains if you look. Good hunting! **stf** 

Next month we review AVR's new hard drive sampler, which can produce CD-quality samples. To make sure you don't miss it, turn to page 138

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# **EDUCATION** reviews

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This easy-to-use platform environment is central to the first games in Module 1

In Prof Makes Sentences children use a fairly simple classroom environment

One for a

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This is LCL's *Primary Maths* menu. Right, children – disk sector 35, question 17

Atari's new Family Curriculum pack seems to have something to offer everyone from infants to their parents. David Jones investigates how the ambitious new package measures up

sk Atari what interest they have in the world of education and they're likely to tell you they have a number of education advisers working for them, they're in constant consultation with various LEAs and they're promoting their machines in many schools and colleges. However, words are one thing, actions another. To date there has been little to show for all this consulting. With the advent of Atari's latest bundled pack, "Family Curriculum," are we perhaps seeing at least a small amount of commitment in this area?

As *ST FORMAT* reported in issue 22, the new pack is a large one. For an attractive £399 you get a 1040STE and five "modules" or boxes of educational software. In all, the boxes contain 12 double-sided disks and nearly 700 pages in manuals. The first three modules in the pack contain programs and data files aimed at preschool/infant, junior and secondary school children respectively. The other two – "Creative Computing" and "Business Computing" – are, one would suppose, included in response to various statements made in the National Curriculum for Information Technology. Between them, these two modules contain six apparently weighty applications.

Attractive though the pack looks, its release may be a case of too little too late. Presumably, Atari are hoping to cash in on the vital importance of Information Technology and the use of computers which is now compulsory in the school curriculum. But for some children, it has been compulsory for the best part of a year already, and in that time other manufacturers have been determinedly targeting both the school and the home learning market. Acorn seem to have cornered the former, with around 85% of all schools using their machines. Atari seem happy not to have their machines in schools and are now targeting the home educational market – but for their strategy to succeed, the new pack had better be pretty good.

#### Module 1: Play and Learn

This set of programs is aimed at young children (4 to 9) and comprises the first three of Prisma's much praised and respected *Play and Read* series. Along with the software and manual you also get five small reading books which are integral to the packages. What you don't get is Prisma's introductory disk and story cassette,



■ In module 3, GCSE Revision is emphasised. While French Mistress is a good language program...

originally released with the first program in the series – an important addition, setting the scene for the programs as well as introducing the computer keyboard and mouse to very young users. You can, however, buy this by mail order for an extra  $\pounds 8.50$ .

The series begins with Prof Plays a New Game, in which you move the cute little sprite Prof up and down ladders and around platforms in an attempt to match pairs of words. The words used in the game are identical to those in the accompanying books, so using one reinforces the other. The program is played on five levels (one corresponding to each book) which become increasingly difficult, and each level is sub-divided into five further "steps." Starting with the easiest step in book one, children are introduced to simple words such as "I," "play" and "school," and by the time they have worked their way through to the end of book five they should have developed a fundamental reading vocabulary of 63 words.

Two further programs in the pack reinforce and extend basic reading skills. In *Prof Looks at Words* children have to search for letters to complete words in the familiar platform environment. There are five games to choose from, ranging from one where you must find the missing first letters of words to one where you seek out com-



It is badly marred by slow and archaic menu systems and totally uninspiring work screens





WHILE STOCKS LAST

binations of vowels. In *Prof Makes Sentences*, children are now placed into a classroom complete with blackboard. Here they either select words to finish sentences or form complete sentences from a jumbled list of words.

This group of programs is an excellent introduction to basic literacy. A fourth package (*Prof Hunts for Words*) is now available to build on this foundation, and more should be out soon.

# STF Rating - 94%

#### **Module 2: Junior School**

This second box of programs, aimed at seven to ten year olds, centres on Kosmos' *Answer Back Quizzes* and also includes a basic Maths program from LCL.

The quiz program is an adaptable educational tool. You can load and use the various files that come with it, purchase from a huge range of additional data disks or use the built-in editor to create your own quizzes. The files provided with the program are reasonably well written. Some questions may need careful revision as the National Curriculum absorbs more subjects including Geography and History.

The Answer Back Quizzes include a total of 35 files testing spelling and general knowledge with, between them, some 1,250 questions. The one major drawback is that to load any file, you have to answer numerous questions and set various parameters. For most children, this is bound to be too frustrating to persevere with. Once the data is loaded, however, you are presented with a well-drawn screen, complete with princess and medieval castle. You can opt to play a simple arcade-type game as a reward for getting questions right. Here, you must shoot a dragon before it reaches the princess.

Primary Maths from LCL consists of some 33 simple maths programs, including the times tables between two and ten. The initial menu is confusing, but the program screens themselves are clear and easy to use. Each is rather basic and looks rather dated, although colourful sprites are used to reinforce simple number concepts. The major gripe with *Primary Maths* is that you can enter numbers only by using the mouse – rather clumsy, especially for this age group.

STF Rating - 81%

#### **Module 3: GCSE Revision**

Hoping your ST can get you through your GCSEs? Forget it. This is the area most poorly supported by ST software in general. Here you find three adequate entries:

• Geography Quiz: a fairly good data file of



Hyperpaint, part of module 4, is simple to use but insubstantial

# I'VE STARTED, SO I'LL FINISH IT OFF



■ Here is the opening screen to Kosmos' Answer Back Quiz program in Module 2...



■ Kosmos' Answer Back Quizzes are presented from this rather jolly medieval castle...

500 questions for use with the Answer Back *Quiz* from Module 2.

• French Mistress: a comprehensive French language tutor from Kosmos, with a vocabulary of over 2,500 words. However, screen presentation is very poor and the program is riddled with slow, archaic menus.

• LCL's *Micro Maths.* Presumably a step up from *Primary Maths.* The manual boasts that "the 59 topics covered include the topics common to all examining boards." A bold claim that we were unable to check out – the program was missing from our review disk!

#### STF Rating - 71%

#### Module 4: Creative Computing

Rather an odd title for a box that contains a simple art program, a music package and a BASIC compiler. As far as National Curriculum Information Technology is concerned, one of these areas (Art and Graphics) is compulsory and the others (computer generated music and BASIC programming) are at best considered optional.

Hyperpaint is an easy to use, fairly reasonable, introductory art program. It includes many

> (if not all) of the functions budding young artists require to enter the world of computer graphics. Most options can be selected from a narrow bar to the left of the screen containing a collection of icons. The program is reasonably self-explanatory and is powerful enough to see kids up to GCSE. One of its major strengths is the ability to import and export files in a variety of formats. This means that pre-drawn, scanned or digitised images can be



Load in some questions and it becomes far too confusing for the age group it's aimed at



Answer a question correctly and you can go after the dragon and save the princess

imported and edited in *Hyperpaint* and then exported to another application such as a desk-top publisher – not vital for the National Curriculum, but good to have anyway.

*First BASIC*, an adequate compiler, has been bundled with STs for some time now and it seems reasonable to include it here – except that the use of a LOGO compiler is an essential part of the National Curriculum, and this language and its distinctive "turtle" pointer icon are noticeably absent.

STE Music Maker is described as "the complete package for the beginner to Computer Music." It includes a composer, a MIDI recorder and a drum pattern designer/editor, all very easy to use. The major drawback is that the three sections are unrelated to one another.

Creative computing? Maybe that's a bit of an exaggeration. And from the National Curriculum point of view, the lack of a LOGO compiler is a serious shortcoming.

#### STF Rating - 79%

# Module 5: Business Computing

The final, and potentially most important, module of the Family Curriculum bundle contains a word processor, a database and a spreadsheet. Sadly, however, Atari have decided to use Kuma's rather weak products.

The word processor, *ST Word*, is a poor choice compared to most similar ST packages. Even the most basic examination syllabuses require pupils to carry out a number of manipulations that are simply beyond this program. You can't, for example, mark and move a block of text without resorting to a second text window, making the operation both difficult and clumsy.

Line spacing is fixed at a single line, and once it's entered text cannot be reformatted (from justified to unjustified and vice versa). If you want bold, underscored or italic text, forget it! All of these functions are essential for secondary school children, according to both exam

## **EDUCATION** reviews

syllabuses and the National Curriculum. Finally, it's almost unbelievable that in a WP included in an educational bundle the spell checker has to be loaded outside of the main program!

Word processing is a vital skill for children to acquire. This program is of very limited use in developing such a skill. Maybe children can use it to write their Christmas thank you letters to grandma, but that's about it.

ST Data is the bundled database – but it is clumsy in the extreme and unsuitable for children's use. Kids need a straightforward approach to the collection and processing of data. They should be able to design the various fields in which data should be placed, enter that data, sort it and finally search it and print out the results of their searches. ST Data does enable them to do these basic manipulations, but it is about as easy to use as a Lada car manual written in Russian.

To produce a database in *ST Data* you first have to load a design program where you can enter your field types and sizes, along with the labels they should include. Then you must load up the database and import the designed file. You are now in a position to enter your data into the database. With searching and sorting being far from straightforward, children may find that this clumsy, limited program could put them off using databases for life!

The spreadsheet, *ST Calc*, is a fairly basic, inoffensive, program that enables children to enter text and numeric data and manipulate it using standard process commands. However, the program cannot deal with multiple numeric cells in a straightforward manner. With most spreadsheets you can add up a long column of

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#### Kuma's ST Calc is simple – a little too simple!

data using a simple SUM command, but this is not possible with *ST Calc.* Formatting cells also tends to be a rather difficult.

This final module should have been the most important in the Family Curriculum pack, yet it is the poorest. One of the major strengths of the ST is the wide variety of industry-standard software available, yet Atari have chosen to include cheap and fundamentally flawed applications. The Kuma programs are non-standard, archaic, slow and clumsy, and as such were an awful choice for an educational package.

#### STF Rating - 62%

#### The Verdict?

Any moves by Atari towards the educational field are most welcome. Here they are offering a bundle containing a range of software for the price of an STE – the software is effectively free. Anyone looking to buy a computer to supplement a child's school work would be well advised to seriously consider the Family Curriculum pack. The first four modules are well presented and meet their aims in an admirable way.

Parents should, however, be aware that the programs in the pack are not necessarily the best on the market, they are simply examples of what is available – in the case of the non-standard Kuma software in the final module, not very good examples. The inclusion of these is a serious shortcoming: buy the Family Curriculum pack and you soon find that you need to get a decent word processor and possibly a database and spreadsheet. The Family Curriculum pack, therefore, fails to be all things to all people – but even though it is by no means perfect, it is still the best of the computer and educational software bundles around at the moment. **stf** 



# David Jones finds what a basic skills package should be like

# Let's Spell Out & About

AGE RANGE: 4 – 9	
MACHINE: ALL COLOUR STs	
PRICE: £14.99	
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ichard Dunn's *Let's Spell* series is widely regarded as being among the brightest and best of all early-spelling tutors for your ST. There are now five separate *Let's Spell* packages. The previous four helped children to spell "...at the shops" and "...at home" in both English and French.

After loading, each of these programs presents a well-drawn, user-friendly main menu. Here it's a bus station, with a bus representing each of the eight areas covered – Park, Zoo, Country, Farm and so on. The mouse pointer takes the form of a girl or (following a rightbutton click) a boy. Choose your destination, click on the bus, and off we go...

The scenes are carefully and accurately drawn, and full of activity – they cannot fail to



■ Where shall we go today? Get aboard the right bus at the *Let's Spell* bus station and take a trip

stimulate any child's imagination. Move the pointer over the screen and it becomes an arm. Touch an object and a bell rings. Then a click of the mouse button takes you to the spelling screen, featuring a large picture of the item in question. To its left are two teddies you can click on to set the difficulty level – either for 4 to 6 year olds or for 6 to 9 year olds.

You pick letters from a large bar at the bottom of the screen. At the lower level, the word to be spelled is shown on screen and you simply try to reproduce it. This help facility



The town picture is typical of all the *Let's Spell* screens – bright, colourful and great fun to use

does not exist at the higher level. A second "spelling aid" can be called up in the form of a thermometer which shows you how close the mouse pointer is to the next letter to be chosen. As each letter is selected its phonetic sound is read out by a digitised voice: "ah," "ber," "cer" and so on. Spell a word correctly and the voice says "well done," then the scenic picture reappears.

Each Let's Spell package is limited to a vocabulary of just over 100 words – which can



■ Let's Spell's bold, bright workscreen. Pick a ted to set the difficulty level, then choose letters

be regarded as both an advantage (because younger children can concentrate their efforts on a manageable number of words) and a disadvantage (because older children may soon tire of the limited vocabulary).

The series has been criticised for the fact that the words available cannot be altered or added to, but I understand that Richard Dunn is now planning a *Let's Spell* construction pack to remedy this apparent problem. Even as it is, though, the *Let's Spell* series is beautifully presented, both easy and stimulating for children to use. A lesson for everyone here. **stf** 

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## LETTERS

# Feedback

# Write to: Feedback, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW

# **Policy for piracy**

I've seen various views on piracy expressed in Feedback. I don't mean to start the ball rolling again but it's high time people realise that it's not just the end users who are the guilty ones.

I work in a Virgin Computer Games store in central London. We sell thousands of games for 13 computers and six consoles. A year ago Virgin introduced a new policy which stated that any customer may return a game bought from Virgin – as long as there is proof of purchase.

This is fair enough if the game won't load, has no instructions or can't be used. But since this policy was introduced, software has been regularly bought and then returned the next day to exchange it for a different title – even when the software has nothing wrong with it. That way the buyer gets several games for the price of one. This buy and return method is popular among schoolkids who take turns to return a game so as not to get caught. When this matter is mentioned to the manager, nothing can be done because a policy is a policy. Surely the big brass are encouraging piracy?

#### Tan Shah London

**stf** Not so much encouraging piracy as closing their eyes to it. Let's face it, everyone commits exactly the same crime when a friend copies

software and you don't report him to FAST. It's the programmers and software houses who lose out most from this kind of activity.

The problem seems to be that Virgin have established a policy which treats computer games in the same way as CDs or records. If you don't like a CD you've bought, you can often exchange it. I'm sure many children abuse this system and copy the CDs, but what they end up with is an inferior version of the original. In the case of ST games, a pirated copy runs just as well as the original – no drop outs in sound or occasional picture flutters. The temptation to rip off games is that much stronger.

Consider keeping a record of the people who come into the shop to exchange games and build up a list of dodgy characters. If the crime is as widespread as you suggest, take it to your bosses. Virgin inevitably lose money from this kind of activity and they should think about coming up with a different system.

# Cheaper words wanted

A few weeks ago I decided to complete the coursework for my A-levels on a word processor. I began to look through some back issues of *ST FORMAT* and found to my horror that it would cost me about  $\pounds70$  for a word pro-

# **GIVE GAME-MAKERS MORE CREDIT**

Why is it that game publishers get all the credit? In the record and book industry, musicians and authors always get their names onto the cover of their work and any publishing company is in tiny lettering.

Publishers plough all the money into a game and get it onto the shelves, but the game itself isn't their design. Even the best software publishers occasionally produce rubbish, so you can't always trust their name on the box. I would have thought that good programmers would be keen to get their name on the packaging. When the same software house that handles their game proceeds to turn out rubbish, some of that reputation is inevitably going to rub off on the good games too.

Can you explain to me why games have always been sold in this way? Stuart Camden Tadworth, Surrey

stf Programmers can build a reputation for being good game-makers – the Bitmap Brothers and Bullfrog are both well-known for producing such hits as Xenon 2 and Populous. The Mirrorsoft and Electronic Arts logos were all over the packaging but the names of the programmers also made it onto the box.

It does seem illogical that the software publishers go to



so much trouble to establish different labels for their games but never push the authors' names more rigorously. The argument is that game-players like particular types of games rather than all the games from a specific team. For example, someone who buys Powermonger for its strategy element is not necessarily going to enjoy Flood, the Bullfrogs' cutesy platformer.

The Bitmaps were so keen that game authors should be

given more prominence that they established Renegade. This profit-sharing software publisher pushes the name of the programming team more than any other label.

Computer games were first programmed by kids in the bedroom. The games were often dreadful and the programmers were just out for a quick buck, so they sold their creations to the games houses as fast as they could.

The games industry is still in its infancy, and few programmers have tried to change things, just because "that's the way it's always been done." For obvious reasons, software publishers are keen to maintain the current situation. However, now that the Bitmaps have started to make noises with Renegade, I think we may be seeing some changes in the future.

In ST FORMAT we regularly try to focus on the personality of the programming teams – as you can see with our Top 20 games sections and our interviews for Gallery.

#### SHORT BUT SWEET If you can fit all you want to say on a postcard, just send it to the usual address

■ I have recently bought a 520STFM Discovery Pack and have decided to upgrade it to 1MByte in order to play some 1MByte games. However, I'm confused as to what is required. Do I need a plug-in or soldered board? Populated or unpopulated? Brian Thompson, Essex

– From our questionnaire results we established that many of you want to invest in a memory upgrade. We're therefore taking a detailed look at the subject in next month's issue. Catch Issue 25 out Thursday 11 July.

■ I have only recently bought an Atari and would like to know where I could get a copy of the classic game *Tetris* – none of the software distributors seem to stock it any more. Mr Kwai Yu, Harrow

– Mirrorsoft released the official ST Tetris about four years ago but a much better version has appeared in the Public Domain since then. STetris is available from the SouthWest Software Library for less than four pounds – see PD directory, page 100. Infogrames have also written a full-price version – see SCreenplay Extra, page 71.

■ Recently I checked my *Lost Patrol* disk for viruses and found that it had one. When I repaired the disk I found my game wouldn't load any more. Why?

#### J. Cadman, Wales

– To protect games from unlawful copying, programmers set up weird disk formats, harmless to your ST but detected as viruses by virus killers. When you repair the disk the weird format is corrupted and the game is ruined. Speak to publishers Ocean on = 061832 6633 to see if they can help and keep an eye out for our forthcoming virus feature.

■ I am writing in defence of Evesham Micros, with reference to a letter you received from a Mr Steve Bamber (*STF* 23). He said that they had messed him around and he had to wait ages for his goods to arrive. I purchased an ST from them, and found their service friendly and efficient. They were very organised – even when their computer broke down while I was in the process of ordering. **Peter Newman, West Midlands** 

Glad to hear it, Peter. Bet they weren't using an ST to do the ordering.

Can you tell me why I can't make my STE boot up in medium resolution? Stuart O'Neil, Peterborough

– Early STEs were troubled by a bug which made it impossible to save a medium res boot-up file. That was remedied when Atari released a new version of TOS. They also released a medium res patch into the Public Domain, curing the problem for existing STE owners – to get hold of it, contact a PD library listed in our directory, page 100, or speak to Atari on = 0753 33344.

■ I'm using my ST for programming and have discovered there are a bewildering number of filename extensions. Some are obvious, but others aren't. Can you help out? M Walmsley, Winslow, Bucks - Apart from program files (with PRG, TOS

– Apart from program files (with PRG, TOS or APP filename extensions), there are no standardised file extension types. Various applications like databases, spreadsheets and some graphics packages use SEQ or DAT file types, but a file's extension doesn't change the way it's understood by your ST. Watch for more in a future DESKTOP.

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## LETTERS

cessor. I could buy a second floppy drive for this. I'm only 16 and do not have this kind of money. Why is serious software so expensive? And how can a company charge so much for a WP program? One package costs £180!

My dad said I should look through the PD and Shareware adverts. I did find a word processor for £2. What is the difference between the PD and full-price versions and do I need the more expensive program?

#### Sarita Marsland Manchester

**stf** The first thing you're going to notice is the lack of any manual in the PD version – it's on the disk and you have to print it out yourself. If your demands on a word processor are only very limited then a PD version should easily suffice. If, on the other hand, you intend producing very large complex documents, a full-price version is worthwhile – but even here you can pay anything from £20 to over £200 for a commercial package and the differences are vast. We covered much of this topic back in issue 22 where we did a mammoth roundup of word processors. (If you haven't got a copy then turn to page 138 and see how you can get hold of a back issue.) Inevitably you get what you pay for.

# The end is nigh!

With the cut in price of the STE and the start of the phasing out of the STFM, it seems to me that STFM owners are soon going to find themselves facing a far bigger problem than singlesided drive owners. As the proportion of STEs rises, software houses are going to start producing many STE-only programs. After a few years, the STFM will be regarded as obsolete (as single-sided drives are becoming now). Unless some manufacturer comes up with a miracle upgrade board, existing STFM owners like myself will have to sell their computers and buy an STE – a decidedly expensive course of action. As far as I can see, the best thing for me to do is part-exchange my STFM for an STE while I can still get a good price for it and before people start realising they're out of date. Have you any suggestions?

#### Adam Millard-Ball Southsea

**stf** Yes: wait. You're painting the future far blacker than it is, Adam. Atari themselves have stated their intention to establish the STE as the standard ST model (see the News story, page 6) but they admit that it's not going to happen for a year. In my opinion, that's more likely to be closer to two or three years – bearing in mind the vast number of STFMs already on the market. Consider this: STFM owners are only going to be ignored when the software houses start to write STE-only versions of games and that's unlikely to happen for a long while yet.

The release of an upgrade board which gives STE power to STFMs would speed up this process, but such a board is certain to emerge long before you need to think about selling your ST, and would make selling it unnecessary.

# No joy with stick

For some time now I have been looking for an analogue joystick for the ST. Alas, it appears that nothing of the kind is available. I attended a computer show about a year ago where a salesman told me that a company was currently developing one. I have also enquired from several reputable dealers and the answer is always the same – "we've never heard of one."

One could argue that unless the market for an analogue joystick exists, then nobody is going to bother designing and manufacturing one. But I am sure other ST users must have asked the same question. And, after all, the design only has to emulate the output from a mouse – an A to D converter! Maybe it is even possible to modify an IBM joystick for example. Having said all this, I may be wrong. There may be a gorgeous analogue joystick sitting around on a shelf somewhere with "Atari ST compatible" plastered all over the box. Please enlighten me.

#### Martin Anthony Ilford

**stf** Because of the way the mouse port works, there's certainly no difficulty in attaching an analogue joystick to it. The new Gravis MouseStick (see review, page 87) is the only such stick so far. Unfortunately, it's that old chicken and egg situation. Manufacturers won't produce an analogue joystick to attach to the mouse port because games would need to be specially written to take advantage of it, while the gameprogrammers won't incorporate the code to read an analogue joystick because there aren't enough such sticks currently on the market.

On the STE, however, an analogue joystick port is standard – fitted deliberately to receive analogue input. Atari have said that developers are working on an analogue stick but that there still aren't any games to make use of it. That's sure to change now the sticks are appearing.

# Virus? What virus!

I have been buying *ST FORMAT* for some time now and recently found that a number of your Cover DIsks have viruses on them. These have damaged a number of my disks and this has annoyed me greatly. I would be very grateful if you could ensure that future Disks are free of viruses or have a virus detector on them.

#### Derek Robertson Coatbridge

stf We have NEVER put a virus on our Cover Disk and never will. Each and every month we run the Disk through a rigorous virus-checking

WE WANT YOUR HONEST OP	NION OF ST FORMAT – SO WE	CAN MAKE IT EVEN BETTER!
This questionnaire helps us monitor	4. How much does the cover	9. What is it you like <i>most,</i> and then
what you, our readers, think of <b>ST FORMAT</b> and so keep it tailored	of this issue appeal to you?/10	least about this issue? I most like
to your wishes. Please don't pass up	5. How much does this issue	BILLING CONTRACTOR
this opportunity to influence the	appeal to you overall?/10	
future of your magazine. We really do want to know your honest views!	6. How does it compare with previous	1 100A   I lopsual and southeast
	issues you've seen?	
<b>1. Which ST do you own?</b> □ 520ST □ 1040ST □ 520STE	□ Much better □ Slightly better	
□ 1040STE □ Mega □ STACY	The same standard	
	□ Slightly worse	And I least like
2. Which other computers do you own? □ Spectrum □ Amstrad CPC □ C-64	Much worse	Land Target
BBC Amiga PC	7. Please rate out of ten this and any other	South and the
Archimedes Sega console Nintendo	computer magazines you read regularly:	
3. How do you rate ST FORMAT in terms	ST FORMAT/10	teau farmer annual a far
of value for money?	/10	
Excellent value		You don't need a stamp in the UK.
Good value		Simply return to: Reader Survey,
□ Reasonable value □ Poor value	8. How interesting did you find this month's	ST FORMAT, Future Publishing Ltd,
	video feature?/10	Freepost, Bath, Avon BA1 1XY

process - pushing it through the very best virus killers on the market to make absolutely certain there is no chance of an infection. When the Disk reaches our duplicators, it is tested by them, and before the full duplication commences we receive early sample copies of the Disk for checking. There's no way a virus could sneak onto your Disk - not before you get it.

A simple precaution to reduce the risk of infection is to ensure you always write-protect your Disk before using it for the first time. Simply move the write-protect notch in the top right-hand corner of the disk so that you can see through the hole. To clear up all the confusion about ST viruses, there is going to be a feature on the subject in a forthcoming issue.

# Helpline is a rip-off

In your magazine you have a section called Gamebusters where readers send in tips on how to cheat games. Most of the cheats involve passwords or doing things in a set order. How do these readers find the passwords? Surely they don't type in every different word they can think of? Do programmers incorporate the cheats waiting for someone to find them?

It also seems to me that you cannot complete some games unless you find a cheat. Not only is it frustrating when you get stuck no matter how much you play, it is also a bit of a con because when you buy the game you expect a reasonable chance of completing it.

One final point: Fantasy World Dizzy gives an 0898 number to ring if you get stuck. I have tried to help my kids when they get stuck and after many hours have been unable to solve the problem. Even so, I am loath to ring an 0898 number - I feel it's a rip-off, especially since this sort of game is aimed at young children who are bound to get stuck often. It appears the makers deliberately make the game impossible in an attempt to make more money out of the 0898 number - surely a practice to be frowned upon.

#### **Ray Rigby Cronton, Cheshire**

stf Most game-players discover the cheats to games by examining the game's code. This involves taking some sort of disk editor and then examining the contents of the game disk for likely-looking words. If you know much about assembly programming you can look at the machine code and trace the flow of the program to discover the password. However, many simple passwords (like the way you can hit 4 in Klax to take you to level 100) are no doubt discovered entirely by accident.

Big software houses like US Gold, Mirrorsoft and Ocean provide a free helpline for their games. To offer such a service you need to have someone on call all day who knows each game inside out. This is an expensive service to provide, especially for a budget software house like Code Masters who produce the Dizzy series. It's not surprising then that they should choose to charge you for the service. stf

# Bank on our sounds

After reading your article on the Yamaha PSS680/780 synthesizers, we thought you'd like to know about some programs we've written. These enable ST owners to save the mem-

VISA

ory contents of Yamaha PSS synths to disk. There are two programs: PSSDUMP, which works with the 480/580/680/780 synths, and 790DUMP, which works with the PSS790 only. Both run on all STs up to TOS 1.6 and in medium or high resolution. They are Shareware and are available from the ST Club. You can also obtain them directly from me if you send a disk and two first class stamps, stating the version vou require. In addition we'd like any PSS590 owners in need of a similar program to get in touch, because we need help from someone who actually owns one. You can write to me at: 24 Airedale, Hadrian Lodge West, Wallsend, Newcastle NE28 8TL.

**Graham Galbraith** Newcastle

# **Double trouble**

Can you tell me what the difference is between double-density disks and high-density disks? Are high-density disks suitable for the 520STE?

#### I Smitherman, Bury St. Edmonds, Suffolk.

stf High-density disks can be formatted by special drives to store 144MBytes of data rather than the 720K that double-density disks can hold. High-density disks aren't as reliable as double-density disks because the disk needs to incorporate twice as many tracks. As far as the ST is concerned there is no difference, but standard ST floppy drives aren't capable of formatting to 144MBytes. You can buy a high-density drive for your ST - for more information contact the Silica Shop = 081 309 1111. stf

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# he*ST FORMAT*

You could win one of three sizzling colour inkjet printers from Canon – if you can answer this month's 20 tortuous teasers

e received so many correct replies to last month's competition that we've decided to make this one even harder but don't worry, we're giving you a bit longer this time to complete it.

Before you do anything else, before you even think about taking a look at these questions, flick back to the Contents page and make sure you've read every feature this issue. You need all the help you can get to complete this month's epic quiz!

Name Jeff Minter's loonv graphics package, reviewed this month in FORMAT.

Which recently-released D FORMAT Gold rated paint package also doubles as a good way to put animations onto your own videos?

What is the Roland D-110?

What package under review this month is supposed to be with you all the way through your formative years?

A rather spectacular quote appears in the manual of a

package under scrutiny this month. What package boastfully claims "you'll never need to read this manual again"?

Who is the author of Alice's 6 **Adventures in Wonderland?** 

What PD demo, reviewed this month, has something in common with the Bitmaps?

How many registered ST User Groups are there in the United States?

How many hotkey combinations can you have in the HotWire program?

What programming team are responsible for the development of MidWinter 2?

What device, reviewed this issue, would enhance your control of F-19?

What is the maximum amount of memory you can upgrade your ST to?

13 Using the ST's Desktop, how many kilobytes are left free on this month's Cover Disk?

What type of printer works using tiny jets of ink?

B What new software house is now going to be selling **Deuteros?** 

Some STs are called STFs, others are called STFMs. What does the M stand for?

The STE incorporates two new joystick ports on the side of the machine. What's so special about them?

B What's the size (in pixels) of the ST's screen in highresolution mode?

Name a black and white digitiser which can digitise in real-time.

20 What device can you install or attach to your ST to make it act as if it's a totally different machine?

Find out all the answers in next month's issue. Winners will be announced in the September issue

# THE RULES BOX

- All entries to the competition must make it 1. into the ST FORMAT offices by July 5th.
- **Employees of Canon or Future Publishing** 2. and their families are not eligible to enter.
- 3. Anyone who submits more than one entry to the competition is not only going to be banned, but you'll also learn how painful it can be to have tiny jets of ink squirted up your paper-feed.
- 4. No cash alternatives can be offered.
  - The Judge's decision is absolutely final, so we'll just keep all the tenners, thanks.

IN NEXT MONTH'S ST FORMAT - OUR BIGGEST EVER GUIDE TO PRINTERS,



£1,200 worth of compact but powerful Canon Bubblejet printers are going for a song – well, a competition entry anyway!

In next month's issue we're doing the biggest round-up of printers yet. As a taster to that issue, we're offering you the chance to win one of three Canon inkjet printers, each worth £400.

The beauty of inkjet printers is the quality of the printout. Inkjets work by squirting very fine jets of ink at the sheet of paper (hence the name). Because there's no print head to slam into the paper, you can obtain very fine, crisp lines. The Canon Bubblejet has a print head with 64 jets, giving it a resolution of 360 dots per inch – comparable to the best laser printers on the market.

The FORMAT Gold winning Bubblejet from Canon (reviewed in STF 17) is a tiny inkjet printer, no more than a foot wide and weighing just four pounds. It runs off the mains with its supplied power unit, and with an optional nickel-cadmium rechargeable powerpack you can use it as an entirely portable device!

The Bubblejet has everything you'd expect from a quality printer – proportional spacing, two character fonts and a range of character sizes.

It is also very easy to maintain. The ink cartridges contain not only new ink but also the print head itself, so replacing them is just a case of lifting out one car-

> This tiny black box is actually the

**Canon Bubblejet** 

printer, and we've

got three up for

grabs! It uses an

printing method

standing output

quality which can

even rival that of

laser printers

but it boasts out-

uncommon



character fonts and a The Canon BJ-10e Bubblejet printer is astonishingly compact and can be linked to an optional battery pack for totally portable use

<text><text><text><text><text><text><text>

tridge and inserting another. It's tomorrow's printer technology today – and all you need to do to win one is answer the questions opposite – simple, innit?

#### THE JUNE QUIZ

Your response to last month's mind-bending compo was overwhelming. But we're sure we've whittled down the number of entries we'll get this time. The correct answers were:

- 1. UBI Soft
- 2. The Killing Game Show
- 3. Yamaha MIDI keyboard
- 4. 16
- 5. Prestel
- 6. C-Lab's Alpha Notator
- 7. Any Bulletin Board
- 8. Bui-Tong Phong
- 9. 4,096
- 10. A4
- 11. Double-buffering
- 12. Assembly Line
- 13.9,216 (or 11,264, using DC Utils)
- 14. Hidden Line Removal
- 15. Lyndon Baines Johnson
- 16. DMA port
- 17. America
- 18. At least 10 frames per second
- 19. "I've got the Power," released 1990 20. Genlock

#### LAST MONTH'S WINNERS

Pandaal A4 scanners with sheet-feeders go to: Richard Lockwood from Doncaster, and Alan Richardson from Dunfermline, Fife. Three hand-held Pandaal scanners were won by: Laura Young from Tonbridge, Kent, David Sykes from Halifax, and T R Bennett from Bridgnorth, Shropshire

# PLUS MEMORY UPGRADES AND EMULATORS - OUT THURSDAY JULY 11TH

issue 24-JULY-91

# Twilight zone

# It's all in the Twilight zone - scandal, weird stuff, leftovers that didn't fit...

# **Oscar Wilde Celebrity Review**

Well, this month, luvvies, I've had a look at a football game called Wazza. Apparently this is inspired by a professional footballing chappie who plays for one of the more second rate sides.

The idea of the game is to leave the pitch before the game is completed. This can be done in two ways. First, you can have a crying fit at every one of the ref's decisions and get sent off to have some fluids pumped into your body. Second, you can fall down lame every time you come within ten feet of another player, and again, cry a lot - at least until the physio rubs your leggy-weggy better and carries you off on a stretcher. If you get really good at the game, you can even fail to go onto the pitch at all. This is a tricky manoeuvre, however, and takes minutes of practice.

I thoroughly enjoyed this game. I see it appealing mainly to football fans whose intelligence quotient has dropped by a few hundred points through repeated beastly kickings on the terraces **OW Rating: 69%** 

# **Murphy's** Column

Just when you see the light at the end of the tunnel, the roof caves in

When a compiler accepts a program without error on the first run, the program will not yield the desired output

Variables won't; constants aren't

Whatever you did. that's what you planned One fifth of the people are against

everything all the time

# ED: keen techno

We're aiming to print some helpful DIY projects in future issues, so if you're a competent writer with the technical know-how to design your own DIY circuit boards (such as input/output boards, external clocks, and so on), drop a line to: The Editor, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW

# The FORMAT Letterhack of the month

Remember how we asked what you'd like to see in future issues of FORMAT? Well, we got a sudden flurry of cards wanting something on hacking, signed in different names - but all from the same person! The addresses were all different but the postmarks were all the same - and they all spelled it "Haking." Must be a big fan of the gadoid food fish of the genus Merluccius. Surely he can't imagine FORMAT would condone pirating in any of its malevolent forms?

# Now this is getting ridiculous...

Still having trouble getting hold of ST FORMAT? One more time, then: it's the FORMAT guide to making sure you don't miss out.

If your newsagent doesn't have a copy of FORMAT on the shelf, try asking the person standing behind the counter. They might have some more hidden away. If that doesn't work, check one of the bigger newsagents, like WH Smith.

If you don't want to subscribe - and see page 138 for some good reasons why you should - fill in the form below and hand it to your newsagent. Every newsagent in the country - from John Menzies to the corner shop - will be delighted to reserve you a copy each month - or even deliver it to your door.

Still no luck? Then call the extremely helpful Kate Hodges on = 0225 442244 and tell her which of Future's magazines you're after and where you've tried to get hold of it. She can sort out all of your problems in no time at all!

# Complete this form and hand it to your newsagent

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# **COMING NEXT MONTH**

Next month's issue is just popping out of its 501s with features. You told us in your questionnaire returns that most of you intend to buy memory upgrades sometime in the year, so we're taking a close look at all the upgrades available. What can you do with them? Where do they go? And if you don't know what "populated" and "unpopulated" mean, we'll be asking the residents of the charming rural village of Copping Offbury.

Plus we've got the biggest roundup of printers ever. We're looking at dot matrix, inkjet, laser and colour printers, and we're making a foray into the baffling subject of printer drivers. We're also having a gander at the vast range of emulators which can transform your ST into a PC, a Macintosh - even a ZX81!

And whatever you do, don't miss our exclusive interview with Soul II Soul. We speak to Will Mowatt, co-writer of their third album, about the trials and tribulations of truly professional music writing on an ST.

All the regulars are there as well, including exclusive reviews of Cruise for a Corpse and R-Type 2 - and we hope beyond hope that MidWinter 2 is going to make it too, because our cleaner can't wait to drop mops and have a bash. So until STFORMAT 25 hits the pavement on Thursday 11 July, remember to keep those Slinkies clean!

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