

ST FORMAT

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Why's everyone going crazy over *Sensible Soccer*?



**FUTURE
MUSIC FREE!**

Sample a new
music mag inside!

MAKE SOME NOISE!
Pop, Rave, Club, Rock, or New Age - make the music
you want to hear with our special five page tutorial

39
COVER
DISK 2

**ST
FORMAT**

A host of
powerful MIDI
sequencing
features including
cut and paste,
step editor,
score editor and
quantizing



TOTALLY AWESOME!
Steinberg's 12 track sequencer

NO COVER DISKS?
THEN ASK YOUR NEWSAGENT FOR THEM IMMEDIATELY

39
COVER
DISK 1

**ST
FORMAT**

ARCSVS
Excellent archiving utility
with squillions of features
ZAPENU
Smart program launcher
to make life easier
GALLERY
Slideshow program with
balls and whistles
PLUS!
Midi Menu,
Pack Ice and
much more...



NOT TOS 2 COMPATIBLE

POP RAVE CLUB ROCK NEW AGE

DEATH METAL...

Kerrang! Grunge! Scream!
How STs make it happen



ON DISK Entire music program worth £££s!

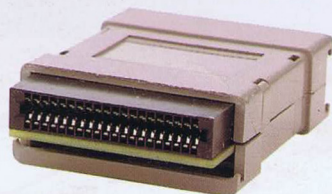
REVIEWED Seven sequencers • Six hard drives • Spectre Mac Emulator •
Games: *Push-Over*, *Crazy Cars 3*, *Fascination* and *D/Generation* •
PLUS Advanced DTP masterclass • PD reviews and more!

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12 month warranty **£65**

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PC7200I

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(No case cutting, but must be small button version)

PC720P

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5.25"

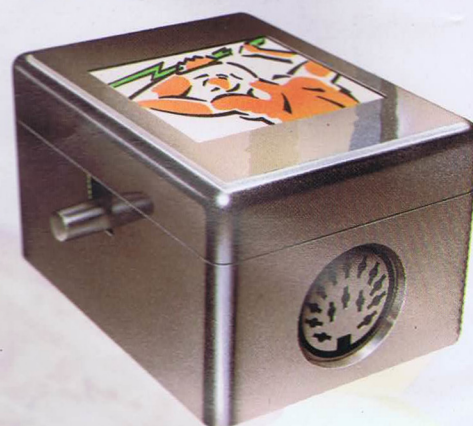
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Maxell multi colour branded disks (Box of ten) **£9.95**
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Lattice C v5.0 **£89**
Devpac v2.0 **£29**
Hisoft C **£29**
Proflight **£29**
Harlekin **£45**
Werks **£24**
Knife ST **£29**
PC Ditto **£29**
Neodesk v3.0 **£34**
Devpac v3.0 **£69.95**

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POWER COMPUTING

Atari ST Power Scanner



Following the huge success of the Amiga Power Scanner, we have been hard at work to produce a product of the same high quality for the Atari ST, and are proud to present the new Atari ST Power Scanner.

This compact unit plugs into the Atari cartridge port and allows scans to be taken at up to 400dpi using the supplied M105-PLUS hand scanning head.

The unit is supplied with the 'PowerScan ST' software - a powerful and user-friendly utility boasting features normally only found on far more expensive products including:

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- Real time greyscale scanning
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- Scan join feature for taking wide scans
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- Works in all three resolutions
- Save in a variety of picture file formats
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Special upgrade offer!

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Show**



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- Search memory
- Print memory
- Disassemble
- Disassemble to disk
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- Search for sprites
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- Load TOS programs

Load and save graphic screens

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- Format analyser
- File editor
- Directory editor
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- Play music
- Load and save music
- Search for soundtracker music
- Search for sound samples

The cartridge the ST has been waiting for **£25 inc.VAT**

Name Description

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Postcode

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System Owned

Credit Card No.

Expiry Date

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Signature

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£

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Ring your credit card order on **0234 843388**
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 reasons of space. So, on with the, erm, magazine then.

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 seven years ago (doesn't time fly) but now selling more computer
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 • Super Power • Your Sinclair
 Commodore Format • PC Plus •
 PC Answers • Amstrad Action
 Your Sinclair • Amiga Format
 Amiga Power • Amiga Shopper
 PCW Plus • PC FORMAT

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COVER DISK

Plug a synth into your ST, load up this
 brilliant sequencer and make sweet
 music.

30 MAKE SOME NOISE!

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35 DEATHLY BUSINESS

Hardcore death thrash metal music
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 erm, balance their books.

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AND FAST?

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 pieces.

46 PRACTICAL DTP

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50 SUBSCRIBE!

Never have to walk to the shops again.
 Until you run out of food anyway.

90 RANT

Jon Hare of Sensible Software has got
 something to get off his chest - and it
 certainly isn't hair.

116 IT'S NOT ME,

IT'S THE JOYSTICK!

Are games too hard? Why are there
 cheat modes in games? What does
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And now, the end is near, and so we
 face, the final curtain. And just before
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112 CUBASE LITE OFFER

Try out Pro 12, the A, then upgrade to
 Cubase Lite. What a stunning oppor-
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 the ST FORMAT seal of approval.

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52 HELP!

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60 ST ANSWERS

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72 REVIEWS SECTION

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 about the upgrade to
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 Spectra GCR, the incredible
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 a couple of jazzy printers on
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 and the best puzzle game this
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Are they really great value?
 We review the latest PD
 programs to hit the drives.

THE GREAT ST COVER DISKS



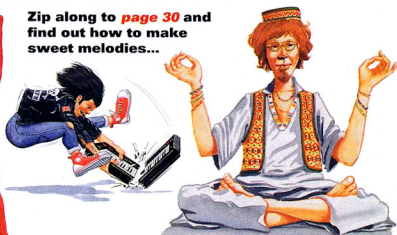
"WE CAN'T ALL BE HEROES..."
 ... somebody has to sit on the kerb and
 clap as they go by." But Captain Dynamo
 doesn't want to sit on kerbs - he wants
 to save the day and the fact that he's in
 his 80s isn't going to stop him. The great
 Cap'n Dynamo appears in our Cover Disk
 game demo - check it out and witness a
 hero with a ZimmerFrame™ in action.



MAKE SOME NOISE!

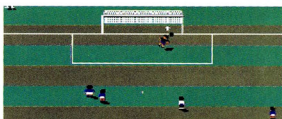
Crank up your stereo, load up your sequencer and make the kind of noise you like!

Zip along to **page 30** and find out how to make sweet melodies...



SENSIBLE SOCCER: FOOTIE FOR THE 1990s OR THE DARK AGES?

Read the only ST review that counts on **page 91**

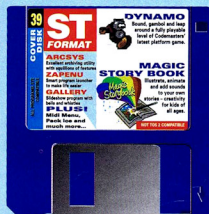


HAVE YOU EVER SEEN THIS SCREEN?

Is that because you cheat? We find out if games really are that hard - turn to **page 116**



THERE'S SO MUCH ON IT



Not ones to rest on our laurels, we bring you another Cover Disk jam-packed full of treats. This month there's the brilliant *Magic Story Book*, the cavorting *Captain Dynamo*, a slideshow utility, a brilliant archiving program, a program launcher and a packing program. Music fans are also going to enjoy *MIDI menu*, a nifty program which checks your music setup for faults.

■ Proof positive that the ST is a great educational tool, *Magic Story Book* is on the disk and it's excellent for kids of all ages.



"I WANT ANOTHER ONE"



On the second disk we bring you the excellent *Pro 12* music sequencer. We at *ST FORMAT* believe there's a song inside everyone, so just load up the program, get out your ST and your MIDI keyboard, create a masterpiece then record it to tape. Then you just have to send it off to the record companies for instant fame and fortune. Well - you can but try. Turn to **page 17** for the first steps.



■ Does this look confusing? It won't when you've read our guide to *Pro 12* - starts **page 17**.

TURN THE PAGE NOW!



COVER DISK 39

You enter into the hallowed sectors of the Cover Disk and discover the enchanted bundles of programs lying within. Chris Lloyd leads the chants for a bit and then pops out for a sarnie

MENU OF THE MONTH

Dynamo: a level of the exhilarating platform bounce about from Codemasters. **Page 9**

Magic Story Book: interactive story book for kids of all ages. **Page 6**

Galleries: a multi-format slideshow with books on. **Page 12**

Pack Ice: fast, reliable and amazingly efficient file compactor. **Page 10**

MIDI Menu: unbelievably handy MIDI testing program. **Page 12**

ARCSys: smart and simple shell for the classic Arc archiver. **Page 10**

Nifty STOS accessory: all those little utilities you wish you had from within STOS. **Page 12**

MIDI files: collection of groovy, funky, housey MIDI-type file things, man. **Page 10**

Back Up: makes a copy of the Cover Disk in a twink. **Page 7**

Magic Story Book

BY: JAYNE AND RICHARD DUNN

RESOLUTION: LOW ONLY

FOLDER: MSB

FILES: MSB.TOS, EDITOR.TOS, WORKBOOK.TOS

GET STARTED WITH: SEE BELOW

A brilliant piece of software, *Magic Story Book* is an interactive system for children of all ages to create a whole animation – you write a story, and add graphics, movement and sound. You can save the finished stories and play them back when the relatives come round at Christmas. There's a full editor to create your own graphics, too. The new series of *Rolf Harris's Cartoon Club* starting in October is to feature the program – and an ST!

Because the package is so big we had to compress it. Setting up *Magic Story Book* takes a tiny bit of patience and three or four blank disks. Copy MSB.TOS to one disk, EDITOR.TOS to another and WORKBOOK.TOS to the third. Now run each one – after a while all the relevant files appear. You now have the main *Magic Story Book* disk, the editor disk and the workbook disk. You can delete the TOS files. If you start producing your own graphics you need a fourth disk with the folder called Pictures on it to store your er, pictures.

Phew, done all that? When you first boot up with *Magic Story Book* you are presented with three stories to load in. You can load in others, but you haven't generated them yet. So start with one of the supplied ones. You're now ready to enter the world of magical stories. Are

you sitting comfortably? Then let's boot up. Once you've gone through a story adding the pictures and sounds and changing the text to suit, you can save it to your workbook disk and then play it by clicking on Play from the main menu. The screen around the books goes black and the first page opens up along with all the animation and sound you've added – magical indeed.

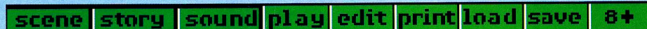
Get the Full Picture

Magic Story Book was previously only available commercially for £29.95. This is the first Shareware version. If you use this program and like it, you are invited to register your copy with the authors. For being such a honest upstanding citizen you are rewarded with many goodies including:

- Detailed illustrated printed manual and tutorial
 - Two more complete stories
 - Combined 1MByte hard drive compatible *Magic Story Book* and editor
 - *Magic Story Book* utilities
 - Access to the *Magic Story Book* library
 - Upgrade offers
- Registration costs a very reasonable £10. Make your cheques payable to Squirrel Soft and send them to:
- John and Richard Dunn
Squirrel Soft
26 Bennett Drive
Warwick
CV34 6QJ



■ *Magic Story Book* comes with three stories ready to load straight in and bring to life.



■ **THE MAIN STRIP:** From the main strip of icons you can load and save stories to your workbook disk, then add graphics, sound and text to a

story. You can play back completed stories and even print them out. The number on the right toggles between the 5+ and 8+ ages. Some functions

isn't fatal to the prog. Clicking on Scene takes you to the graphics section, Story to the text editor and Sound to the sound samples department.

ST Repairs

Our Service department can repair ST's in minimum time at competitive rates. We can arrange for courier pickup and return delivery of your machine to ensure it's safe. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day. We can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc. We offer a Quotation service for £15 for which we will examine your machine and report back with an instant price for repair if you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge. Please note The minimum charge covers labour parts are extra.

Quotation	£ 15
Min repair charge	£ 35.25
Courier Pickup	£ 11
Courier return	£ 6
Same day service	£ 15
STFMIE PSU	£ 45
1Mb Internal drive	£ 45
A/B Boot switch	£ 4.99
STOS Switch	£ 10
52Mb Hard drive upgrade for Mega 1 STE including insured courier pickup and return.	£ 299.99
105Mb Hard drive upgrade for Mega 1 STE including insured courier pickup and return.	£ 409.99

ST Secure

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

Now Only £19.99

Mega 1 STE	£469
520STE Start pack	£235
1Mb STE Start Pack	£245
Phone for printers, monitors etc.	

GI Hand Scanner £119.99

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

GI External drive £59.99

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

- ✓ 100, 200, 300, 400 Dpi scanning resolution
 - ✓ 105mm scanning head
 - ✓ 1 letter mode, 3 photo modes
 - ✓ Includes Touch Up
 - ✓ Includes Deluxe Paint
- Scanline is an accessory which allows the scanning and saving of files whilst your favourite editor or DTP package is running. The accessory supports Golden Image, Migra's GenScan and DATAScan Hand Scanners. £20

- ✓ 720K Formatted capacity
- ✓ LED Track Counter
- ✓ External Power Supply
- ✓ Daisy Chain Through Port

Data Pulse

The Data-Pulse range has recently been re-designed. The Data-Pulse Plus range now offers a more complete range of products and makes an extensive range of software utilities are now included and our range of special offer utilities has been expanded to include our own customised future support. We are continuing to improve the quality and price/performance ratio of our drives. We have recently introduced the MAXI/CP hard drive mechanisms which offer low power, cached times access time, 12MB formatted capacity, 65000 Power on hours mean time between failures and all for a lower price than our old 12MB drives.

- ✓ All drives are formatted/partitioned and tested ready to 'plug in and go'.
- ✓ Extremely low noise.
- ✓ Full Auto booting and Auto parking.
- ✓ DMA device selector & On/Off switch on front of case.
- ✓ DMA Out port for daisy chaining extra drives/Laser printer.
- ✓ Full metal case measuring 300mm x 285mm x 51mm (w/ld), providing good shielding and monitor stand.
- ✓ High quality ICID boards including on board clock and controller software.
- ✓ All drives include Vault archives, Backup software, Virus killer, MCP shell program, Midstate Master demo.

All drives now include the full version of Midstate Junior worth £30 absolutely free.	
Data-Pulse Plus 127Mb ICID	£ 429.99
Data-Pulse Plus 213Mb ICID	£ 539.99
Neodesk 3	£ 24.99
HD Turbokit	£ 4.99

Data/Pulse 2 20 Mb Floptical

The New Data-Pulse Plus Floptical drive, is a 35" SCSI type hard drive, high quality Data-Pulse Plus case and psu. The drive is capable of storing over 20Mb of data on a single 35" Floptical disk and can also read 720K and 1MB 35" floppy disks. The average access time is just 68ms and the data transfer rate is 200K per second, 6 times faster than 5.25" floppy disks. It is available either as a 20Mb unit or as an upgrade to new and existing Data-Pulse/Plus users where it would be ideal for fast data backup from hard drive using a package such as Diamond Back II.

20Mb Floptical	£439.99
20Mb Floptical disk	£24.99
Floptical Upgrade to Data-Pulse (Plus) HD	£33.99
Diamond Back II	£29.99

New Unlimited Storage capacity.

Aries Upgrades

The Aries Upgrade board is an in house designed, Multi layer board utilising high density ZPP RAM chips. The board has been designed to allow progressive upgrading from the base 512K up to 4Mb. The board does require some soldering but once installed is very reliable. The board is hand assembled in our workshops by skilled technicians and is fully tested before despatch. It also comes complete with fitting instructions and test software.

Our technicians can fit any one ST for a small fitting charge. We can arrange courier pickup and return to ensure last turn around. A same day fitting service is also available. Please phone for further details of courier and same day service.

Aries Upgrades (any ST/FX/MI)

512K Aries board	£ 39.99
2Mb Aries board	£ 84.99*
4Mb Aries board	£ 149.99*
Courier pickup	£ 11
Courier return	£ 6
Fitting charge	£ 15
Same day charge	£ 15
16 chip upgrade	
STFM	£ 19.99

Please check the configuration of your machine before ordering. These are not surface mount chips. *special offer

The NEW Brush Mouse

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

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

GI Optical Mouse £24.99

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

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

GI Mouse

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

Only £14.99 Only £9.99

Jin Mouse

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

Data-Net is a high speed network solution developed in house at Ladbroke Computing for the ST/STE. Ladbroke Data-Net hardware consists of an unobtrusive cartridge which plugs into the cartridge port of your ST/STE and connects via Coaxial cable and BNC connectors. The Data-Net hardware is fully Ladbroke compatible and can be used with Universal Network software. The Universal Network software is a Multi tasking network package which does not tie up the server whilst drive or printer accesses take place. It allows file sharing of hard drives and Centronics printers anywhere on the Network. Notes can also auto back accessories from a host's hard drive.

Data-Net Hardware starter	£179.99
The starter pack includes 2 Data-Net nodes.	
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Silhouette

Silhouette is a bit image and vector graphics drawing program with Auto Tracing. The package offers Auto-Tracing, Bezier, B-Splines, High resolution, window, working, Supporting IBM-GDD, requires MB ST or TT High resolution. Imports: IML, GEM1,3,5,SGE, DDE, EPS,Postscript.

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ADDING TEXT

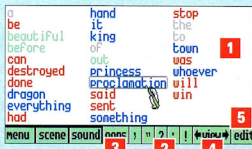
Each story comes complete with the text, how complex it is depends which age group is selected

- 1 THE AVAILABLE WORDS:** click on them to add them to the main text.
- 2 PUNCTUATION:** just click on one out of this selection of chaps to slot them into the text – preferably not at random.

3 OOPS: left click to remove an errant word and right click to delete the lot.

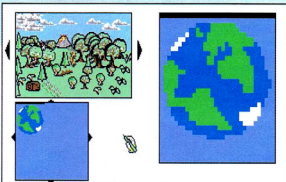
4 VIEW OTHER TEXT: left click to cycle through the other pages of available words.

5 EDIT TEXT DIRECTLY: just left click and type away as you would in a normal word processor. The cursor keys move you about the text. Right click with the mouse when you're done.

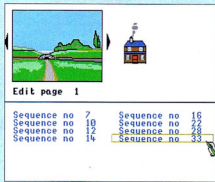


AND THERE'S MORE

Along with *Magic Story Book* comes a powerful editor enabling you to draw all your own graphics. First you need a saved story to load in. There's one on your workbook disk called Ideas which shows off the possibilities. To edit one of the supplied stories you need to save them out from the main program.



■ The editor with a wealth of functions. You can edit the sprites, background details and backgrounds. Unfortunately there isn't room here to explain all the functions. Registration brings a 20,000 word manual which takes you through all the ins and outs.



■ The movement editor enables you to animate your carefully drawn graphics. Sequences can be edited and tested out on the backgrounds.

DYNAMO

BY: CODEMASTERS
RESOLUTION: LOW ONLY
FOLDER: DYNAMO
FILES: DYNAMO.TOS
GET STARTED WITH: SEE BELOW

You are Captain Dynamo, no, honestly, you are – ask your mum. Your long time adversary Austen Von Flyswatter is up to his old tricks and trying to make it away with some sparklers he has obtained. It's out of retirement and into the old super-hero body-stocking and funny hat for a leaping-to-the-rescue effort.

Dynamo is the latest in platform tomfoolery from Codemasters featuring the Captain and his perilous bounce avoiding snake-like thistles, spikes, huge Van de Graff generators and the like. On the Cover Disk is the fully playable Level One. Control

is as you might expect – left is left and so on. Hit <Fire> to jump and push the joystick up to jump that bit higher.

You have to unquish *Dynamo* before you can use it – just copy DYNAMO.TOS across to a blank disk and run it. Just run LOADER.PRG and off you bound.



■ Springy platforms add a little boost for our geriatric Captain Dynamo. A super-hero's life isn't all dominos and hot chocolate – there's also leaping blindly to a horrible death to deal with.

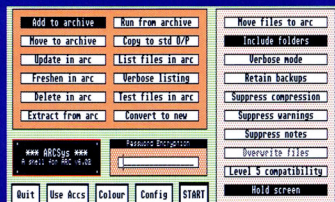


■ Captain Dynamo faces a particularly tricky bit of leaping. Jump on top of the snaky fellas to zap 'em. The jump to the second platform is a bitch.



ARCSys

BY: GRAHAM PHILLIPS
RESOLUTION: MEDIUM OR HIGH
FOLDER: ARCSYS
FILES: ARCSYS.TOS
READ: ARCSYS.TXT, ARC.DOC, MANUAL.DOC
GET STARTED WITH: SEE BELOW



■ With **ZAPenu** you can instantly run any of the programs in the menu at the click of a button and edit it to your heart's content.

Remember when 32K seemed huge? 32,768 characters was enough for loads of pictures or code. It doesn't seem like much any more – barely enough for one ST screen. With the advent of comms and the ability to transmit these enormous files over the phone, the prospect of horrifying bills loomed. What was needed was a way to compress files and to clump lots of them into one big one – and archiving was born. The most popular program is called Arc, but it's very complicated to operate. ARCSys sorts all that out with a smart interface that sits between you and Arc. To fit it on the disk we've done a spot of archiving ourselves. Copy the file ARCSYS.TOS to a blank

disk and run it, after a minute or three it will have de-archived all the files for you. Run ARCSYS.PRGM and you're confronted with a mass of buttons and things. Click on Add To Archive and hit Start, up pops a fileselector asking for your archiving engine – this is ARC.TTP inside the Arc folder.

To create a new archived file, give the fileselector a name or select an existing file, then use the fileselector to pick the files you want squashing into it. To get stuff back again, click on Extract From Arc and pick your Arc file. When the fileselector comes up again, just click on OK to extract everything from the archive.

There are loads more jazzy features including the ability to configure the program so it's all set up as you want it when it loads. Have a good gander at the comprehensive manual called ARCSYS.TXT.

MIDI FILES

BY: TIM TUCKER
FOLDER: MIDI
FILES: MIDIFILE.TOS
GET STARTED WITH: SEE BELOW

To go with our Make Some Noise feature we've lots of lovely MIDI files for you. Over 330K worth, in fact, covering everything from new age to rock. To squish this mass of data down to something reasonable the files have been archived – that is, compressed into one file. Copy the MIDIFILE.TOS file to a blank disk and run it. After a couple of minutes disk whirring, 17 shiny new MIDI files should appear ready to load into your sequencer. Take a look at our feature-packed feature on page 30 for the full gen on how to make all sorts of noise from new age to rave.

PACK ICE

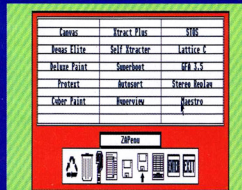
BY: AXE
RESOLUTION: MEDIUM OR HIGH
FOLDER: PACK_ICE
FILES: ICE_2_4.PRGM, ICE_DCRUS, ICE_UNPAS
GET STARTED WITH: PACK_ICE.PRGM

Don't you wish your files were smaller? That's impossible, though – you can't shorten them without losing data, can you? But you can use a dead smart compacting utility which squashes the data without losing anything at all. It examines the file and uses a mathematical algorithm to pack the data, then adds a small section of code at the beginning which unpacks it to its original form when the program is run.

Pack Ice is a brilliant example of this sort of program – often compacting files to half their size. You can fit more on a disk and large pro-

grams load faster. There are plenty of file squashers about but this stands out as the best. It's reliable, efficient and quick. And there are no messages or funny flashing colours while programs are decompacting. Run ICE_2_4.PRGM and select the type of file you want to squash – data or executable – that is, a runnable program. You can compact any runnable programs but, if you pack a data file, then the program using that file has to be specially written to be able to handle **Pack Ice** stuff. The **Gallery** program on the Cover Disk can do this for you. For the technical assembly coders out there, the source code for the depacking routines is on the disk too, so you can add **Pack Ice** compatibility to your own creations. Armed with this little wonder you can cram loads more on every disk – we do.

ZAPENU



■ With **ZAPenu** you can instantly run any of the programs in the menu at the click of a button and edit it to your heart's content.

BY: JOHN SOHN
RESOLUTION: ALL
FOLDER: ZAPENU
FILES: READ_ME.DOC, ZAPENU.DOC, ZAPENU.PRGM, ZAPENU.H.RSC, ZAPENU.L.RSC, ZAPENU.SAMPLE.ZIP
READ: READ_ME.DOC, ZAPENU.DOC
GET STARTED WITH: ZAPENU.PRGM

ZAPenu is a program launcher which – er, launches programs. Load up **ZAPenu** and you can run your programs at the click of a button without searching through multitudes of drives and folders – it really comes into its own with a hard drive. No more fumbling around trying to remember where you put that handy

little utility – just run **ZAPenu** and click on the name. The first job is to set up your menu as you want it. Copy across **ZAPENU.PRGM** and the appropriate resource file – **ZAPENU.H.RSC** for colour systems or **ZAPENU.L.RSC** for mono ones, to the disk holding your programs or to your hard drive and run the program.

The whole works are controlled from a row of icons which are positioned along the bottom of the screen. Click on the recycle icon on the right hand side to add items to the menu and on the enter icon to run programs. The file **ZAPENU.DOC** has full instructions, so check it out.





MIDI MENU

BY: MARC BRADLEY

RESOLUTION: ALL RESOLUTIONS

FOLDER: MIDIMENU

FILES: READ_ME.DOC, MIDI-

MENU.PRG, MIDI.RSC

READ: READ_ME.DOC

GET STARTED WITH: MIDI-MENU.PRG

Connecting a MIDI synthesizer to your ST gives you unparalleled control over its warblings. Unfortunately, it can also give you an unparalleled headache trying to figure out if the cacophony coming out of your synth is because of

faulty MIDI leads or incorrect codes. *MIDI Menu* comes to the rescue, there are three functions – monitor, test and manual – available from the main menu. Monitor displays all the MIDI information reaching your ST – press a few keys and watch the numbers pop up on your ST's screen. It's ideal for finding out exactly which codes are being transmitted. Test mode first asks for the MIDI channels to be tested, then runs through testing voices and vibrato automatically. Manual mode enables you to add any codes you like to your instrument as well as hear the results. All this could just save your sanity when setting up your system.

NIFTY STOS ACCESSORY

BY: ROBERT COOPER

RESOLUTION: ALL

FOLDER: NIFTY

FILES: NIFTY.ACB, NIFTY.DOC

READ: NIFTY.DOC

GET STARTED WITH: SEE BELOW

Imagine the scene: you're in the middle of a programming session and, after hours of toiling over hot code, the time comes to save your work and the only disk you have spare needs to be formatted. A chilling tale indeed. The *Nifty STOS Accessory* sorts that out, no

problem – not only can it format disks but it can delete or rename files, give you the low-down on scancodes and function keys, it even changes the key speed and converts numbers on the side all without having to leave *STOS*. Just copy across the *NIFTY.ACB* file to your *STOS Accessory* disk, any time you want to use the chap, type in *ACCLoad "nifty.acb"* and then press the <Help> key and there it is assigned to one of the function keys, <F1> – if there are no other Accessories loaded. From the main menu press the number of the function you want. Pressing <Esc> gets you out of trouble. Full instructions are on in the *NIFTY.DOC* file.

GALLERY

BY: STEPHEN JONES

RESOLUTION: LOW

FOLDER: GALLERY

FILES: GALLERY.PRG, GALLERY.DOC

READ: GALLERY.DOC

GET STARTED WITH: GALLERY.PRG

There are plenty of slideshow programs about which can show off your pixelated painting abilities, but *Gallery* has all the bells and whis-

cles. It can handle *Neochrome*, *Degas Elite* and *Spectrum 512* pictures, has an editable introduction screen with a scrolling message and a choice of tunes to accompany everything. It can even use pictures packed using *Pack Ice*. Copy across *GALLERY.PRG* to a blank disk and whack on all your pictures, then run the proggy. The function keys select the music and the numeric keys select the speed of the slideshow. Press <Esc> when you've seen enough. To make the show run automatically when you boot with the disk in the drive, copy the *GALLERY.PRG* into an *AUTO* folder. To create your own scrolling

message you need a word processor that can save documents in ASCII – that is, without any frills and control codes. Any decent text editor can do this – look for the *Save As ASCII* function under the file menu. Write your scroll line text and save it as *SCROLL.TXT* on your slideshow disk. To change the title page, do a similar trick but end the lines with a <-> and remember that you have 23 lines a maximum of 40 characters long. Save this file as *TEXT.TXT*. Make sure both of your new text files are on the root directory of the disk – that is, not inside any folders. The customised show is now ready to roll.



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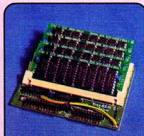
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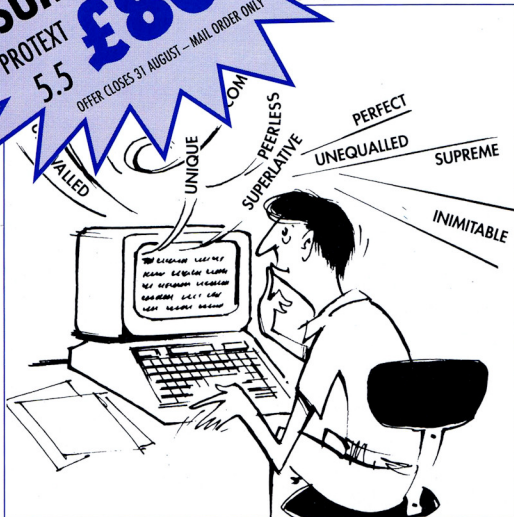
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PRO 12

**Fancy creating some soothing tunes?
Chris Lloyd explains how to sequence
those furrowed brows away.**

With the introduction of MIDI – or Musical Instrument Digital Interface – a whole new dimension in music composition and production came of age; machines were then able to talk to each another.

Atari took the bull by the horns and fitted MIDI sockets to their new baby, the ST. The ST quickly established itself as the most powerful and affordable music machine on the market

with a brand new breed of program – the sequencer.

We've scooped Steinberg's *Pro 12*, a fully featured semi-professional sequencer, for the second Cover Disk. You now have an unprecedented level of control over any MIDI instrument attached to your ST. *Pro 12* works in medium and high resolution on all STs, although the more memory you have the merrier. Right then, got your MIDI instrument hooked-up? Let's roll.

Unless you're familiar with your instrument's MIDI operation it's a good idea to run the MIDI tests first. Here's a super quick recording session – set up your system, load TWELVE.PRG, click on the Record button and plunk away at your keyboard. Rewind the track by pressing <D>, then click on Play – whammo! an instant recording studio. Depending on the kit you've got you might have to fiddle with a few

settings, but getting going is as easy as that.

Getting to grips with the complexity of a program like *Pro 12*, though, is another story. Unless you're already familiar with MIDI and don't mind experimenting, then getting hold of the manual could save a few hassles. On

page 19 there's a coupon that you can use to get hold of it – and it's well worth the £14.99. Steinberg are setting new standards in music software which can turn an ordinary keyboard into a band with its own recording studio. So, plug in those MIDI cables and lay down some tracks.

JARGON BUSTERS

OMNI MODE:

Your instrument processes all data disregarding the MIDI channel. Now outdated

MONO MODE:

Gives each voice on an instrument its own MIDI channel. Your instrument can now produce several different sounds at once, although only in mono.

MULTI MODE:

Often called Omni off/Poly mode. A more advanced form of Mono mode, it enables you

to decide which voice plays which sound. The best system that's used by most modern MIDI instruments.

POLY MODE:

The instrument only plays commands sent to it on a specific MIDI channel, enabling you to chain up to 16 different devices together.

TIMBRE:

The actual noise the instrument makes, from drums to flutes – and all points in between.



■ The Mastertrack option from the Track menu enables you to change the time signature. Click on the values using the left and right buttons to alter them.

TESTING TESTING ONE TWO ONE TWO

Getting MIDI instruments and sequencers talking together properly can cause a few headaches for the inexperienced user and so it's best to start with a few quick tests

The first thing to suss out is which MIDI mode your instrument uses and which channels it receives on. Load-up *Pro 12* and hit the File menu, then use the fileselector to load in the demo song, TESTSONG.SNG. Now Press <D>, <F1>, <T> and <D> one after the other. The Cycle field should be selected and the Master field switched on. If that doesn't happen, press <Caps Lock> and try again. Now click on Play. One of three things should happen – you hear one note, you hear a mixture of notes or you get nothing. If you get nothing try checking all your MIDI connections and set your

synth to receive MIDI. If you only hear one note, then your keyboard can only play one note at a time. Switch your keyboard to Multi or Mono mode. If you can, but be warned – one note at a time isn't too impressive. If you hear lots of notes, then your keyboard can receive several MIDI channels at once.

For the next test, click on Stop, press <F2> and then click on Play. If you hear steady repeated notes in one timbre, your keyboard is receiving in MIDI Omni mode. Try switching it to Multi (often called Omni off/Poly) or Mono mode. If you hear repeated notes in different timbres, then your keyboard is receiving in Multi or Mono mode.

The last test checks out the MIDI channels. Click on <F3>, <1> and <S> – the Solo field should turn black. If your keyboard receives in MIDI Poly mode, you need only do the test until you hear a sound – in which case, make a note of the channel number your keyboard receives on. If your

keyboard receives either Multi or Mono modes, go through the following steps – the numbers you see are the MIDI channels your synth receives on and the maximum number of sounds that are available at the same time.

■ Click on Play – if you hear a repeating note, write down the number appearing in the field at the far right, next to the Pattern and Chan (channel) buttons.

■ Click on Stop and select number two from the Track box. Eat some popcorn.

■ Directly below the number two icon, in the Status row, is a box with an "X" in it. Click on the "X," which changes to the On position.

■ Hit Play again and jot down the number displayed in the field next to the Pattern if you hear a repeating note.

Continue testing each track in the same manner. You now know how many MIDI channels and sounds are available and what their numbers are. What a relief.

Soooper dooper music maker

Pro 12's main screen. This where all the action takes place. Everything is mouse-controlled and most of the functions have keyboard shortcuts

1 TRANSPORT CONTROLS: these work rather like a tape recorder in the way that they play and move through the song. The twin arrow buttons are a speeded-up fast forward and rewind. To record, just click on Record and after a count-in it starts recording.

2 TRACK BOXES: click on the track numbers to select them. Below the track number is the Status switch to turn each track on and off, the Record indi-

cator and the MIDI channel box. Click on these boxes to activate a particular track or tracks. Change the MIDI channels using the left and right mouse buttons.

3 TRACK NAME: to edit the name just click on it and type an appropriate name for the selected track.

4 PATTERN INFORMATION: displays the start and end points, names and number of patterns.

5 TRACK INFORMATION: click here and a box pops up enabling you to alter the velocity, delay, transposition, volume and voice of the selected track. The velocity can be in either Fixed or Shift mode. Shift changes the value relative to the original velocity. Fixed ignores recorded velocity and resets it to

the new value. The right mouse button increases the value and the left lowers it. Just move the mouse outside the box when you want to close it.

6 SOLO: this turns off all the tracks except the one selected by the track switch – very useful for isolating tracks to check the voice.

7 MIDI CLICK: if you're using the MIDI click, you can assign the note and channel here.

8 TEMPO: unlike a normal recorder, changing speed doesn't affect the pitch at all – you can slow down or speed up a piece as much as you want. Clicking with the left mouse button lowers the tempo and the right button increases it. Below Tempo is the current time signature.

9 CYCLE: This enables you to isolate a specific part of a song, the song is repeated between the left and right locators. Use the <L> and <R> keys and type in the new values. With the Cycle button activated – when it appears black – the song loops endlessly between these points.

10 ZERO: rewinds the song to the beginning.

11 QUANTIZE: fixes bad timing by snapping the timing of notes to the nearest sixteenth or thirty-second of a note.

12 SYNC: chooses between synchronizing Pro 12 with its own internal high resolution clock or else with an external clock.

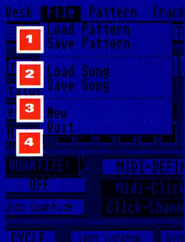
13 VU METERS: shows the MIDI information for each track graphically.

MENU MADNESS

Along the top of the main screen is the familiar GEM menu bar packed with juicy features

MENU 1

- 1** Loads and saves all the patterns you've been generating.
- 2** Loads and saves the whole caboodle.
- 3** Clears the song from memory ready for your newly created masterpiece.
- 4** Zaps you back to the Desktop.



MENU 2

- 1** Shorten patterns, adjust the locators in the Pattern box and then click here to crop the little fella.
- 2** Select this one to create a new pattern to work on.
- 3** Takes you to the Score Editing screen when you want to step-edit and score-edit a track or pattern.



MENU 3

- 1** Takes you to the Master-track box to edit the tempo and time signature of the song.
- 2** Off you pop to the Arrange Track screen where you can use patterns to build up complete tracks. Remember to set the relevant track into sequencing mode.
- 3** As it says – cuts or inserts at the locator positions.



MENU 4

- 1** Takes you to the Mode Setting screen to select MIDI commands.
- 2** Enables you to enter text describing the track.
- 3** Activates the MIDI clock, used if you want to synchronize a MIDI drum machine or second sequencer or when you want to transfer material.
- 4** Toggles the MIDI click, an alternative to using the beep as a metronome.



MENU 5

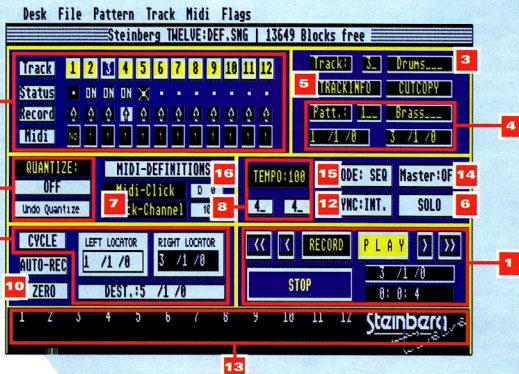
- 1** Toggles the beep on and off.
- 2** Uses a special MIDI command that puts a connected machine back in the manufacturer's default state.
- 3** Helps you to optimize MIDI channel use. Leave this on unless you notice problems with unplayed notes, ignored program changes and the like.
- 4** Sets the Cycle parameters, eats a Penguin bar and then sulks for a while.



14 MASTERTRACK: toggles the Mastertrack settings from the Track menu on and off. These settings are saved with your song.

15 SEQUENCE MODE: click here to toggle between Tape and Sequence mode. Tape mode works like a traditional tape machine, while Sequence mode enables you to switch tracks to Sequence mode by double-clicking on the On box below the track number to display an "S."

16 MIDI DEFINITIONS: enables you to change the input filters. Useful if you have little memory because you can filter out unwanted information. When MIDI-through is flagged, all incoming MIDI info is sent again so you can control all MIDI channels on other expanders or keyboards. If MIDI-through is selected, the channel set here is not sent through but recorded.



INSTANT REPLAY

Replaying a song with one timbre, or voice, is possible on any keyboard

Go to the File menu and click on Load Song. The fileselector should pop up with five example songs. Select BACH.1.SNG, then click on OK. Now press <0>, <1> and <F1>. The Cycle field is still black. Enter the number of a MIDI channel you wrote down during the MIDI test into the MIDI row below Track One box – use the right mouse button to select a higher channel or the left for a lower one. Now hit Play and you should have a spot of classical music. For a different voice click on the TRACKINFO box, click on voice while holding down <Control>, then use the left and right mouse buttons to alter the voice. How about three

tracks? Load in the COOL.SNG then press <0> and <F1> – you now have a song with three separate tracks. Change the boxes in the MIDI row under the Tracks One to Three to those of your synth's MIDI channels. If your synth can receive more than one channel, you can assign tracks to different channels and use different sounds. To

isolate a track, press <S> or click on Solo and select each track in turn, playing it and fiddling with the voice until you get what you want, then deselect Solo. Pressing <0> takes you to the beginning of the song.

■ For the Pro 12 manual, fill in the coupon below and send it, with £14.99, to ST FORMAT, FREEPOST, Somerton TA11 7BR.

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■ The MIDI mode box enables you to choose which commands to send to your keyboard. The first column is the keyboard mode and is sent to connected devices when you load a song or leave the MIDI mode box. The second column is the command sent when Pro 12 stops, commands other than All Notes Off are for equipment which don't understand this command.

KNITTING PATTERNS

An easy way to construct songs is to make them up from small patterns which can be looped and shuffled about to make a complete song

The best way to start a song is with a short basic drum pattern. Clear the decks by selecting New from the file menu. Pick a track and select the Record arrow below it. Set the left locator to "1" and the right to "3" - this gives you a two bar pattern. Now



■ Remix the Tango advert music and really annoy the neighbours.

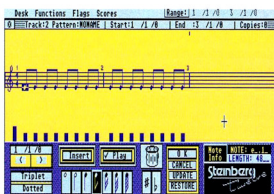
click on Create from the pattern menu. You have now created an empty pattern that you can use. Make sure the MIDI channel is set to the one your keyboard uses for drums. Right - you're ready to lay down the drums. Go to Score Edit from the Pattern menu and up come two empty bars ready for the sounds.

First off is a simple hi-hat sound at eight beats to the bar. Click on the semi-quaver note at the bottom and then click on Fill from the Functions menu. This fills the bars with the selected note - an instant beat. You might find your synth isn't playing the hi-hat, no problem - just transpose the notes until you hit the right sound. Try F#0 by transposing down by 22. Go to the Functions menu and select Transpose and use the left and right mouse buttons to change the value. Click on Play or press <p> to hear the results.

Now you can add some bass drum. Click on Insert and add a note to the first hi-hat at the right value for your instrument's bass drum sound, usually

C,0. Move your mouse up and down until the right note appears at the top left. If you put a note in the wrong position fear not, you can always drag it to the trash can to zap it. Add further bass drums on the fifth, eighth, ninth, thirteenth and sixteenth notes. Exit from Insert mode by right clicking. The drum track is beginning to take shape. Try adding a snare drum to the third, seventh, eleventh and fifteenth notes - the snare drum is usually D,0. When everything is as you want it, click on OK and save your pattern from the file menu.

Now it's time for the bass. Select another free track and create a free pattern as before, selecting a different MIDI channel for your bass sounds. You can create the notes in the same way as the drums or use Step Edit. Right click on Insert and play your keyboard - every note is in eighths no matter how you play



■ Oh wait, I know this one. It's the latest Erasure track, isn't it?

it - enter a <0> from the ST to add a rest. Save your pattern as before.

Two bars of drums won't go far, so it's time for a spot of copying. The location of your pattern is shown below the pattern details. Select the destination bar in the Destination box below the left and right locators and type in the destination bar - initially 3 - then drag the Pattern box to the track you're copying to. Repeat this six times to the odd numbered bars and you have 16 bars of drums without inputting each one by hand. Using this method, long pieces of music can be built up from small chunks.

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FALCON LAUNCHED TO THE WORLD

BY **ANDY HUTCHINSON**
IN DUSSELDORF

Atari launched their new computer, the Falcon, this month. They announced an initial price tag of £499 for the 1MByte version and £899 for a 4MByte version with internal 65MByte hard drive – it was stressed that those are launch prices. The machine isn't going to be available in bulk until Christmas. However, 10,000 machines are being shipped into the UK for October.

During an exclusive interview with *ST FORMAT*, Sam Tramiel, president of Atari, said that, while they would be pushing the games platform for their new machine, he didn't want the Falcon to be tagged as a games-only machine. To this end the company are producing Atari badged software, with initial releases comprising games, productivity, music and art software.

Tramiel said: "Falcon is not just an evolutionary machine, it's a revolutionary machine." He told the journalists assembled at the Atari show in Dusseldorf, Germany that the Falcon was the world's first true multi-media machine, a home computer which could "...interface with the real world."

Tramiel launched a broadside at PCs by declaring, "You will see the best PC games on Falcon but with true colour and real speed." This motif was adopted by Richard Miller, one of Falcon's creators, when he said: "To get similar sound from a PC you need an \$800 – \$900 sound card and even then it's not as

good." Miller believes that there isn't another computer on the market which comes close to touching Falcon. He said, "Falcon represents the integration of personal computing with reality." He added that this was only possible on Falcon because of its enormous 30 to 35 MIPS (millions of instructions per second) of total processing power.

With Falcon 030 barely off the drawing board, Tramiel revealed that the next step was Falcon 040 – he even ventured to say that Motorola were working on a 68050 CPU and that Atari would support that chip when it became available.

CD machines possible

While other companies rush out ill-fated CD peripherals "and/or"

machines, Tramiel remains unconvinced about the viability of entering the CD market – he believes that it is so small at the moment that it just wouldn't be worth investing in it. He did reveal, however, that Atari are working on a CD-based machine. Sources at the Dusseldorf show told us that this machine is likely to consist of a CD drive and a Falcon in the same casing, and will be able to be operated by remote control. It is to feature Falcon's incredible sound and full motion video making it superior to Commodore's CD-TV and Philips's CD-I. We were told that it is unlikely that the new CD-Falcon will enter the market much before 1994 – a time when the CD market should have matured sufficiently to support a decent machine. The offi-

cial launch of Falcon was suitably impressive. Gorgeous true colour pictures were displayed on a video wall and then manipulated by the machine. Its sound capabilities were demonstrated by adding delay, flange and echo to the announcer's voice – Atari even demonstrated a special Dolby effect where the hiss was completely removed from his voice.

Other applications which are being developed include computerised home videos with text and music that run entirely on the Falcon, as well as photo albums with voice narration. Karaoke, music videos, colour video phones, video titling and special effects programs, graphic equalisation and surround sound functions are also promised.



■ Here's the Falcon in its natty new (not!) case. There will, however, be a new case for the 1MByte version though.

MR TRAMIEL, WHY SHOULD I BUY A FALCON...

...When I can get a PC?

"Everything on Falcon is better and cheaper than PC."

...When I can get a new Amiga?

"Falcon is in the market place."

...When I can get a Mac Classic 2?

"It's not bad for a monochrome."

...When I can take my money elsewhere?

"Falcon 030 is better than anything in the market place."



■ Sam Tramiel (head of Atari) tells Bob Gleadon (head of Atari UK) which *ST* magazine to read.

MORIARTY GO BUST

■ The *Monulator* enables an ST with a colour monitor to run software like *Migraph's Touch-Up* graphics program in high resolution mode.



Moriarty Software, best known for their mono emulator, the *Monulator*, have ceased trading. Goodmans International have secured exclusive rights to the emulator and have reduced the price to £14.95 from £20. Contact Goodmans on 0782 335650.

FALCON SOFTWARE

"It's just a box until you wrap the software around it." So said Bob Gleadow last month. Here's the software we saw running on Falcon at the show and which will be coming out first - most of it at the European Computer Trade Show which starts on Saturday 5 September, although some aren't due to be released until 1993

DIGITISING. The DSP (digital signal processing) chip was hardly breaking into a sweat, even though this digitising program received pictures through a video camera and displayed them on a monitor in true colour. Tasty indeed.

GRAPHICS. Bill Rehbock, head of software development at Atari US told us that packages being developed included real-time 3D rendering, photo retouching and Bitstream font scaling. You heard it here first.

LLAMAZAP. The boy Minter's game. This is a sort of split-screen defender with all the usual Llamasoft embellishments. The idea is to zip around blowing seven shades of shampoo out of various alien ships by changing ships to suit needs. And - er, that's it.

FALCON D2D. This is an impressive hard disk recording system being developed by D2D systems

which enables you to record sound straight to hard disk where it can be remixed, reversed, cajoled, hassled and generally turned into pleasing noises. Previously the only way you could do this on the ST was with *Sound Tools* which cost £2,000. This program will cost under £300. Read an exclusive preview of this package next month.

SPACE JUNK. This is being developed by the multimedia programming group Mirage. It is a space explore-'em-up with true colour digitised stop frame animation and digitised voices. The game is an open-ended adventure set in a universe - you control the central character who can indulge in space or surface travel, talk to other characters and play sub-games like gambling. *Space Junk* will be available in 1993 and will come in both floppy and hard disk formats. It is to be released under Atari's own label, as are a large number of Falcon programs. *Space Junk* looks brilliant and is sure to create a real stir when it emerges next year.

STEEL TALONS. Who remembers this one then? *Steel Talons* was supposed to come out on the STE, taking advantage of all its extra hardware. A Falcon version of the game will be released in 1993.

TRUE COLOUR. Those chaps at Hisoft have been beavering away to create an art package which can make use of a quarter of a million colours. The program - which is expected to retail at under £50 - is very reminiscent of *Neochrome* - and that's no bad thing. We also heard about two other major league art packages which are being Falconised. One of these is rumoured to be the utterly brilliant *Deluxe Paint 5*.

PD LIBRARY CLOSES

The South West Software Library is to close because Martin Dryden, the owner, is fed up with the legal aggravation that has been caused by an investigation into the allegedly copyright material used in some PD demos. From Tuesday 1 September, 16/32 Systems will take over the SWSL PD catalogue and integrate it with their own.

The closure follows the seizure of sampled sound and commercial product demo discs (see ST 34 News) by the Dorset Trading Standards Department under the Copyright Design and Patents Act and the Trade Descriptions Act. Investigations are still in progress.

Dryden explained: "Running the library just isn't fun anymore - it's supposed to be a hobby and, if it's not fun, there is no point in carrying on. We feel that we were unfairly singled out for legal action over something that was not unique to us and is ultimately harmless."

The SWSL has previously faced legal action by Spear's Games over alleged breach of copyright over the Shareware game *STrabble*.

You can contact 16/32 Systems at 35 Northcote Road, Strood, Kent ME2 2DH.

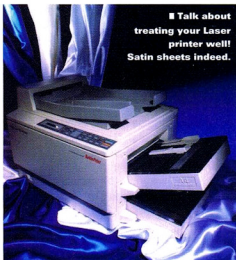
SPARES AND REPAIRS FROM PEOPLE WHO CARE

HCS Computer Peripheral Supplies have recently launched HCS Engineering for repairs, servicing and upgrades to home computers. Prices for repairs start at £30, upgrades cost £15 to £20. HCS can also arrange a delivery and collection service costing £5 each way. The company stocks a full range of computer parts enabling them to offer a 24 hour turnaround on ST repairs. For further information contact: HCS Engineering, 144 Tanner Street, London SE1. Contact HCS on 071 252 3553.

NEW PRINTERS FROM PANASONIC

Panasonic have added two mono narrow carriage printers to their Quiet-Printer range - a 24-pin model, the KX-P2123M priced at £346.63 and a 9-pin machine, known as the KX-P2180M which costs £264.38. It is possible to upgrade both of these printers to colour output by the addition of a colour kit which costs £45. Colour versions of both machines are available - the 24-pin KX-P2123C for £399.50 and the 9-pin KX-P2180C costs £317.25.

They have also launched a new SatinPrint Laser - the KX-P4451 for £2,109.12. It incorporates PCL5 software compatibility



as well as HP LaserJet Series 3, Epson and IBM emulations.

Panasonic can be reached on 0334 853551.

ALARMING TIMES

Want to keep your new Falcon to yourself and not have it hauled off by some burglar? Then you need either a complete home alarm system or perhaps just the Protector +2 alarm from JF Cape & Son. It's a small unit with two magnet switches that can be attached to your ST and monitor - if either are moved more than a few millimetres, a 111 decibel alarm is triggered. It normally costs £29.99 but if you mention *ST FORMAT* when you order it, you only have to pay £29.99.

Contact JF Cape & Son on 0752 700649.

PREVIEWS

Toads with axes and skin complaints for names, 75 year old superheroes, more misspelt mythical creatures, a spot of footy and some animated counter-espionage.

Andy Lowe suggests you click on your brain, open the Coming Soon folder and gawp in amazement

THE LADS DONE GREAT

Before you collapse with relief muttering "The European Championship is over - thank goodness, no more football," watch out for this compilation. Ubi Soft are releasing *Stuart Pearce's Football Compilation* - a collection of *Kick Off 2*, *World Championship Soccer*, *International Soccer Challenge* and *Manchester United*, with no frills attached apart from the fact that the whole thing is being endorsed by England defender Stuart Pearce.

In the European Championship you may recall that our Stu was shamelessly booted by French player, Basile Boli - but was highly "mellow" and diplomatic about the whole thing which annoyed *The Sun* but did wonders for European relations. So, if you fancy owning all those footy games in one swoop, get your £30.99 ready.

■ Stuart Pearce. He came, he saw, he got mistaken for the ball by a French player.

PLEASE LET ME IN FRONT OF YOU, SO I CAN CASH ME PENSION

Insane professor Austen Von Flyswatter, aged 72, has constructed his own rocket, nicked 81 year old Lady Phillis Uppenhoofen's collection of diamonds and footed it to a hideout on the moon. There's only one man capable of sorting him out, getting the diamonds back and coming out of it all with his walking frame intact - Captain Ernest P Dynamo, aged 75.

Captain Dynamo is a vertically-scrolling platform romp from the Codemasters' budget range, featuring all the usual traps, obstacles and fiendishly positioned conveyor belts as well as rope slides, flying robot halibut and deranged rotating gobstop-

pers spitting fire. It plays wonderfully and has enough hidden features and warp cheats to persuade you to part with the customary £7.99. If you need more encouragement, check out the excellent playable demo of *Captain Dynamo* on this month's Cover Disk.

Also from Codemasters comes *Soccer Pinball* - you're in charge of a pair of flippers and you have to knock football players over at the same time as playing around a pinball table. Each table has a theme so, if you're less than rapturous at the thought of more f***y, this sounds like a refreshing deviation.

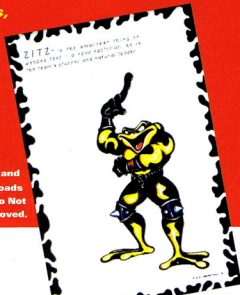
■ Do soccer and pinball mix? Like tabs and booze. Like cheese and toast. (Send more huge long lists of seemingly unconnected things that mix to Garth Sumpter, Priory Court, 30 - 32 Farringdon Lane, London EC1R 3AW.)



WART A SPECTACLE

After the turtles, Mindscape come slithering through with the revenge of the amphibians in Battletoads...

■ Titz - the quick-witted and resourceful leader of the toads - has wisely had his "Do Not Mess" tattoo removed.



DIGITAL ORGANISMS

Doubtless you've spent many hours sweating over DI's *Gobliins*, the game with the best comic intro sequence ever. You've probably also completed the game as a result of our rather fun-spilling solution printed in *STF* 38. Well, don't worry about that – you're in for another dose of casting spells on unlikely objects and tickling skeletons because the sequel, entitled *Gobliins 2 – The Prince Buffoon*, is fast approaching your ST.

This time round you control two elves – Fingus, a careful and serious guy – and Winkle, who's something of a reckless lunatic. You have to rescue a young prince

who's been kidnapped by the Demon King.

Both Fingus and Winkle react according to character and you must decide if you should use Fingus' diplomacy or Winkle's less subtle, more physical approach. On top of that there's another small problem – they both have to act simultaneously for things to progress.

Another goodie in the way from Digital Integration comes in the form of *Ween – The Prophecy*, described as "a medieval adventure with animated video images." In this game a downright unsociable git called Kraal has decided to mosey on back to



the Kingdom of the Blue Rocks, from where he was banished "in the times no longer remembered by men," to wreak revenge on the son of the sorcerer who banished him in the first place. Imagine: "I am the mighty Kraal!"... greeted by a loud chorus of "Who?" Due to be released in October.

■ The tortured soul of a dead sorcerer surveys the land he once reigned over, but which is now being menaced by the evil Kraal. Don't you think Laurence Olivier would be right for this role?



■ "Hello! My name's Guy Spy. Get away from it all on one of my super economical ski-breaks. Take a welcome breather from chasing those evil international spies at Guy's Skis 'R' Us. Oh, my skis have stuck in the snow. Ah..."

SOME GUYS GET ALL THE INTERACTION

Do you like your graphically stunning games to be discreetly running on your ST when your mates come around? Look no further. Readysoft, the people who brought you the distinctly dodgy *Dragon's Lair* games, have come up with *Guy Spy*. This boasts superb quality graphics and animation but – and it's a big but – instead of all those irritating joystick nuances of the previous games which caused you to die so easily, Guy

Spy puts you firmly in control of the character and so – gasp – you may see some playability backing up the graphics.

You're in the suave and shrewd shoes of the title character who, of course, has to save the world from the Domesday machine of the evil Von Max. These six disks, 1,500 frames of animation and 6MBytes of graphics have earned the description of an "interactive movie experience that you can actually play."

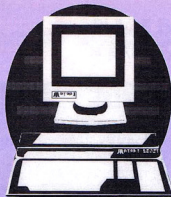
When is a toad not a toad? When it's bloody enormous, wears shades and studded knee-pads and sports the physique of a body-builder. Mindscape's latest scrolling beat-'em-up, *Battletoads*, comes on like a cross between *Tron* and those well-known oily, broadsword-brandishing reptiles, who, incidentally, wouldn't stand a chance against these boys. The plot

– rescue the "radiantly beautiful" Princess Angelica from the clutches of the Dark Queen – isn't exactly a major ground-breaker in the originality stakes, but the game features around 30 cartoon-like characters – including pigs, rats, humans and bulls – all geared up to cause the toads some serious grief on their slick and slimy quest. *Battletoads*, apparently, the best-selling

Super Nintendo game in Japan and, with a recommendation like that, how can you afford to pass it up? Watch out for the definitive *STF* review soon.

■ Hail the arrival of the *Battletoads* – valiant saviours of oppressed pond-life.





HCS

Memory

HCS STE and MEGA STE UPGRADES

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

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

STF (M) and Mega ST upgrade kits

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

MARPET XTREAM <i>DELUXE</i> QUALITY SIMM UPGRADING SYSTEM	
Formerly Frontier	
Upgrade from 520 to 1040	£44.99
To 2.5 Megabytes	£79.99
To 4 Megabytes	£119.99

Solder in Kit

The solder in kit will upgrade the 520STE to 1Mb. Electronics experience is required as much soldering is needed. Check your RAM chip configuration before ordering: 4 or 16 chips, SMD or DIL packages. 16 chip DIL version comes C/W sockets

Solder in kit (all versions)	£25.00
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REPLACEMENTS

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

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

ACCELERATORS

The AD speed made by ICD fits in place of your microprocessor. It uses a 68000 chip running at a switchable 16Mhz with cache or standard 8Mhz to give virtually 100% compatibility. The 68030 SST for the Mega ST gives phenomenal speed with a 68030 running at 50Mhz! The SST has space for 8Mb on board RAM, TOS2 included.

AD Speed ST	£145.00
AD Speed STE	£165.00
68030 SST - 50	£550.00
Fitting for above	£35.00



INTERFACES

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

Keyboard interface allows the use of external PC compatible keyboards on the ST.

AD SCSI	£69.99
AD SCSI Plus (with clock)	£79.99
Keyboard Interface	£55.00
Multirez	£44.99
Forget Me Clock	£16.99

MONITORS

14" super high resolution 0.28 dot pitch Multisync monitor is compatible with the TT, PC VGA/SVGA and Multirez and proposed Falcon output. SM144 is compatible with all monochrome ST software, all normal controls at the front. Both have picture size and position adjustment.

Multisync colour monitor	£280.00
SM144 14" FST Monochrome	£115.00

PC EMULATORS

The Vortex 386 emulator runs at 16Mhz and allows true multitasking in PC mode on the ST. Space on board is provided for a 387 CO Processor and 512K of FASTRAM. Norton factor 15!

VORTEX 386 SX-16	£330.00
387 CO-PROCESSOR	£117.00
FASTRAM CACHE	£30.00

Upgrade Specialists

SPECTRE GCR MAC EMULATOR

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SPECTRE GCR (Inc. 128K Roms).....£300.00

Atari TT2£1050.00

PROTAR HARD DRIVES

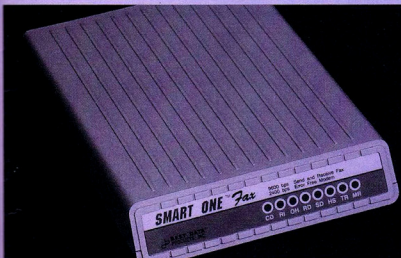
Progate II 30.....£249.00

Progate II 40.....£288.00

Progate II 40DC.....£349.99

Progate II 50DC.....£369.00

Progate II 100DC.....£449.00



HOW TO ORDER

Enquiries/mail order and credit card orders please call 081-777 0751

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For mail order please send description of goods and cheque/PO to:



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**35 Hartland Way, Shirley,
Croydon CR0 8RJ**



Prices include VAT and P & P

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MODEMS

HCS Smart Modem 9600 has full FAX capability for send and receive. Auto-answer, pulse or tone dial, automatically determines incoming calls as fax or modem, industry standard command set with support for V22bis, V22, V21. Fully Hayes compatible. All types c/w PC software. ST fax software option supports most ST graphics formats including Pagestream and Calamus for immediate composition and send. Modem 2400 has all above features but without fax. All types come complete with cables.

Smart One™ Fax with ST FAX software£139.99

Smart One™ Fax with only PC software.....£119.99

Straight Fax software£45.00

Smart One™ 2400£59.99

**Smart One™ 14, 400 FAX MNP V32, V32 bis
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Feed Your ST



MAKE SOME NOISE!

Making music doesn't have to be about learning complicated

scales, blistering your fingers mastering strange positions around your guitar, or even about spending a fortune on technical equipment.

Tim Tucker shows you how to create different styles of music with a synth and your ST

MIDI music has been with us for a while now and it is clear that it's had a considerable effect on music being made and the people who make it. Everything from advertising jingles to chart hits to film scores have benefited from MIDI technology, and, with the right approach, you can accomplish the results you're looking for whatever your musical preference.

You don't need a powerful or expensive sequencer to make good music, and whether you like pop music or rave, rock or new age, there's something in MIDI for you. You already know the basics of how to cope with MIDI from our music series (issues 35 to 38 inclusive) – and if you haven't read and absorbed them, go and do so now! If you don't have those issues, turn to page 50 to order them. In the following pages you can see how to put together five distinctive styles of music using a MIDI sequencer, with accompanying files on the Cover Disk in the MIDI folder for you to follow the process. Remember that MIDI is just a tool and at the end of the day it should be you and not your ST that determines the results.

Popmongous!!

Pop music is the home of the song. You may be able to boogie on down to it, or smooch to it, or perform silly movements to it, but in there somewhere should be a song. A good song works whether it's played on a complete MIDI studio or a stylophone (well, OK then – an acoustic guitar), but a sequencer is a great tool not only for performing but also for writing your song.

Plug in your synth, get hold of your Cover Disk and open up the file POP1.MID so you can get some idea of how it was put together, then use that as a basis for your

own ideas. A good place to start is to bung the drums down fairly quickly on to one track as an accompaniment while you concentrate on working out some melodic ideas. Nearly every pop song you hear is made up of two main sections – a verse and a chorus. For the verse there's a two chord groove, which bumbles along pleasantly. The chorus is the part which – you hope – everybody sings along to and remembers, so you want to make it stand out musically. In this example the pace in the chorus was doubled – the verse has one chord per bar

WILL POP EAT ITSELF?

The term pop music conjures up images of bubble gum, teenage fads and Australian soap stars, but it really means anything that's music and popular. Ever since it began people have predicted its demise, but it's still going strong and showing no sign of dying out. Remember that it's not easy to write a song that a lot of people

You know the score!

You've just come back from last night's rave. It was probably called Pneumonia or something, you were out in a field somewhere with about 7,000 other people, it was pouring with rain and you had the time of your life. No doubt all those hardcore and techno riffs are still pounding through your brain and you wouldn't mind getting a few of your own down. So

where do you start?

The first most important thing about any dance track is that it's got to be danceable. A great place to start is with the drums, and if you load RAVE1.MID that's just what you can find. Ravers like their tempos fast – anything from 125 to 140 BPM (beats per minute) – and beyond, so the beat here is 130. You can see that the drum parts are introduced in stages to build in to the track, and from then on it's just an eight bar cycle with variations in the snare fills at the end of each loop. It's important to keep things simple – the kick drum states the beat, while the rest of the kit adds the backbeat and accents. Everything is quantized to sixteenth notes to get that machine-like feel and kept the drum parts on separate tracks so that each can be





■ For the guitar chords try staggering the notes slightly to emulate the strum of a guitar.

whereas the chorus has two. There's also a short bridge between the verse and chorus to link them together smoothly and enhance the melody. For the guitar part in the bridge, you could try emulating the strum of a real guitar by playing the notes of the chord slightly after each other, just as a guitarist naturally does when taking his pick to his strings. Be sure not to quan-

tize when recording this or you lose the effect.

Next listen to POP2.MIDI you could add a bass line. The bass may clash with the left hand (lower) part of the piano. In the example everything apart from the piano was muted while the bass was recorded to make sure there was no clash. If you do have a problem you can just delete the offending notes in the piano track – another advantage of recording on a MIDI sequencer and not tape. With a pop song you want to grab attention immediately, so you could add some brass to the intro. Notice that the intro is not just a verse but a slightly different arrangement of the same two chords. In this way it leads into the verse but also adds

variety. The brass is brought back in the chorus to add punch.

The completed version of the song is on POP3.MIDI. There's a marimba in there to add colour after the first chorus, and again in the middle eight. A middle eight is a new musical section which gives a break from the verse/chorus structure – so called because it's usually eight bars long and it comes in the middle. In this case, however, it's 16 bars in length and consists of a repetition of the intro. Another option might be to have a solo of some sort, or a rap section.

Once you've written the song, go back and look at the drums which you put down at the beginning. In the example the previous snare part was wiped from the drum track and a new one was inserted for the entire length of the song – with cymbal crashes to boot. This gives you the chance to put in fills where you want so the drum track sounds less "looped." All you have to do now is to add an astounding vocal and get signed by a famous and wealthy record company before you get on *Top of the Pops!*



■ Lion-Pop has turned soap star Kylie into a super sex goddess. Could it do the same for you?

like – and also that some of this century's greatest musicians wrote popular music – look at the Beatles, Cole Porter, and Leonard Bernstein. Pop music started with the guitar, bass, drums model established in the '60s. Now the guitar is being supplanted as the central instrument of pop by the keyboard as a result of the big steps forward in synth design and the advent of MIDI sequencers. These days your future superstar is more likely to be boning up on the MIDI implementation of his latest synth than posing with his tennis racket.

muted in and out when you're experimenting with different mixes.

Once you're happy with the drum parts, you can put it into loop and mess around with the piano – RAVE2.MID is what I managed to come up with. This is just four chords in a two bar pattern which you could then paste on to the rest of the track and add a bass part. In the example the track is extended by 32 bars and at bar 73 the drums are dropped in favour of a piano section, so you can see a structure starting to emerge. The velocities on the drums are set to their highest level (127) so that they drive the track, but the piano and bass velocities are left as they were played because they sound more natural that way.

By looping the parts and jamming along you can create a groove – and probably wind up the neighbour-

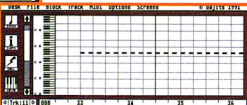
bour something chronic – but the track needs some new ideas to make it interesting. In other words, it's time to add all those synth sounds you've been dying to use. On RAVE3.MID there's a pad to add a bit of atmosphere and ambience – if you don't have a pad sound on your synth, try a string sound. Bleeps are a good complement to any rave track – use a square wave sound for this part – and a bit of analog squelch has been popped in to pep up the groove. Notice how the analog part recreates a delay effect by using MIDI's ability to record velocity – though unfortunately if your synth's not velocity sensitive you can't hear this. You can do this by playing single notes in triplets



■ Keep each drum part on a separate track so that you can experiment with different mixes by muting them in as well as out.

and then taking each successive note down in velocity – and then back up again to achieve the reverse effect.

Don't let anyone tell you that putting a rave tune together is simple and unmusical because it's not.



■ By playing a succession of notes of the same pitch and reducing the velocities of each in turn, you get a delay effect.

Just like any other style of music it takes care, consideration and a good sense of arrangement to get the right noises. One of the first problems you could come across is actually getting the right sounds out of your synth. This is because rave tracks tend to use more dirty, gritty sounds for which an analog synth is ideal, but digital synth manufacturers are catching on to this demand, and you can put together a decent demo on home equipment.

If you're really serious about it you need a sampler, and they are getting cheaper all the time – check out our sampler roundup next issue. And if you're looking for something to sample, why not consider the theme from *Captain Pugwash?*

RAVING MAD

So what's all this about hacking down the M25 to go and dance in some disused air-hanger with 5,000 other loonies until dawn? Well, it all started in 1987 when someone had the brilliant idea of mixing house music with psychedelia – and acid house was born. It ignited a dormant club scene, and pretty soon there just weren't any clubs big enough to hold the thousands who were into dancing

all night, so they took to the fields and rave culture was well and truly with us. Five years later the scene's still going strong all over the country.

During this time rave music has got further away from its roots in house music and has become something entirely new. One of the healthiest things to come out of all this is the do-it-yourself philosophy which, along with the ever decreasing cost of setting yourself up with a bit of gear, is enabling anyone who's into it to have a go.

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■ All you have to do to win the dancing compo is stagger over to the bar and get a drink.

Get into the groove

So the bouncer's finally let you in, you've spent half an hour trying to get your coat in the cloakroom, you've shoved your way to the bar only to find that one round's going to clean you out. Yes, you're in club land – a world of designer fashion, kickin' sounds and expensive beer.

For club music the beat is all important, so on CLUB1.MID you can hear that familiar beat as made famous by Soul to Soul. In muso talk this is a half time shuffle and it's one of those grooves that gets your muscles twitching as soon as you hear it. The feel derives from each beat being split into six subdivisions instead of four, so quantize to semi-quaver triplets – that is, three notes joined together by two lines. When quantizing to very fine values like this you have to be more accurate because a small slip gets quantized to the beat before or after the one you were aiming for. If this causes you real problems, you can just slow the track down until it's at a tempo

you feel comfortable with and speed it back up when you've finished recording.

Electric pianos have a pretty mellow feel – you can hear one of them making the chords playing over the beat on CLUB2.MID. 16 bars of the same four chords were recorded with slight variations on the inversions to give your music an improvised feel. You can go a long way with four chords – you can hear two sections out of this progression – the first with a chord on the first beat of every bar and the second a more syncopated part.

The bass really has to work with the drums on a track like this. Notice that it doesn't follow the kick drum religiously but fills in some of the spaces in the drum pattern. The bass was recorded as an eight bar loop and then it was pasted through the rest of the track. A clean bass sound works best here – bass guitar or acoustic bass is preferable.

On CLUB3.MID you can hear more elements. The string parts are played rhythmically rather than as a pad and there's also a brass part in the chorus section. At bar 35 a clavina is introduced to add a new texture. As well as the clav track you



■ If you quantize pitch bend information you lose the glide between pitches. Record the notes on one track (Clav) and quantize it and then record a separate track with just the pitch bend on (Clav PB).

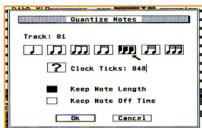
can see a track called Clav PB, which contains the pitch bend information for the clav track. It's on a separate track so that it can be quantized – but since quantizing pitch bend destroys the smooth glide between pitches, the clav part was recorded on one track with quantize and the pitch bend was recorded separately without. Of course, if your sequencer enables you to merge tracks, you could put them back together at the end.

So, sequencing is well suited to rave and club music. The idea of a dance track is to groove and stay in that groove, and sequencers do this perfectly. With looping facilities and cut and paste, you can save a lot of time by playing the section once and putting it where you like. This can get boring, and you have to find ways of keeping the track interesting, such as bringing in new instruments, putting drum or bass fills in at the end of certain sections or adding more percussion in various parts. Even just subtle variations can make all the difference.

BEAT THAT

The world of club music is an ever changing affair. The chances are that if you've heard a track then it's out of date – if a club is in this month it's going to be out next, and if you're DJ of the week two weeks running you're doing alright. About the only thing that is consistent is the high bar prices. The style of a club track is often dictated by the beats

that drive it. With disco and the advent of drum machines and sequencers, the beat became metronomic and machine-like, but in recent times there has been a resurgence of natural sounding "human" rhythms. Sampling has enabled clubbers to go back to old classic drum parts to lay on their tracks, the most ubiquitous being *Funky Drummer*, an old James Brown song which just happened to have a good long drum break just begging to be sampled.



■ A half time shuffle should be quantized to semi-quaver triplets. There are six subdivisions in a beat – that is, two lots of three.

JARGON BUSTERS

ACCENT:

This means that one note has slightly more emphasis than another. It is usually a little bit shorter or a little bit louder than the other notes.

ANALOG SQUELCH:

The process of removing hissy noise from a sound.

ANALOG VERSUS DIGITAL SYNTHS:

Analog synthesis is based around voltages while digital synthesis is based around silicon chips and integrated circuits. The best metaphor is that analog sounds can be modified by rotating a

wheel, while a digital sound's components can be switched on or off. Analog synthesis is therefore more subtle.

BACKBEAT:

At the core of all songs is a simple, slow drum beat. This is usually the start of a song. The backbeat sets up the general speed of the song. Drums and melody lines – along with any samples – are layered on top of the backbeat.

BLOCK CHORDS:

Tune based on whole chords rather than single notes.

CROTCHET:

Note equivalent to half a minim.

FILL:

This is used when the drum or melody line is getting a bit boring or you want to lead up to something interesting like a chorus. It's simply a twiddly bit of music usually based around just three notes. For example, a tom fill is a fill based around the tom-tom drum, while a snare fill is a fill based around a snare drum.

HI-HAT:

A cymbal with a high pitch.

GET YOUR ROCKS OFF

As with many great things, rock started in the '60s. The rhythm and blues style of bands like the Rolling Stones and The Who developed into the guitar pyrotechnics of supergroups like Cream and the Jimi Hendrix Experience. In

1969 a group called Led Zeppelin moved rock into an area it's never come back from – heavy metal.

The '70s saw rock go in all sorts of directions – solos got longer, songs got longer, hair got longer and a few bands

decided that if they were going to do an album it may as well be three albums with a concept linking them. Subject matter varied from hobbits and toadstools to the devil and anything connected with him and, for some reason, it's now assumed that if you like guitar-based rock music you're likely to be a bit of a devil worshipper on the side.

Let there be rock

Hammer of the Gods! Hobgoblins and elves, tight leather trousers, Lucifer and his hordes of depraved minions rampaging the earth in a helter skelter of apocalyptic death and destruction (*Steady on – Ed*). All this and more is the domain of rock music, and like it or loathe it, it's not going away.

Of course, mention rock music and the last thing you think of is a MIDI sequencer, but it isn't hard to do a fair impression of a rock band. Load ROCK1.MID and you hear a raunchy two bar phrase. Part of the art of arranging on a sequencer is to play the instrument you're recording in the way it would be played for real. A guitarist often plays chords in parallel – for example, he might play a certain chord shape, then move the whole shape up the neck of the guitar to get a new chord, preserving the same distance between each note. It's hard to play like this on a keyboard, but if you slow the track down and play one chord at a time it makes it easier.

Pitch bend on the lead guitar emulates a guitarist bending the

strings. You have to put this on a separate MIDI channel because pitch bend sounds very unnatural. By the way, if you look at the lead guitar track in your editor you can see how much shape pitch bend information takes up – so use it sparingly.

The parts for the drums are quite simple. There's a semi open hi-hat on each beat of the bar, which is a typical "rock" sound. The kit for this track has been expanded by adding toms – rock drummers can rarely

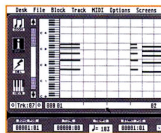
resist those thundering fills. You don't need anything too busy for the bass line, just as long as it sits with the drums and follows the chord pattern. It's not really a song yet, more of a jam around a riff, but that's how many rock songs start off.

On ROCK2.MID you can see a chorus has been introduced. The chords are still played as block chords, but the rhythm's set off the beat to contrast with the verse. The drum pattern is slightly different and there's also a ride cymbal – something a rock drummer often reaches for to make a

section more full. Going in and out of the chorus there's a "chugging" section, where the guitar stays on one chord and the rest of the band go ape – all this is topped off by another nose-splattering tom fill. This screams at you "new section coming up!" but it is effective. The toms have been "flamed" at the end of the chorus – sounds like a cooking method, but it refers to the effect produced when a drummer hits his drums with one stick very slightly after the other. It adds a bit

of resonance to a fill – again, be careful not to quantize or you lose the flaming effect.

On the finished article (ROCK3.MID) the chorus has been filled out with an organ. There's also a guitar solo after the second double chorus – plenty of pitch bend and a few fast trills help to make this convincing. The solo's unquantized except for the Eddie Van Halen type lick because the solo just sounded messy and needed tightening up. For the ending the "chugging" section is doubled and finished on a power chord – well, it always goes down brilliantly at gigs. If you want to end with a bang, try throwing a guitar through your monitor – that should get the crowd going!



■ A typical guitarist's bar chord looks like this on the keyboard – a guitarist doesn't usually play all six strings. Moving the whole shape up or down emulates the chord movement on the guitar.



■ Heavy rock was invented by Angus Polesworthy Snr, pictured here, while having tea with his auntie Elvira.

INVERSION:

In counterpoint this is the turning upside-down of a chord or single melody – by applying intervals in opposite directions – or two melodies by the upper melody becoming the lower and vice versa.

METRONOME:

A device which emits a series of clicks to enable a musician to keep in strict time. This is emulated by most sequencers and synthesizers, enabling musicians to keep in time while recording a MIDI sequence.

MINIM:

Note equivalent to two crotchets.

PITCH BEND:

Most synthesizers have this wheel to the left of the keyboard. By pushing the wheel up or down you can move the pitch of a note smoothly up or down. This is accessible from within MIDI.

QUANTIZE:

Places note events exactly on the beat. This effect makes up for bad timing but can make the music sound too mechanical.

SEMI-QUAVER:

Note equivalent to half a quaver.

QUAVER:

Not a crisp. Note equivalent to half a crotchet.

SQUARE WAVE:

Type of waveform which early synthesizers used. It has a very dull, monotonous sound. When written in musical notation, it looks like a series of battlements.

SYNCO-PATION:

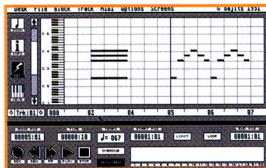
Where the emphasis is on the off-beat. Characteristic of jazz styles.

Float on

Are you floating comfortably? Then we'll begin. Relaxation is the name of the game here, so ensure you're fully chilled out before you start. If you load NEWAGE1.MID you can see that it starts with a very simple piano part. New age music is designed to be totally soothing, which means that to the ear – there's no place for abrupt changes of mood or unsettling harmonies. The chords are very straightforward, with no deviation from the key. The time signature is 3/4 (three beats to the bar), and the tempo is a very slow 67 BPM.

The track is constructed out of three separate sections – one of 16 bars and

two of eight bars. In new age music there is a certain amount of repetition but quite often the melodies are improvised. If you are playing the identical chord for a number of bars try playing it as an "arpeggio". This is where instead of playing the notes of the chord all at once, you play each one separately in rhythm. It works particularly well with new age because it gives a certain ebb and flow to the music. The piano part finishes with a slight "rallentando" ("slowing down") which you can do by ignoring the click for the last two bars and not quantizing this particular section of the track. On the



■ Two ways of playing a chord - the first conventionally with notes played together; the second as an arpeggio, where each note is played separately.

file NEWAGE2.MID a warm pad sound has been added. A pad is a soft sound with a slow attack that is often used to add a "wash" or "cushion" to a track. It's also a great provider of atmosphere and complements the piano part well. Because of its slow attack you can't play fast melodies with a pad sound, but you wouldn't want this on a new age track anyway. Chords can sound a bit heavy on a pad so play a single note melody over the piano. There's no place for a drum track here but you could add some percussion – perhaps a tambourine and congas to enhance the pulse.

To finish off (NEWAGE3.MID) there's a harp and a flute – ideal instruments for a new age piece. The harp is left unquantized to retain the strummed feel – just like the guitar in the pop track – and the flute plays slightly varied melodies for the two sections that it comes in, giving a more natural sound to the music. Finally, if you've got a sampler, try adding some earthy sounds – noises like birds singing, and waves lapping are perfect for the mood new age music creates.

■ It's second time round for some as those naff '70s fashions make a comeback.



TENSE NERVOUS HEADACHE?

In the last ten years the increased pace of modern day living and the stress it places upon us has given birth to new ways of finding relaxation. This, along with a heightened sense of the natural beauty and mystery of the earth, gave rise to what is known as new age culture. Many people found that new age music was just what they needed to unwind – not intellectually taxing or demanding attention, just flowing effortlessly on, allowing the listener to drift away in bliss for an hour or so.

Along with the music came relaxation centres, where you can lie in a floatation tank with no sensory input apart from the soothing tones of new age music – a welcome change to the media blitz we're subjected to in our daily lives – and just wonder how our ancestors managed to get those stonking great stones up in a circle like that.

BUT HOW DO I MAKE THIS GREAT MUSIC

To create these funky tunes, you need a synthesizer. They are getting cheaper and you can pick up an advanced keyboard for a song (almost.)

One of the best older synths is the Yamaha DX-7. It's very rugged and has a sound range to cover most needs. These days you can pick one up for around £100.

The Yamaha SY-35 is a great mid-range synth. It's got some superb sounds, including some complete drum kits. It's

also got vector synthesis built-in so you can mix four sounds together. It's fully polyphonic so it can play drum and synth sounds simultaneously. Yamaha are on ☎ 0908 366700.

Or you could invest £1,000 on a Korg Wavestation. It has sexy sounds, bangs and noises and is well catered for with synth editing programs. Contact Korg on ☎ 081 427 5377. Whatever you choose, ensure it has MIDI In and Out and preferably Thru as well.

When you've gone through these tracks you can see there are no restrictions to the music you can create. You could record the finished performance to tape, or you may just be putting together an arrangement to show the rest of your band what you want to hear, but you can get your sequencer to come up with the goods. Of course, the quality depends what sounds your sequencer can trigger, but the best guitar sound in the world isn't going to sound like a guitar unless you play it like one. This is where listening to music is invaluable - study the instruments you're arranging for. If you're writing for an orchestra, you need to know about the instruments in it, and the same applies to those you work with on a sequencer. Have fun!



■ Hell is near Australia and that's why bats hang upside down in caves, practising for when they die.

DEATHLY BUSINESS

What does a Death Metal record label do with STs? Sampling? Sequencing? Smashing into the amps? Nah, for doing the accounts, actually. Chris Lloyd visits the heart of Yorkshire to check it out



■ Chris failed his audition for the part of Neil in the *Young Ones* and so became a warrior at the gates of hell instead.

Grind, crunch and growl! Death Metal – you either love it or – er, run away and hide until it goes away again. There's a thriving underground scene, though, which just goes to show that lots of people do stay for a thrash about.

The Peaceville record company was started up in a back bedroom by a guy known as Hammy. It was a hobby – he offered fans of crashing chords and throaty vocals a sort of Shareware music service. All you had to do was send in a tape and 50p, then back came the tape crammed with goodies. Demand took him by surprise and, four years ago, the operation went legit – Peaceville Records was born. It's now a rapidly expanding independent record label with 16 LPs released so far this year and a worldwide distribution contract. Their biggest-selling group, the charmingly named Autopsy, have shifted 30,000 copies of their 1991 LP, *Mental Funeral*, since its release.

Along with the exciting bits of running a record business, lunching

on expenses and hanging out with musos (just a touch of sarcasm there), comes the more mundane chore of running an office, writing letters and keeping records. Having been impressed with the ST in the recording studio – "*Cubase* is bloody excellent, a revolution in music technology," they decided to use an ST to run the whole caboodle. They use *First Word Plus* for word processing, *Calamus* handles the press releases, *K-Spread 2* for the accounts and *Super-*

base Personal stores the masses of data that running businesses generates. So, why did they choose an ST and not some PC compatible that the "suits" prefer? Well, many of Peaceville's European distributors like Rough Trade already used STs to handle the business side of things, they are affordable and there's plenty of local support. Loads of the death metal bands had them and the local studio uses STs with *Cubase* and *Sound Tools*. "We were computer novices to start with and found STs very easy to learn – everything is logical and easy to work with."

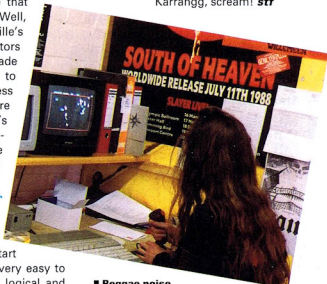
The office sports two 2MByte STs with mono monitors, a hard drive, 24-pin printer and a bubblejet printer for creat-

ing smart-looking letters. There's also a colour TV for the odd relaxation session with *Llama-tron* – "the best game ever." Current projects are Autopsy's third album and a tour by GGFH And My Dying Bride. They are also moving into the industrial scene with the Dreamtime label. Keep your eyes out for demos featuring their bands.

It hasn't been easy though: "It's a tough business and suits play rough – it wasn't long before we got ourselves a lawyer." As for the STs: "One of the troubles in this country is convincing people to take the ST seriously – so many people dismiss it as a games machine. But we've found it meets all our needs in running a record business. A PC system would have cost two to three times as much. We're very pleased with our decision." Karrangg, scream! **stf**



■ Autopsy's 3rd LP, *Eating at McDonald's*, features Aled Jones on vocals.



■ Reggae noise terrorists RDF's recent conversion to Death Metal has been confirmed with the release of their new single *Bob Marley Ate My Daughter*.

ST
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FEEDBACK

Get involved! Tell us what you love or hate about anything ST - write to The Editor, Feedback, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW



God games anyone?

I am writing to let you know what I think about the state of the software industry. It's so annoying - why do you fill your pages with demonic rubbish: monsters, demons, and freaky creatures?

The game review *Ishar* (STF 37) was one such example. I think the present market is brainwashing the youth of today with demonic games from all occult angles. Why not have screen dumps of things like Jesus in all his glory, or angels, or anything uplifting like that? Landscapes of fractal images, detailed drawings and close-ups of animals are also interesting. We need to generate a positive atmosphere. I'm not

suggesting you are biased, but you never see any games based on Joshua going into Canaan, or the adventures of Elijah or Elisha, King David or Daniel in the lions' den. There's a great wealth of material in the Bible that's just being ignored.

Despite the grubby software, your magazine has a good layout and, with free disks every issue, is worth the money. So let's stick to the good software for a change. Forget the dungeon rubbish. There's nothing wrong with *Chess* or *Asteroids*.

God will give you a longer economic life if you stay clean. The clean software is actually

more enjoyable. So, how about it, Mr Editor?

**Simon Petrie,
Bristol**

stf: Has the possibility occurred to you, Simon, that the companies which produce these "demonic" games aren't being entirely serious? Simply because they choose to create inventive worlds populated with mythical characters doesn't mean they're advocating devil worship. They credit the people who play their games with the understanding that the world they've created is imaginary, non-existent and

otherwise not real. You mention the game *Ishar*, a *Dungeons and Dragons* game which we reviewed in STF 37 and awarded 90%. In the review Chris Lloyd says "It's just an excuse for a good jaunt around the land clobbering things and collecting goodies." No reference to Beelzebub, no comments about pentagrams and no subtle asides on the need for a bottle of holy water.

You suggest that the youth of today is being brainwashed by these games. This seems a bit strong and I'd suggest that the

LETTER FROM ABROAD

Sensible sounds

Thank you for your interesting interview with the legendary Captain Sensible. I was introduced to the fantastic music of *The Damned* by a self-proclaimed "retired punk" with whom I worked some time ago. I have been wondering for some time what happened to this unique and brilliant band. Now I know, sort of.

It's great to know that we will be hearing some sensible (no pun intended) music on the ST and that he is continuing in his estranged ways. I can now look forward to hearing more of his damned good tunes soon. I think that more of the stars should follow Sensible's path because their input would certainly add to the quality and atmosphere of a game.

There are some good ST musicians out there, of course, but I think that software would be improved greatly by better music in games. I mean, I don't normally find myself humming along to ST music - probably because most of it is so dull and bland. Then again, good music doesn't make up for a terrible game and I could spend an eternity complaining about the lack of playability in recent soft-

ware, but most of it has been said before.
Long live The Damned!
Dan Pleet, Ottawa, Canada

stf: It must be said that most of the "music" on ST games is crap. However, this is largely to do with the useless sound chip which Atari, in their wisdom, decided to plonk inside STs. It's utterly impossible to create anything other than digital watch music on that cruddy ST sound chip. The alternative, of course, is to use sampled songs or tracker music. Sampled songs, use as it may seem, are songs sampled in their entirety onto disk and played back. Tracker music is a series of samples used as notes. The problem with both of these forms of music is that they take up huge amounts of memory space - space which could otherwise be devoted to the game itself.

What I prefer to do is to bung a decent CD on (*Slow Bongo Floyd's* album, Brenda Salmonds is my favourite at the moment), crank the volume right up and play along to that instead. Of course, once I've got a Falcon installed in my living room I can enjoy CD quality sound that's been written especially for the game.

religious indoctrination which some children receive at school is far worse. Indeed, I suffered the same fate myself. Children aren't asked whether or not they believe in God, it's merely assumed that this is the "uplifting" route they should travel.

Software houses aren't ignoring the Bible and its contents, they simply realise that the possibility of any child buying the software is minimal and software houses are, after all, out to make money. There are programs of a religious nature in the Public Domain which sell in small numbers because only a very few people are interested in them.

The simple fact is that "grubby" software shifts in huge volumes because it's pure

escapism. As you quite rightly point out, there is nothing wrong with Chess or Asteroids - lots of people enjoy playing both games. However, many ST owners also feel that these games are dull as ditchwater and wouldn't go near a chess program if they were prodded towards the keyboard with a Tazer gun.

It's reassuring to know that God is going to give me a longer economic life if I stay "clean" and, to that end, I've invested in some new all-over body lotion and a large loafah. I shall await with great patience (a Christian virtue, I believe) the many economic benefits which God is going to shower on me. In the meantime, I shall continue to live my life by my own personal

beliefs without forcing them on anyone else. Oh - and long live the forces of darkness... damn, did I say that?

Ban the ball

In STF 35 you gave tips for cheating on Level Four of Shadowlands. Included in the section describing the use of potions you include the reference: "Next time you're hassled on the train by a crowd of drunken Scottish football supporters..." I'm sure you can guess the point I am attempting to make here.

Much as it may seem smug to be wise after the event, I saw the European Championship on TV and watched English football fans on the rampage, while Scot-

land's fans received a special award for their behaviour. This seems to leave you with egg on your face.

You are by no means alone in your attitude towards Scotland in general, since everyone south of Carlisle seems to feel that Scotland is a nation of Neanderthal men roaming the land looking for trouble with knuckles trailing on the ground.

**Billy McDonald,
Glasgow**

stf: Aha, but Scotland football supporters aren't always mild-mannered and obsequious, are they, Billy? Ed Ricketts, for it was he who wrote that piece, only included it after being accosted on the train by a group of very

YOU CAN BE MY LUCKY STAR

Astrology: sensationalist crap pandering to sad humans with no decision-making powers or legitimate science popularised by Russell Grant?

FACT: ASTROLOGY WORKS!

I was interested to see the letter from Tom Rees (Feedback, STF 37) claiming that astrology "contravenes all laws of physics." If, as his letter implies, Tom is familiar with all of these laws, perhaps he would like demonstrate even a single case where this rather wild

assertion is true.

The fact is that physical laws are, by definition, inviolable. If we take as an example Kepler's first law of planetary motion - you know, the one about planets moving in ellipses with the sun at one of their foci - and ask if astrology "contravenes" it, then the answer is, of course, no. OK, I know Kepler was an astrologer, but that doesn't invalidate his laws.

Where observed facts do not apparently fit into established physical laws, then it is our understanding of those laws which is imperfect and perhaps in need of revision. The French scientist Michel Gauquelin recently tried to expose the fraudulent nature of astrology by applying crude statistical tests to thousands of horoscopes, particularly with respect to the subjects' professions.

When his findings unexpectedly validated astrology he was forced to accept them - being unusually open-minded for a scientist - and, in effect, to acknowledge that ancient astrologers had discovered laws and principles of which modern science is completely

ignorant. Physical science is, in fact, hopelessly equipped to handle the things in life which really matter: things like joy and sorrow, love, humour, appreciation of art and music, spiritual-ity, creativity, hope, inspiration, compassion - in short, manifestations of the human soul. It is alleged by some that the whole physical world, from quarks to elephant droppings, is but a thin slice of the totality of existence - a rather dim reflection on the surface of reality.

The true value of astrology is that it affords a doorway to understanding the world in all its dimensions, and not merely the uninspiring materialistic universe of present-day physics.

**Phil Wilcox,
Cardiff**

stf: That's fine up to a point, Phil, but when people come to rely on astrology and let it rule their lives it can become dangerous. Like many people I do read my stars in the newspaper, but I do it as a giggle. I don't seriously believe that I might find luck in the arms of a blue eyed stranger with a northern accent, or even that love is well aspected for me despite the moon being in Jupiter. However, there are people who do - people who live their lives by the peculiar predictions of someone called Mystic Meg.

Quite frankly, I put more faith in the predictions of Paddy, our office cleaner. He's never failed to successfully predict the outcome of an England match yet. Maybe we should invent a new science called Paddyology. Well, stranger things have happened.

IDEOLOGICALLY UNSOUND

The letter by Tom Rees discounting astrology as a legitimate information source is remarkable. It does no harm to remember that the completed description of nature at the atomic level is given by probability functions that refer not to microscopic space-time realities, but, rather, to macroscopic objects of sense experience.

The information available from astrology, like that of other esoteric streams of consciousness, is accessed experientially. The problem with "proof," "experiment," and so on when dealing with esoteric streams is very much the same as that faced by Schrodinger, Bohm and Einstein as they pursued particles. They realised that "looking" at the particles affected the behaviour of particles.

Belief systems, conditioned thinking and prejudice are about as useful to us as buggy whips as we enter the halls of our new science where we find that literally anything goes.

**Phelin Lunny,
Miami, USA**

stf: Erm, yes, Phelin. What exactly does that all mean? I mean, I always thought I was reasonably bright but all this talk of esoteric streams of consciousness has completely non-plussed my cerebral hemispheres, man.

What you're saying, I think, is that we've got to keep an open mind for new explanations to old problems no matter how weird they seem, right? OK, I'm glad we got that one straight.



drunk, very noisy and very violent Scottish football supporters.

Despite all that, I do agree with you. England's football supporters have an extremely bad name because they continue to go abroad and create havoc. All too often Scotland and Wales get lumped with the reputation created by mindless English idiots who think that kicking the hell out of fans from another country is a laugh. My own solution is to ban England fans completely from going to matches abroad. After all, there aren't any real English football fans left, are there?

That wasn't the issue that wasn't

I am writing to enquire about what happened to *STF* 36. When I loyally went to my newsagent to collect my copy, I was told that the disks were virused, all issues were being recalled and that there would be no *STF* that month. But in *STF* 37, you made lots of references to *STF* 36 and it was also for sale in the back issues section. Was *STF* 36 re-issued? Please clarify things.

Mark Blair,
Rosshire

stf: This seems to have been a problem in most parts of Scot-

land. *STF* 36 was on sale as normal and it did not have a virus on the Cover Disk. Any newsagents who told you that it did were misinformed.

We take the utmost care to make sure that our disks are completely virus free – Chris Lloyd, our Cover Disk Editor, checks the master Cover Disks at every stage of the duplication process to safeguard against this eventuality.

The issue was late on the shelves in certain parts of the country because we had to do a late card insertion. As a result, the few copies which had gone out early were recalled to have the card inserted, but they should have reappeared about three days later complete with luxurious card. If you didn't get hold of this issue and would like one, turn to page 50 and order your copy now.

Hurrah Atari

I recently had my STE upgraded by Atari Workshop to TOS 2.06 from 1.62. Although I like the new Desktop, it still isn't a patch on *NeoDesk* 3, which, I found to my dismay, is not TOS 2 friendly. After writing to the distributors, GST Software, their helpful Mr Barsby sent me the latest version

of *NeoDesk*, v3.02. It would appear that this version is happy running on new machines, and I am now starting to return to sanity after being without it for so long – almost three weeks!

I would like to praise GST for their swift action, and recommend any other users with the same problem to write to them. I must say that the only other incompatibility I've found is a tiny problem with *Cubeat*, so, well done Atari for an excellent upgrade.

Adam Reeve,
Sheffield

stf: Cheers for that, Adam – it's always good to hear positive feedback about any person or company within the *ST* industry.

Simply soupier

The other day I was drinking some soup when a loud noise caused me to spill some on my *ST*. Imagine my dismay when I discovered that *ST FORMAT* 36 was not able to offer any advice, despite the fact that the front cover said "Soup up your *ST*."

Disappointed,
Hornsey

stf: I know how you feel, Disappointed – only the other day I

was extracting a spark plug from my trusty Honda CM125 when a squirt of oil smudged my sleeve. Imagine my annoyance when I discovered that the publication *What Lube Remover?* was not able to offer any advice, despite the fact that on the front cover it said "The 20 Best Fractal Algorithms Ever."

Barrow boys

Why don't you open a second-hand market or a section for people to advertise the games they don't want any more in *ST FORMAT*? There are some old games out there which are difficult to find – some of them may well prove to be of interest.

Joaquim Teixeira Duarte,
Lisbon, Portugal

stf: Well, how do you feel about *ST FORMAT* running a classified ads section? Write to Everything But Lonely Hearts at the usual Feedback address.

If you have anything that you want to talk to the *ST* world about, be it critical or praise-worthy, write to The Editor, Feedback, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW.

BIRDS OF A FEATHER

Our exclusive news of Atari's new home computer has created considerable interest. Here's just one of the letters we received on the subject

UGLY ST

After reading the article on the new Falcon, here are my comments:

1. Atari must redesign the machine's appearance since the *ST* is over seven years old. To be frank, the *ST* is very ugly – a change in colour and design must be in high demand from other *ST* lovers as well as myself. Putting the machine in a seven year old box will only kill demand for it.
 2. The rhombus-shaped function keys must go. They are so pathetic – just like the keyboard. Where is the caps lock LED? An Atari function key like the one on the *ST* Book would also be welcome on the Falcon.
 3. Atari must change the Desktop colour. It is totally crap – after seven years you'd have thought they would have changed it. No doubt they will not.
- I hope the manuals are going to be rewritten and include every detail about the Falcon. The new *ST*s still come with the 1987 manuals which are pathetic.

The manual should be second to none and the owner shouldn't have to pay another £15 or so to purchase a real manual from a third party supplier.

I have been with the *ST* since 1986 and am fed up with the lack of decent software. The *ST* is also outdated with its tiny screen display which doesn't use the full potential screen display area.

A lot of fellow Atarians have now bought Amoebas. Why? Because the *ST* is now much too old. After seeing the games on it you can see why it's a games machine. I am near to selling my *ST* and getting an Amiga and I'm more likely to do this if Atari doesn't redesign the pathetic *ST*.

As for your mag, where are the Lynx articles? No back up from you and you wonder why the Lynx is outsold! The Lynx is the only 100% decent machine Atari have designed, but they forgot to advertise it.... again.

Richard Scott, Leicester

stf: Right, those points. Atari have signalled their intention to house the Falcon in a new casing, although early versions are probably going to be in the standard 1040 *ST* case. We don't know about the function keys, but they've never presented too much of a problem in the *ST* office. The Desktop is a different colour and Atari also say the manuals are being written from scratch.

As to your other complaints, the *ST* is no more outdated than the eight year old technology in the Amoeba, but you're right, it is getting just a bit long in the tooth.

Finally, we are considering doing some Lynx stuff, but, since this is an *ST* magazine, we thought we'd canvas some opinions first. What do you think? Should we be supporting the best handheld on the market simply because it's an Atari product? Write to Run With The Lynx at Feedback, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW.

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WHAT'S HARD AND FAST?

Put on your favourite pair of peril sensitive sunglasses and follow Clive Parker and Chris Lloyd in search of the best hard drives around



You need a hard drive to get the best out of your system - here are the good, the bad and the slab-like.

You think you can store lot of information on a floppy disk? Nearly three-quarters of a million characters sounds like loads, eh? Well, that's peanuts compared to the capacities of hard drives. These start at around 30MBytes - 30,720,000 characters - and go into great realms of hugeness. They also speed up loading and saving

PROGATE SERIES 2 100DC

PRICE: £401.85
FROM: PROTAR
CONTACT: 0923 254133



The Protar Progate 100DC is the pick of the bunch. There is room inside the case for another drive to be added later.

Protar have made the Series 2 drives more reliable than the older series of machines with improved utility and driver software and drive caching. It's a dream to set up the 100DC drive - you just plug in the relevant leads and turn everything on. The boot program is automatically detected and the drive loads the Desktop from the boot partition. One unique feature of the Protar boot software is its ability to change the boot drive from within the start-up sequence. If you can't boot the C partition because of AUTO folder programs causing crashes, you can select a different boot drive by pressing the drive letter when booting. Pressing <D> causes the drive to bypass the AUTO folder and Accessories on drive C, and boot from drive D. You can then access the C partition as usual and disable the offending programs.

This is the big brother to the Progate 30 drive - see page 44

- but is bigger, faster and has more features. The dimensions are identical to the Progate 30 - 343 x 343 x 63.5mm and the drive is as quiet in operation.

The back of the drive has the usual DMA in and out ports and an SCSI connector. The power switch and connector are at the rear left of the drive and the SCSI ID switch is in the centre. The front of the drive has the usual power and drive activity LEDs. The manual is very well

written and easy to follow, with all the utilities and programs described in great detail.

In our test, the drive ran for several hours without even getting warm, and had the fastest access rate of all the drives we tested at 15 milliseconds (ms). Of all the drives this was the fastest, quietest and most pleasant to use. At just over £400 it is an excellent value for a 100MByte drive.

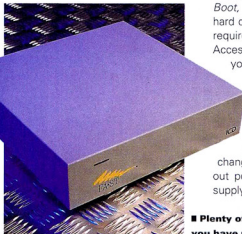
THE FAVOURITE

The Protar 100DC drive got our vote as the best of the bunch because it is reliable and quiet with an enormous amount of storage space for not really that much money. The built-in option to bypass drive C in favour of another partition, so you avoid boot-up problems is another pos-

sitive point. Not long ago a 20MByte drive would also have set you back £400, making this excellent value. Hard drives work on the same basis as RAM capacity, so the more room you have the better - you will be horrified how quickly you can fill up a 30MByte drive with files.

ICD FAST 52MBYTE

PRICE: £399.95
FROM: SYSTEM SOLUTIONS
CONTACT: 0753 832212



You feel well-inclined towards FAST hard drives before you set them up - they all use the excellent ICD host adaptors and software. A hard drive management program, X-Boot, is supplied free with every hard drive. X-Boot enables all AUTO required folder programs and Desk Accessories to be selected before you boot up, and is normally sold separately for £29.95.

The case is made from steel and is big enough to support a monitor, being 280 x 280 x 76mm. The back panel has a device ID change switch, DMA in and DMA out ports, SCSI connection, power supply connection and the power

switch. The front of the drive has power and drive access indicator LEDs so you know everything is running smoothly. The drive and cooling fan are quiet in operation - you soon forget that it is on.

Used with the SCSI ID switch, up to eight SCSI devices can be connected at once, and the 50-way SCSI connection means you can connect other devices. System Solutions provide an optical drive system which uses 128MByte optical read/write disks that you can use with you ST if you have the appropriate driver software. These drives are normally installed in purpose-built ST or TT tower systems.

Setting up the drive is an easy job with clearly marked DMA ports. Because the drive is ready formatted, you should see the Desktop -

complete with hard disk icons - soon after you've booted up.

The ICD manual covers all aspects of the software and host adaptor, and an installation leaflet is provided to get you running. This drive also has a real-time clock which is becoming standard kit on all hard drives.

The FAST 52MByte drive is a fast, efficient and quiet hard drive with valuable expansion options. It performed well over an extended period of time without getting hot or even excessively warm. This drive is slightly more expensive than other 52MByte drives available, but System Solutions offer a back-up service second to none. Recommended for the serious user who wants to expand.

Plenty of techie back-ups available if you have problems with this drive.

times no end, making floppies look like real snails. The upshot of all this added muscle is a greatly improved system. You can store all your programs and data files on one disk. Big shambolic programs that come on a mass of disks and are a pain to load suddenly become a joy again. You can generate huge animations or samples without ever having to worry about disk size. So, why hasn't everybody got one. Well, power like that doesn't come cheap — hard drives can easily cost as much as your ST itself. If you're looking to inject real power into your ST system, a hard drive is the business.

WHAT'S SO HARD ABOUT IT?

Hard drives work in the same way that ordinary floppies do. The data is recorded on magnetic disks by a read/write head. The difference is that, instead of using a floppy plastic disk to record the data on, hard drives —

and this is where the hard bits come in — use solid disks that spin over ten times faster. The read/write heads are tiny and are suspended over the disk only a couple of microns away. To keep dust and draughts out, the whole thing is built inside a sealed vacuum. This means you can't swap disks — once you've got a 40MByte hard drive or whatever, that's it. If you need more capacity, you need to buy another complete unit. There are some drives that get round this and use removable cartridges although they tend to be slower and less reliable. Once you've got one of the beasts wired-up to your system, you'll never look back — your life suddenly becomes so much easier.

WHICH IS HARDER?

There is a myriad of different hard drives about that offer different features. The first decision you need to make is to work out just

how big the drive needs to be. If you have simply masses of stuff, a removable one works out cheaper. The initial cost is higher but the additional cartridges give plenty of MBytes to the pound. The smallest practical size is around 30 to 40MBytes. Space is soon eaten up though, and it's best to be as ambitious as your wallet allows. Access times vary — that is, the speed the drive can get at data — this can be important if you're going to try sampling direct to hard disk or regularly save and load lots of large files. Look for auto-parking heads — the read/write head helpfully tucks itself out of harm's way between sessions. If the head should touch the disk, you're in trouble — auto-parking saves you from screwing everything up.

A neat trick to gain more speed out of a drive is caching, this is a system that saves the most recently accessed data in memory and looks there first next time you access the disk.

SERIES 900 40MBYTE

PRICE: £339.00
FROM: POWER COMPUTING
CONTACT: 0234 843388



■ The Series 900 drive can be tucked away out of sight on your desk.

The new Series 900 hard drives from Power Computing are supplied with ICD host adaptors and hard drive software — probably the most reliable and popular combination that you can use with your ST. The drive uses a Quantum LP52S hard

drive mechanism with an access rate of around 24ms. This drive is a little larger than an external floppy drive — 203 x 127 x 51 mm. There is an external power supply unit provided with ten feet of cable. The DMA lead is two feet long so you

can position the drive on each side of your ST. There are power and drive access LEDs as well as a power switch on the front of the drive. The back panel has a power supply socket, DMA in and out connections and a switch to enable and disable write protection for the hard drive. Once the write protection is switched on, you can't write data to the drive — in effect, it becomes a read-only device. Your ST, however, does not register that the drive is write protected which might mean you can lose data. If you save to the drive while the hard

drive is write protected, you'll probably think the data is saved — but it won't be. If that data is manipulated by a load or a delete command, you lose the data.

Getting the drive set up is easy. Ensuring that everything is turned off, connect the DMA lead from the ST's DMA socket to the DMA in port of the hard drive. Power drives are not supplied preformatted, so you have to use the ICD formatting software. Turn on the hard drive and wait for it to get up to speed, then turn on the ST, booting the ICD utilities disk. The formatting procedure is laid out in the ICD manual — you should be able to get the drive formatted and running inside 15 minutes. Power warn that the DMA in and DMA out connections are reversed on some models, this won't damage anything but it may be confusing when you're trying to format the disk.

The ICD SCSI host adaptor is supplied with hard drive utilities including programs for formatting the drive, setting the clock, check-

ing the access rate of the drive, setting caches on and off, checking the ID of any attached devices and parking the drive heads. The ICD manual is detailed with each utility described thoroughly. There are also sections on configuring your drive, on troubleshooting problems and on backing up data. The ICD manual is one of the best available to accompany a hard drive setup.

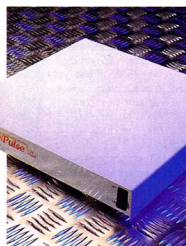
The hard drive manual is basically a "set up and go" — at least explaining where you have to make the connections and how the write protection switch works.

The Power 900 52MByte drive is fast and well made. It consistently performed well in our tests, although the fan is a tad noisy. Both the drive and the power supply unit became quite hot after an hour or so making it the warmest machine we tested, but it did not affect the drive's operation. The whole package makes this drive an excellent buy.



DATA PULSE PLUS 52MBYTE

PRICE: £359.98
FROM: LADBROKE
COMPUTING INTERNATIONAL
CONTACT: 0772 203166



The Ladbroke drive is a slab-like affair, about 305 x 305 x 510 mm, so you could use it as a monitor stand. These larger drives are better suited to being stacked with a Mega ST set-up because the positioning of cable ports on the 520 and 1040 machines can make it awkward to place a hard drive behind the ST — the drive has to be placed to one side. DMA leads are usually long enough to be able to reach either side of the ST without any problem.

The front panel carries the power switch and the power indicator LED, as

■ The Data Pulse drive is another cool and efficient device well worth considering.

well as the SCSI ID button. There is really no need for the ID switch to be on the front panel — you're not likely to change the SCSI device number very regularly. The back panel houses the DMA in and out ports as well as the power supply socket. There is no drive activity indicator to let you know when your ST is accessing the hard drive. The cooling fan makes a negligible amount of noise when you're using it and keeps the drive very well ventilated — the top of the case gets a little warm after an hour's use.

The drive is supplied ready formatted — all you need to do is connect it up and switch it on. Any problems that you may have with the software or hardware are dealt

with in the ICD manual, which, with a hard drive information sheet, is all the documentation supplied by Ladbroke. With the drive, Ladbroke supply demonstration versions of some of the software they have available, along with a folder full of helpful PD software such as Superboot, archiving programs, ST Free file finder, a back-up utility and a virus killer program. Ladbroke can also supply commercial hard drive software if you want it when you order your hard drive.

Overall, this drive is well-constructed, quiet and stays cool causing no problems during sustained regular use.





If it finds the right data in memory it loads it from there rather than from the disk, saving even more time. To make good use of this, you need at least a 1MByte machine to leave plenty of memory to store the cache in. The ST can have up to eight devices attached to the DMA port – generally these are hard drives or Atari's laser printer. Some of the cheaper drives have no DMA through port, so if you plan to add to the system, make sure your chosen drive has through ports. Some drives go a step further and have an SCSI port enabling you to attach extra hard drives intended for the PC yawn or the Mac ego machines.

There are a few other things you should consider – noise: some drives can have quite intrusive fans fitted, warranty: in case the worst happens – and, of course, how well the colour matches Atari

THOSE HARD DRIVES PENNED UP

Drive	Capacity	Access time	153K file load time	Noise level	Heat level	Software	Documentation	Rating
Progate 100DC	100MB	15ms	1.8s	silent	cool	Protar	good	88%
ICD FAST	52MB	24ms	3.2s	very quiet	cool	ICD	very good	87%
Data Pulse	52MB	24ms	3.6s	quiet	warm	ICD	very good	82%
Series 900	40MB	24ms	3.8s	moderate noise	hot	ICD	very good	82%
Mega Drive	52MB	20ms	2.4s	quiet	warm	Gasteiner	good	81%
Progate 30	30MB	40ms	4.2s	silent	cool	Protar	good	78%

grey. Adding a hard drive does wonders for your system and, apart from a laser printer, is probably the biggest hardware investment

you're ever going to make, so it's worth taking your time digesting our roundup before taking the plunge and joining the power-users. **stf**

MEGA DRIVE 52MBYTE

PRICE: £309.00

FROM: GASTEINER

CONTACT: 081 365 1151

This drive comes in a traditional grey steel case measuring 305 x 305 x 63.5mm – that's just big enough to take a chunk out of your work area. That must be a good thing – it'd only be

cluttered up with papers if it wasn't acting as a monitor stand. Which it is, incidentally, robust enough for. The rear of the drive has DMA in and out ports, a power switch, a power connector and a set of DIP switches which you can use to change the SCSI ID. This is not as good an arrangement as the push button switches found on the other drives, but you can get at them from outside the case. The front of the drive has a single power indicator LED but there is no drive activity light. The drive is ready formatted so you can just plug it in and go.

Gasteiner provide hard drive management software, which, although not as polished as the Protar or ICD offerings, is still very well thought out. The manual is a combination of beginners' hints and tips alongside more complex technical information. The manual takes you simply through setting up the system.

In our test, the drive worked well over a long period without getting too warm and the fan was very quiet. It was the second fastest of all the drives we tested – only the Progate 100DC beat it. A fast drive suited to most budgets.

■ This impressive looking slab is the Gasteiner offering. None of the drives performed badly and this reached – oh, the top six. No, really, it was fast.

PROGATE 30

PRICE: £229.99

FROM: FIRST CHOICE
COMPUTER CENTRE

CONTACT: 0532 637988

The Progate 30 is housed in the Protar slab-like style designed to be the base of a tower system – sturdy enough for a Mega ST and monitor to be supported on top. The dimensions of the drive itself are larger than the main unit of a Mega ST, 343 x 343 x 63.5mm, and, if you're concerned about potential colour clashes, don't worry – the case is a passable shade of Atari grey.

The front face of the drive has a green LED indicating drive activity. The back has a DMA (direct memory access) in port, DMA out port as well as a power cable socket. The DMA ports are labelled "Eingang" and "Ausgang" meaning in and out. The power switch is at the rear of the case and is easy to get at – assuming your setup is reason-

ably sensible. The drive ID is the number your ST uses to identify different devices connected on the DMA bus and is displayed in a little window on the back of the case. Each DMA device connected must have a different ID number somewhere between 0 and 7 so your ST can tell what is what – the Atari laser printer is always device 0. Protar have simplified the process of changing the drive ID by providing a simple push button to change the number, rather than the previous system of having to open the case (and there goes the guarantee...).

Setting up the drive is relatively easy and the manual very helpful – you just connect the DMA lead from your ST to the DMA in port on the hard drive, power up the drive and then turn on your ST. The drive is pre-formatted, so the Desktop should appear very quickly complete with drive C and drive D icons.

Protar drives are supplied with a disk packed with utilities and patch programs, all of which are explained clearly in the manual. The

Protar Manager program is one of the best hard drive utility programs supplied.

Many hard drives are judged by their average access speed – this is the time the head takes to get to a particular track from the command being issued by your ST. The access time of the Progate 30 is 40ms. In reality, it is unlikely that the access speed of a drive is really going to matter that much to a home user, or even a small business user. Hard drives are so fast in comparison to using floppy drives that you are unlikely to be able to differentiate between a 28ms and a 40ms drive unless you can measure milliseconds in your head.

In conclusion, the Progate 30 is a solidly constructed reliable drive, very quiet in use and remains cool. It is simple to set up and use and very competitively priced at £229.99. This drive is a good buy if you use your ST at home and haven't got loads of cash.

■ Protar drives are among the most efficient around and the Progate 30 is no exception – get one of these and you'll never need another.

The fact is that no other printer this small is going to give you a bigger print area or better quality than the Fujitsu DL900 or DL1100.

Both printers handle up to 110 column width. That means either A4 landscape or A3 portrait. Pretty impressive from a machine that's significantly smaller than an A3 sheet of paper.

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Both of our models are highly reliable, extremely quiet and built to a standard you normally find only in expensive, heavy-duty printers.

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STP/10

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PRACTICAL DTP

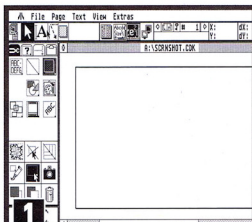


How do you feel about going professional? With desktop publishing, that is. You need to know about bromides, films and the intriguing place they call the print shop. Paul Hughes shows you the way round

You know the scene. You've just put down your copy of *STF* after reading a review of the latest image-enhanced 300 dpi (dots per inch) laser printer to hit the market and you're thinking, "How am I going to find a thousand big ones by next Thursday? The job as shower attendant at the local girls' school only pays £25 a week, and it's getting harder to find £25 to pay them."

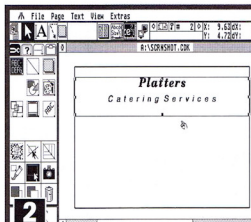
"Perhaps the wife could squeeze a cleaning job in between the milk-round and

PRODUCING YOUR OWN SIMPLE BUSINESS CARD -



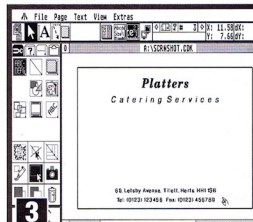
1

In this demo Calamus is used, but everything that you have to do can be handled by most DTP software. Using the box function, create a blank box measuring 90 x 55mm. This is a standard business card size and can fit into the credit card compartments of most wallets.



2

Stretch a text frame across the width of the box and enter the main heading. Experiment with letter spacing to get different effects and try out different font combinations. Here New Century Bold Italic is the title and Swiss (Helvetica) Medium Italic is the sub-title.



3

Create a separate text frame to hold the address and telephone info. Separate frames enable you have more control over moving the various elements. Swiss Medium is used here but at a smaller point size. Experiment with line spacing too.

delivering the papers? I've got a neat desktop publishing software package but only a small 9-pin dot matrix printer so, unless my eight draws come up this weekend, I'm never going to be able to produce professional looking stuff, am I?

So, is it time to reach for the razor blades? Definitely not! To produce the standard of text quality you can see in *STF* is much easier than you may imagine. In this article we assume that you are on a fairly tight budget and that your set-up consists of a 520ST – possibly upgraded to 1MByte – a DTP software package and a 9-pin dot-matrix mono printer.

We also assume that you've read all our beginners' guides to desktop publishing – start at issue 34 if you haven't, and if you don't have that copy, turn to page 50 to order it. You also have a useful knowledge of the workings of your particular software and can produce a print-out of your work. The set-up outlined above is perfectly adequate for learning the DTP ropes and gives you the opportunity to transform your 9-pin printout to a quality typeset creation.

Do I really need a laser printer?

A laser printer is an extremely useful piece of kit and, for producing low-cost leaflets, newsletters,

HOW TO GET MORE DOTS PER INCH OUT OF YOUR PRINTER

Say you've been commissioned to produce a small quantity of business cards – say 50 or 100. What can you do to improve the quality of the finished product without going to the expense of a bromide? Try this method: prepare your artwork at least two to view – that is, with at least two of the cards on a page, depending on how big the cards are – then when you're printing out the final copy, set the print scaling to 130%. The scaling function is normally found with the printer settings in your software and the default should be 100%.

Take this enlarged copy to your print shop and ask the printer to set his camera at 70%. What happens here is that you have

printed an enlarged copy, still at 300 dpi, but your print shop has then reduced it back to normal size, effectively increasing the dpi in the process. This method can also be applied to other work. Sounds fiddly, but it works!

LINE BORDERS

Where you can you should steer clear of using line borders, unless specifically instructed, until you are sure your print shop employs the care necessary in tackling this job. Badly cut business cards with borders of 5mm on one edge and nearly 10mm on the other are not an unusual sight.

ters, CVs, reports, menus, posters and the like, it is in a class of its own. However, if you want to produce professional business stationery like letterheads, business cards, compliments slips, invoices, statements and delivery notes a laser printer's main function is as a good quality proofing system. Proofing is an important part of maintaining the quality of your work – you can read over your pages on hard copy checking that everything is just right before you send it to the print shop or get a bromide. The final result, however, is not affected

by the type of printer you have – with a laser you get a closer representation of what it is eventually going to look like.

9-pin dot-matrix

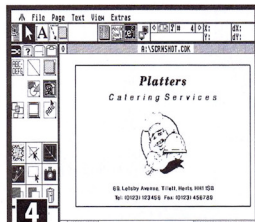
In general, dot-matrix printers don't produce top quality results, mainly because of their low resolution and the physical nature of producing text and graphics on paper by hammering away with minute pins. That is not to say that they do not have a role in DTP – far from it. A simple 9-pin printer is an extremely useful tool for producing quick, inexpensive

proofs of your work. It is also very handy for printing address labels and the large text files often associated with Public Domain software. Many businesses employ a humble 9-pin printer to produce invoices and statements.

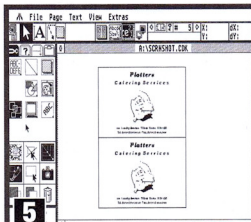
24-pin

24-pin printers do pretty much the same as 9-pin printers but give better quality, especially in text. Because they work at a higher resolution – more pins to the square inch – the blacks are much more solid and, for many

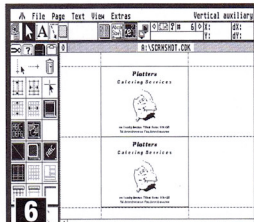
FOLLOW OUR STEP BY STEP GUIDE



4 Logos: a simple line drawing often works best. There are thousands of logos you can use that are available commercially or in the Public Domain. Watch out for infringing copyright especially if you're using a scanner – scanning logos out of publications like the *Yellow Pages* is not on.



5 Select all the frames and use the Group command to group them to make one frame. Make a copy of this frame and butt it to the first one as shown. Since your print shop is likely to use A5 card to run the job, if you supply the artwork two up (or two to view), this means that on a 1,000 card order the print shop only needs to print 500 copies, keeping costs down. Note that some printers prefer four to view, so check first.



6 Now, using the auxiliary grid function, run lines through the outer edges of the business cards as shown. You may want to zoom in for this for greater accuracy. Don't use real lines, just the grid lines for marking purposes.



► applications, worth the extra expense.

Inkjet

Inkjet technology is now firmly established in the market-place and an inkjet printer is fast becoming the entry level printer for many people. Unlike dot-matrix printers and typewriters, inkjets employ a non-impact method of getting the ink onto paper by squirting tiny blobs of ink into place, and are now competing seriously with lasers producing resolutions of 300 dpi. They are ideal for high quality proofs, take up very little space, are quiet in use and, with prices starting from under £300, won't break the bank.

Laser

With image-enhanced technology and resolutions ranging from 300 dpi through to 1,000 dpi, (albeit with more dpi horizontally than vertically), laser printers are getting nearer to professional typeset quality each day. Based on similar technology as photocopyers, but without the hassle of messing around with toner since most come with permanently sealed toner units, laser printers are becoming indispensable.

Whether you need one depends on how serious you are about getting into professional desktop publishing. Whether you

BUREAUX

■ When you send work to a bureau, make sure only the fonts that are actually used in the job are saved with the file.

■ *Calamus 1.09*: if you're using this program when you're using lines or blank boxes, check that they have been given a value (at least 0.5 point), because the default width is zero and, when they are output in high resolution, they have a tendency to vanish.

■ If you need a next day service then files can be sent via a modem. Lharc compression is normally supported and Z-protocol seems to be favoured. Both Lharc and Z-

protocol are standards for archiving files to be sent down a modem.

■ Try and produce your work in Portrait (with a vertical layout) where possible, because you may be charged extra for Landscape (with a horizontal layout) because this takes longer for the print shop to produce. Check first with the bureau.

■ If output is to film, then check with the bureau you are giving them a negative, not a positive. Otherwise the print shop may have to take a camera shot to convert the film back to negative, which defeats the whole object.

can afford one, however, is another matter entirely.

The step in quality above the laser printer takes you into the realm of the professional typesetter – a process that is available to all, not just to the professional.

Bromide

At resolutions of 635 dpi, 1,270 dpi – which is ideal for most purposes – and 2,540 dpi you need bromides or film to give to your local print shop if you are after top quality results. A bromide is produced using a photographic process in a very expensive – £15,000+ – image-setter and the

finished product is usually supplied as an A4 or A3 sheet. You then give this to your print shop as a CRC (Camera Ready Copy), and they place it under a special camera to produce a negative, also known as film.

Film

Film costs a little more but cuts out the bromide stage – print shops usually prefer it, especially if you are using tints in your work. Since you have cut out the bromide to film stage, you have the advantage of being able to preserve the quality of the finished output – just as in say, recording, it is important to keep

as close as possible to the master recording.

But I haven't got £15,000

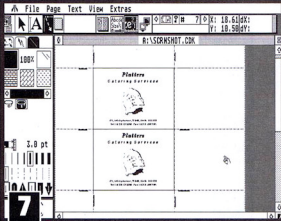
Then you need the services of a bureau. There is good support for the ST – contact the CY Services (= 0602 605377), Halco (= 0734 441525), or Sumner Type (= 081 693 3364). However, at the moment, most of the support is for *Calamus*. If you are using a different package, contact the bureau to see if yours is supported. Speaking of *Calamus*, if you are using it for *Calamus*, if you are using a different package, contact the bureau to see if yours is supported. Speaking of *Calamus*, if you are using it for *Calamus*, if you are using a different package, contact the bureau to see if yours is supported. Speaking of *Calamus*, if you are using it for *Calamus*, if you are using a different package, contact the bureau to see if yours is supported. Have a look at the review in issue 30 for more details.

To use a bureau all you need to do is save the page you are working on to a floppy disk, pop it in the post with your cheque and sit back and wait for the postman to deliver the bromide – usually the working day following receipt. Costs vary from around £5 to £10 for an A4 bromide. This may seem expensive, but you can actually get around four or five letterhead jobs out of one A4 sheet.

No excuses

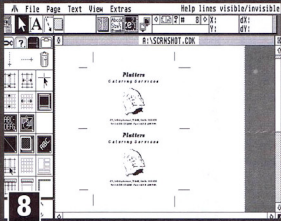
So, as you can see, you don't even need a printer of your own to get top quality results, but even a 9-pin dot-matrix is an extremely handy tool for checking that you have everything just right before using the bureau – see the boxout at the top of the page for more information about this service. You too could soon be creating magazines like this – we'd better watch out! **stf**

THE FINAL STEPS TO PROFESSIONALISM



7

Crop marks or trim lines are used by print shops to determine where to guillotine cards after printing – a line width of 0.5 or 1 point is sufficient. If you use line borders, ensure you position crop marks accurately. Select a horizontal line and, using the snap function, place crop marks as shown above. Repeat this vertically. Allow 5mm from the edge of the cards. Save this page as a template for future reference, then load back the original file. Some software automatically produces crop marks but may not support more than a single card.



8

All you need to do now is ungroup your frames and delete the original boxes. Then you can select all the frames and group them as one so you can move the frame around to leave more space for other bits and pieces that need bromiding. And that's it – your work is now ready to send away for a bromide or film, but it's a good idea to run a test print first for a final check.

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Still in stock: 20 (31 programs on Disk, plug-ins guide), 21 (animation), 22 (desktop publishing, word processing, recover lost data, Devpac 1), 23 (15 programs - 3D construction kits, 3D, comms), 24 (Llunatron, ST video, digitisers roundup), 25 (memory upgrades, classic games, emulator roundup), 26 (protect your ST from viruses, UVK on the Disk, ST on TV)



ISSUE 38
September 1992
Two Disks: Spectrum 512, Spe Code, Sensible Soccer demo, Mapper 2
Inside: Get closer to your ST with Summer School, Falcon and Mega STs investigated, STOS tutorial, getting professional with MIDI music



ISSUE 37
August 1992
Two Disks: STOS Basic language and Animator: sports designer, International Sports Challenge demo, 3D Picture modelling package
Inside: How to create great games, monitor roundup, Calamus SL reviewed and rated



ISSUE 36
July 1992
Two Disks: K-Spread 2 spreadsheet package, Fire and Ice demo, Super Boot 7.4, The Financier money manager, and more
Inside: 50 ways to soup up your ST; what happened to the games heroes of yesterday? HP Inkjet printer review



ISSUE 35
June 1992
Two Disks: GFA Basic v3.5, GFA Assembler, GFA Raytrace complete; Pacific Islands demo, complete database and astrology programs, and much more
Inside: upgrades step-by-step; ST astrology; program fractals



ISSUE 34
May 1992
Two Disks: GFA Draft Plus 3 complete 2D vector drawing package; Campaign demo; Intro Designer; six more full programs
Inside: 21 pages of art guides; ST Book portfolio tested; weird games; 120 tips; Buyer's Guide



ISSUE 33
April 1992
Two Disks: Write On package; Leader preview; two raytracing programs; complete Penguin game; fractals and more
Inside: Over 20 pages of all sorts of tips; complete guide to raytracing; get the best from Sequencer One



ISSUE 32
March 1992
Disk: Nightmare demo; Kozmic pattern generator - exclusive; STOS extension and more
Inside: Find out how you can make money with your ST; reviews of STOS 3D and Timesaver 2; over 40 ST tips!



ISSUE 31
February 1992
Disk: Start here!
Inside: How to get started with the ST; roundups of top software, games and add-ons; inside your ST; assembly language programming



ISSUE 30
January 1992
Two Disks: Complete So... demo; Baby demos; and more
Inside: Being creative on your ST - desktop publishing, programming, graphics and music; high res games



ISSUE 29
December 1991
Disk: Autoplay intro sequence creator; Daylight Robbery and Stereo Replay demos
Inside: Making your own intros; score-writing packages; ST-related book roundup; Band in a Box and other packages reviewed and rated



ISSUE 28
November 1991
Disk: Three fractal programs; Super
Inside: How to get started with the ST; roundups of top software, games and add-ons; inside your ST; assembly language programming



ISSUE 27
October 1991
Disk: Rolling Ronny demo; ST Writer Elite v4, spiral pattern generator, six utilities
Inside: Professionals' graphics techniques; hard drive roundup
Plus 250 best buys in our 24 page buyers' guide supplement, Sam Tramiel interview

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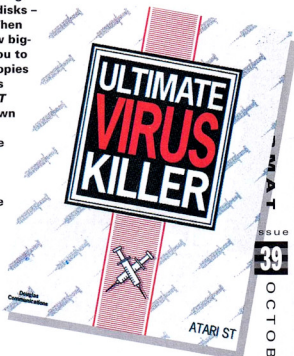
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39 OCTOBER

page

51



HELP!

HINTS AND TIPS

HELP!

ST FORMAT

issue

39

OCTOBER

When you're down and weary and life is a bit duff, just reach for *STF* and let the Help! team strut its stuff.

Here are 11 pages of hints, tips, cheats and solutions for people with perplexed looks on their faces and furrows in their brows

GAMEBUSTERS

Games cracked, solved, transmuted and enveloped in a loving aura

ANDY LOWE

Once while shopping in Woolies Andy came dangerously close to buying both a Remington Fuzzaway, a tartan clothed toy doll in a plastic tube and Bacchara's Greatest Hits.

Cheated this month:

Addams Family:	58
Hook:	58
Sensible Soccer:	58
Legend:	53
Lure of the Temptress:	57
Push-Over:	54



ST ANSWERS

Techie probs prodded, whittled, poked, scowled at and – er, answered



WIN LOTS OF CASH!

Whenever you see this logo it means that someone has won some loot. And you can too. All you have to do is send in a particularly good tip or cheat for either the ST Answers or the Gamebusters sections. So, don't forget to include your name and address. Some Jaffa Cakes would also be appreciated!



CLIVE PARKER

Clive is a sad, neglected individual who knows all the names of the Banana Splits (Fleego, Drooper, Snork and Bingo actually).



TONY WAGSTAFF

Assembly code is a mystery to everyone but Tony. Oh - and Lionel Prothero, but we don't talk about him anymore.



STEVE WRIGHT

Champion of the MIDI user, Steve can sequence, quantize and make a mean Baked Alaska. What a great dude.

page

52

It's the dawn of time. Explosions sends shock waves through the planet. Quagmires belch forth potent liquids and organisms to form the very fabric of life. As the mist clears, out steps Andy Lowe waving this month's game tips, cheats and solutions

LEGEND MINDSCAPE

Here are a few tips to get you started from Tag, Legend's programmer...

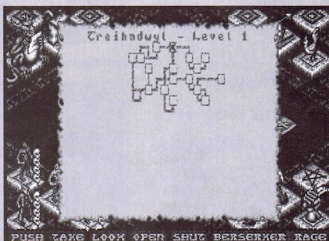
Spell-system tips

Experiment with rune combinations to find spells that suit your personal playing style - the game manual includes most of the major ones you might need. As well as enabling you to cover a larger area, Surround also boosts the remainder of a spell. Many runes don't benefit from boosting, but Damage, Heal, Paralyse, Disrupt and Vivify do - a stronger Vivify gives you more luck. Heal, Damage and Disrupt can be worth using many times in the same spell - for example, Heal Heal is stronger than Heal. Note that casting Missile Paralyse Paralyse is wasted. Continuous Paralyse is, of course, another matter altogether. Here are a few suggestions for spells that you may find useful as you acquaint yourself with the system:

Missile Damage, Missile Damage Damage, Heal, Missile Heal, Missile Heal Heal, Missile Dispel Damage Damage, Missile Dispel Paralyse, Teleport, Surround Damage, Surround Missile Damage, Surround Heal, Surround Surround Antimage.



Wherever you see this logo you can gain valuable insights into how you can cheat a game - how you progress without really trying, how you can get on to that high score table and how you can see those ends of levels from page 118.



Legend - the map for Dungeon Level One...

Bard Songs

The songs, with their musical note colour and effect.

Song Name	Colour	Effect
Thief Of Dolik Pass	Gold	Dexterity
Warriors Awakening	L Green	Strength
Ballad Of Eleanor	Brown	Dodge Ability
Kijam's Litany	White	Constitution
Smithy Song	Grey	Armour Class
March Of The - Bold Ones	Green	Regeneration
Adieu Sweet - Dullard	Blue	Intelligence
Dance Of The - Fairy Queen	L Blue	Speed

For some serious help on this one, Mindscape are currently promoting a hint book containing maps - like those in the screenshots - bard songs and masses of other hints and tips. It's priced at £6.99 and is available from Mindscape International, Priority House, Charles Avenue, Maltings Park, Burgess Hill, West Sussex RH15 9PQ.

...and here's the map for Level 2.

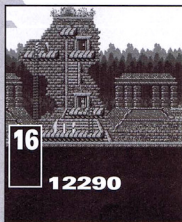
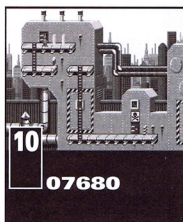
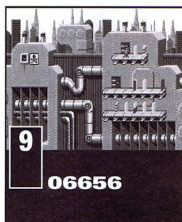
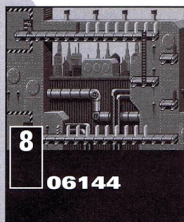
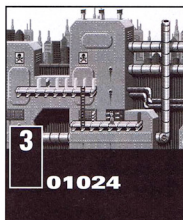
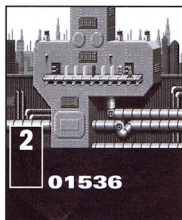
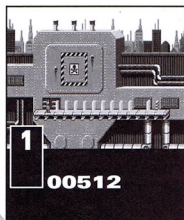


PUSH-OVER - OCEAN

Here are
the first
25 levels
from this



rather
wonderful
game sent in
by Stuart
Riddock of
Lanarkshire,
Scotland.
More to
follow next
issue...



THE 100th LEVEL

Here are the properties of all the
blocks

SP

- SPLITTER

T

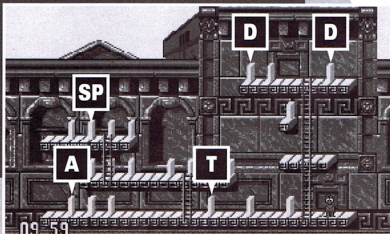
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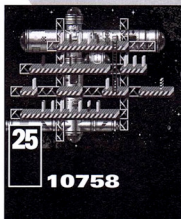
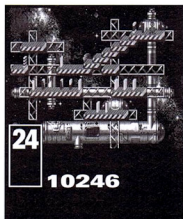
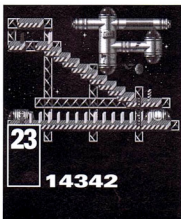
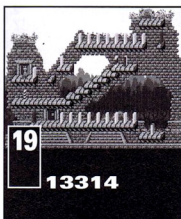
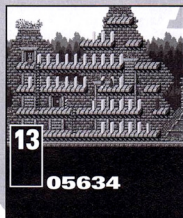
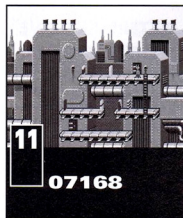
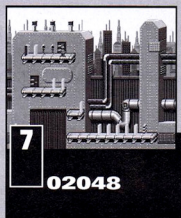
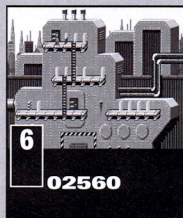
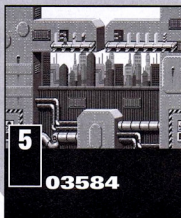
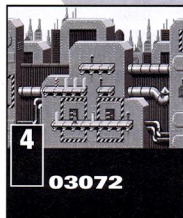
D

- DELAY

A

- ASCENDER





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LURE OF THE TEMPTRESS

VIRGIN

Again quite a few efforts sent in for this excellent game – but A T Brown of Walsall, West Midlands sent a prompt and highly extensive solution, even including some simple and comprehensive little maps. Here's the first half of the solution and the maps. Part two next month

Section One – In Prison

CELL: get the torch from the wall on the right, then move to stand by the door. When the guard enters, nip past him and go through the door.

OUTER CELL: close and lock the cell door, then exit through the door on the right. **Guard Room:** look at the barrel. Get the knife off the top of the barrel. Get the bottle and use it on the barrel's tap. Exit east.

TORTURE ROOM: use the knife on the leather cord on the rack to free Ratpouch. Exit south.

GUARD ROOM: exit west.

OUTER CELL: talk to the prisoner and give him the bottle. Tell Ratpouch to push the bricks, then exit through the hole in the wall. Now sit back and watch the sequence.

Section Two – Turnvale

Make your way to Smithy Street and enter the forge. Get the tinderbox that is lying on the floor. If Luthern is there, talk to him. If not, wait until he arrives. Tell him you have recently escaped from the Skorl (Option 1). Leave the forge.

Find Mallin, the seedy-looking dude in the green coat. Talk to him and agree to his offer (Option 1). He gives you a gold bar. Go to the Market Place and enter the village shop. Talk to Ewan. Use either option. Give him the gold bar and he gives you some money and a gem. Go to Maple Courtyard and enter the Magpie Tavern. Talk to Morkus, who is sitting down drinking. Talk to him again. Now bribe him. Talk to him yet again and he tells you that Goewin has been arrested. Talk to Nellie, the barmaid, give her the gem and she gives you a flask. Leave the tavern.

Go to Smithy Street and enter the forge. Talk to Luthern. Give him the flask and he drinks the booze and hands it back. Go back to Maple Courtyard. Talk to Grub, the dossier. Ask him about the black goat and he gives you a lockpick. Go to West Street and

enter the Severed Arms. Talk to Eileann, the woman knitting. Talk to her again and ask her if she has seen Taidgh. She gives you his diary. Examine the diary. Go to Market Place and wait for Ratpouch to show up. Give Ratpouch the lockpick. Look at the door on the derelict building. *Save your game position.*

If there's a Skorl around, wait until he's gone. Tell Ratpouch to use the lockpick on the lock and open the door. Enter the house and look at the apparatus. Examine it carefully and you should find an oil burner and a tap. Use the tinderbox on the oil burner. Wait until the vessel on the right has filled with potion, then use the flask on the tap. Leave immediately. If you hang around, a Skorl arrives and you are captured. Now go to Weregate and drink the contents of the flask. Go to Middle Street and talk to the Skorl guard. Enter the town hall. Talk to either of the guards to release Goewin. Talk to Goewin before she leaves. Don't hang around for too long or the spell wears off. Go to Apothecary Lane and wait for the spell to wear off. If the shop is closed, wait for Goewin – if not, go in. Talk to Goewin.

Go to Blackfriars Row and look at the poster outside the Monks' Lodge. Find Mallin – he's probably at the castle gates. Talk to him – use Option 3 and he gives you a book. Go to Blackfriars Row and enter the Monks' Lodge. Give the book to Toby, the thin monk, who gives you a statue. Talk to Toby. Ask him to help defeat Selena (Option 2) and



■ **Brough Scott:** "Coming up on the inside - it's There Goes My Beer Money, followed by Three-legged Loopy. But wait - making a last ditch surge for the lead, it's Bound For The Blue Factory and... she's fallen."

he tells you about a dragon. Talk to him again to learn about the Weregate. Go to Apothecary Lane and enter the shop. Talk to Goewin and ask her for an infusion of herbs (Option 2). Ask for Houndstooth, Cowbane and Elecampane (Option 1). Go to Smithy Street and enter the forge. Talk to Catriona, the old woman in the rocking chair. Ask her for Cowbane. Go outside and get Cowbane – the blue flower. Go back to Goewin's shop. Talk to her and she gives you a potion. Go to the Severed Arms and talk to Ultar, the man drinking. Talk to him again and he tells you the gargoyle's names. Go to Weregate and talk to either of the gargoyles. Find Goewin – she may be at the shop or wandering about. Talk to her. Go back to Weregate and wait for Goewin to arrive and talk to her. Go into the caves and save the game... Get Part Two of the solution in next month's issue.

SECTION 1 – THE PRISON AND WERE CAVES

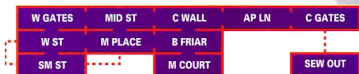
THE PRISON



THE WERE CAVES



SECTION 2 – TURNVALE



KEY

W GATES – Were gates
MID ST – Middle Street
C WALL – Castle Wall
AP LN – Apothecary Lane

C GATES – Castle gates
W ST – West Street
M PLACE – Market Place
B FRIAR – Blackfriars Row

SM ST – Smithy Street
M COURT – Maple Courtyard
SEW OUT – Sewerage outlet
--- – Alley

■ "Well, sir, you have a choice of stale bread, stagnant water and mouldy cheese, or today's special – horse droppings on stale bread with a side salad of penicillin." "Er, no thanks."



SNIPPETS

One or three tipettes from the files of the cheat-obsessed

THE ADDAMS FAMILY OCEAN

The game of the film of the original TV series is selling like hot cakes. And these codes are multiplying, giving us all quadruple vision. It's *Leemings* again! David Harrison of Gillingham, Kent is responsible for this lot.



■ Er, if I'm not mistaken, this animal is spitting out teddy bears. Now that's sick.

&1Y1M 3 HEARTS
Start after big tree.
7191D 4 HEARTS
Start after fridge in kitchen.
B919R 5 HEART
Start after the conservatory.
V1514 PUGSLEY
Start after games room.
V919B FESTER
Start at picture gallery.
BG9K8 WEDNESDAY
Start at crypt.
BLJK# GRANNY
Start at kitchen.

SENSIBLE SOCCER RENEGADE

Neil Tuck of South Humberdale has, rather speedily, sent in a cheat for this fabulous footy game. Apparently, he discovered it while playing the Cover Disk demo, but there's no reason why it won't work on the full version. Just score an own goal in the 45th minute of play and you get infinite time – and, probably, a score of 840-692 before you finally get bored and switch off your ST.

HOOK OCEAN

Quite a few solutions sent in for this one, but the quickest and most coherent came from Neil Aspinall of Liverpool. So, cheers for that and away we go...

First, you must acquire a pirate's uniform to enable you to board Hook's ship. When you appear, go through the doorway to the left – this leads you to Mrs Smeedle's washing-line. Pick up the washing-line pole and the anchor hanging at the bottom of the screen.

Go back to the square and through the doorway on the right. Pick up the rope at the bottom right of the pier. Go into the Bait and Tackle pub, up the stairs and out onto the balcony. Use the rope on the anchor and then the resulting grappling hook on the sky to the right of the crocodile. You must make two unsuccessful attempts before the man in the black hat walks to the right, past the crocodile. Try again and you should get a hat.

To get the jacket, knock on the door you are now standing by and swing back to the balcony by using the grappling hook on the top of the clock tower. Rush back to Mrs Smeedle's washing line. Use the pole and you are able to steal the jacket without Mrs

Smeedle knowing. Getting the pants, however, is a bit harder. Go to see Dr Chop in Muggers' Alley and ask him how to earn some money. Give him one of your gold teeth, then ask him how to earn money again and give him your other gold tooth. Dr Chop gives you two gold pieces. Examine your jacket to find a third gold piece. Go back to the Bait and Tackle and get the mug off the table, then get the two mugs from the nearby Crossed Swords pub. Return to Muggers' Alley and enter Jollister Roger's Place. Give the innkeeper the mugs and the three gold pieces. Give the full mugs to Fake Jake, who is sitting next to the bar, and steal his trousers when he dozes off.

Return to Dr Chop and take the roller blind from the window. Go to Mrs Smeedle's washing line and use the blind. You are now disguised as a pirate.

Go to the Good Form Pier – off Muggers' Alley – and board Hook's ship. To the right of the portcullis are some pots of gold. Take some money from them and then go to the tailor's shop in Pirate Square. Ask the shopkeeper for a metal detector and, when he says he has some magnets, buy one off him. Go back to Good Form Beach and use the magnet on the "X" in the sand. Board Hook's ship again and walk up to Hook.

Watch the animation.

When you appear under the sea, use the pole on the left rope. Look at the clam, then walk into it and use it. You are hoisted up to a large branch. Look at Neverland, then walk right into Neverforest. To get out of Neverforest move right, right, up, right, up, left, up, left. Now walk in front of the hole in the huge tree. You get caught in a trap and, when Tinkerbell releases you from it, go into the tree.

Go up the left flight of stairs then go left and left again to the Avenger. Pick up the net under the bell and examine it to find a piece of string. Go right and take the top left path to the

Four Seasons. Pick up the big yellow flower in the summer section. Walk up to the

chicken-in-the-spring section and use the conch shell you got from the clam. While the chicken is hovering, take its eggs. Go left, back to the jogging area and then back to the workshop and give the eggs to the boy, who gives you some elastic. Go back to the dining area and ascend the stairs on the right. Use the elastic on the broken slingshot.

Go to the round pond – to the right of the dining area – and give the flower to Tinkerbell. Pick up the large branch from the tree on the right. Use the string on the branch to make a bow. Pick up the arrow on the table in the workshop – the small grey circle on the right – and use the bow on the pan pipes that are there. Pick them up when they fall down.

Go to the slingshot and walk up to the top of the cliff. Jump off the cliff by clicking on USE at the end of it.

Do this twice more, then ask Thudbutt what he thinks of you. He tells you that you are good enough to use your slingshot – so do just that. Now ask Thudbutt what his happy thoughts are.

Return to the dining area and talk to Rufio. Say all the insults for a bit of fun, but the main line to say is: "Oh, Rufio!"

Next, go to the round pond and stand in the middle of the screen. You are knocked over the water and walk into the tree. Look at the toy house, the beds, the broken chair and the fireplace. Then talk to Tinkerbell.

After a lengthy hands-off sequence, you get to fight with Hook and you must say the right things to beat him. Here is what to say:

"Peter Pan, the avenger!"

"Good form, James."

"Tick-tock-tick-tock, Hook's afraid of a dead old croc."

"You kidnapped my kids, you deserve to die James Hook."

"Put up your swords. It's Hook or me this time."

"Peter Pan, the avenger!"

That's yer lot. You've done it.



■ "Er, excuse me, my jolly old chum - could you, perchance, tell me where my kids are?" "No. Bigger off."

CHEETAH

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ST ANSWERS

Yes, it's that time of the month again where we open up the mailbag that's straining at the seams, peer nervously inside and pick out a handful of your queries. After an appropriate interval has passed we attempt to answer them. Clive Parker leads our team of merry men they call "experts in their fields"

THE ICONS

BEGINNERS



Only just got hold of an ST? Well you're likely to find helpful info near this icon - newcomers welcome!

COMMS



Do you talk to people through your monitor? Magic, eh? All your comms probs solved here.

DISKS



Disks, floppy and hard ones, that is can be a hassle - don't worry though, all is made clear here.

GAMES



Sol? You want to cheat, huh? Well, look at Gamebusters. We talk serious trauma in Answers.

GRAPHICS



Can't create the art you know you're capable of? You need us, we can help, just sit down and explain...

HARD DRIVES



Do they go round, right round like a record - yes? Great. No? Then you need to look out for this icon.

PRINTERS



Spurious lines, characters, colours - and all from your printer? Something's wrong. Watch out for this pic.

PROGRAMMING



Getting your calls confused? Assembly's this month's language, so check it out here.

SOUND



To keep making that sweet music you want to keep it running smoothly. Get out those headphones.

ST PROBLEMS



Hardware problems and anything else that didn't have a home fits in here - go for it!

Total corruption



Every time I put a disk in the drive of my old 520 STFM it gets corrupted. Should I replace the whole machine or can I just have the disk drive repaired?
Gavin Stewart, York

stf: It is either the floppy disk controller chip or the actual disk drive which is faulty. Your disks may not actually be corrupt - the machine may just be unable to read them. Try them out in a friend's machine, making sure that the disks are kept write-protected. If they work, you know that it is definitely your machine causing the problem. Unfortunately, all you can do is either contact a local computer repair shop and demonstrate the problem or send off your machine to a company such as Ladbroke Computing International for repair. They offer a quotation service for £15 and a minimum repair charge of £35.25. Contact Ladbroke on 0772 203166 for more information about repair services.

Falcon compatibility



Is the new Atari Falcon going to be compatible with existing ST hardware? At the moment I use a Progate 40MByte hard drive, Power PC720 floppy drive and a Panasonic KX-P1123 printer with my 1040 STE. I would like to upgrade to the Falcon 030, but I don't want to have to replace my whole set-up.
Andrew Johnson, Notts

stf: The pre-production Falcon 030 that we saw was not equipped with either a standard Atari DMA (Direct Memory Access) port or an external floppy drive port. However, Atari have brought the DMA signals out to the SCSI 2 port, so your ST hard drive can plug into the Falcon using an adaptor or a special DMA lead. The machine can interface directly to SCSI (Small Computer System Interface) devices via its SCSI2 port, so any new hard drives with a SCSI port can run with the Falcon. The Falcon has a full specification bi-directional parallel printer port, so it is compatible with all parallel printers.

SOUND AND MIDI

More of your music questions answered by Steve Wright

CONTROL AND PROGRAM CHANGES

To get my E-70 synthesizer to change to multi-timbral mode, I need to send a control change "00" = 127 plus program change. How can I do this with Sequencer One Plus?
Douglas David Grannel, Staffordshire.

stf: Sequencer One Plus enables you to input notes from your keyboard and then convert them into control change or program change events. First, open a track and set it to the channel which your E-70 is set up to receive on. Next record or step-enter any two notes - it doesn't matter what they are because they are about to be converted into something else, but keep them short if you want quick changes, and make sure that they are recorded at the place in your song where you want the information to be sent. Now, on the

step editor screen, click on the Edit icon to enter Diamond Drag mode. Hold down the left mouse button with the mouse over the grid, and position the pointer over the first note.

The note's pitch, velocity, position and length appears at the top of the screen, the note sounds, and four diamonds appear around the note. Now release the mouse button. Towards the lower right of the note, a small square is depicted. Click and hold here to reveal the "mini-menu," and move the mouse pointer over the word "Control" before releasing the button. Hey presto! Your note is now depicted as a letter "C" which stands for Control Info, and you are looking at the Add/Edit Event Box.

Now highlight the small Control Change box as well as the small box on the far right in the row of three below it. This is where you enter the number of the controller which you wish to use, which, in your case, is the default number - zero. Below this is the space for entering the actual value for controller zero - in your case, 127.



Games don't work



I have a 520 STE and I have found that some of my games don't work, but they do work on my friend's STFM. Is there any kind of emulator that I can buy so that old ST games run on my STE?

Jack Venner, Leeds

stf: There is no way that you can make an STE emulate an STFM to run non-compatible games because the machines actually boot from the games disk, so it is impossible to install a disk-based version of TOS. It is only games that are over three years old that cause any problems on an STE, so why don't you concentrate on playing some of the more recently released games – in general they have far superior graphics and sound capabilities.

PC stuff



Are PC-XT (eXtended Technology) emulators able to run PC-AT (Advanced Technology) software on STEs and can XT software work on an AT emulator?

Marvin Butt, Middlesex

stf: AT software does not run on any machine that does not contain an Intel 80286 processor or equivalent, whether it's a PC clone or PC emulator installed in an ST.

XT software does run on AT machines, although it does not take advantage of the enhancements that are built into the 286 chips.

Error on booting



When booting the Atari Language disk supplied with my new STE I get the message "Error – this ROM version does not need patch program." What does this mean? The machine works perfectly in all other respects.

Peter Andrews, Bucks

stf: You get this message because of a small program contained in the AUTO folder of the UK Language Disk. This program was designed to fix a problem with the older version of the STE operating system, this has now been rectified on newer machines although the program is still included on the Language Disk. You can safely ignore this error message, your machine will not be affected.

TV monitor?



Can the Philips' 3332 TV/monitor give as good a picture as the Philips' CM8833 mark 2?

Mark Evans, Birmingham

stf: No, the resulting picture on the Philips 3332 will not be as good as the CM8833 monitor because it is simply a monitor style TV, not a monitor. The CM8833 takes a pure video signal direct from the modulator in the ST and therefore gives an excellent display. A TV picture is converted to an RF (radio frequency) signal in the ST, transmitted to the TV and converted back to a video signal. This process degrades the final picture quality.

Guide me to Autoroute



Can you tell me where I can get hold of the full version of Autoroute and how much it costs?

Stuart Innott, Hampshire

stf: Next Base, the company that created Autoroute no longer produce an ST version of the program because it didn't sell very well. Try advertising in the Wanted section of a computer magazine which specialises in private classified ads, or perhaps another reader has an unwanted original copy. If so, why not send it to us so that we can pass it on to Stuart.

Faded away...



The sound on my STFM fades to nothing after using it for a mere ten minutes, returning only intermittently. I originally thought that this was because I was using a TV rather than a monitor, but the same problem now occurs when I'm using my new colour monitor.

Jill Kendall, Essex

stf: This sounds as if the problem is caused by your machine heating up and affecting the chips or it could be the circuitry that deals with the sound output. Excess heat can destroy computer chips over prolonged periods of time.

Unfortunately you need professional help to solve the problem – contact Evesham Micros on ☎ 0386 446441, they provide a fixed rate repair service for £65.

Click on OK in order to complete the process.

The procedure for the program change is the same, except that you choose the Program Change option in the Add/Edit Event box and simply insert the required value. Just click with the mouse and move to second note, and continue as before.

Seems too much like hard work? Not really – after all, you only need to repeat the process once for each song. Alternatively, why don't you save a file which contains these two events only and call it NEWSONG.PLS. Whenever you want to work on a new piece, load NEWSONG.PLS and get straight on with your work before your idea fades, remembering to "save as" with a different name to preserve the original template.

INSTRUMENT TUTOR SOFTWARE

Can you tell me whereabouts I can get a keyboard tutor with two staves that uses MIDI?

Daryl Waycott, Bristol

stf: One interesting keyboard tutor is the ADG series of teaching books, distributed by Zone Distribution (☎ 071 738 5444). They each cost £15. There are three teaching books available, each consisting of a book of specially composed keyboard pieces, a cassette tape and a disk.

The cassette tape has the music recorded so that the left hand is heard from the left speaker and the right hand from the right, so you can listen to them in isolation. The disk contains standard MIDI files of the music, enabling it to be loaded into any sequencer. The music can then be played at any tempo, edited, transposed or analysed. It's worth hearing in mind, however, that tutor software is no substitute for lots and lots of practice!

STEREO SOUND

How is it possible to put the music that I make on my ST through my stereo system?

Robert Dyson, Sheffield

stf: If you have an STE, it couldn't be simpler – just connect a pair of leads from the stereo outputs at the back of your STE to the line inputs on your hi-fi. If you've an earlier ST, you need to buy add-on hardware which provides line outputs. Stereo Playback can do the trick – you can get it from Microdeal (☎ 0726 68020) for £29.95. Look at the full review in STF 22, where it earned a rating of 82%.

HIGH-QUALITY SAMPLING

Is there any sampler of at least 16 bits that can be linked to an STFM? It should be controllable from a sequencer as part of a stereo MIDI setup.

D Hood, South Glamorgan.

stf: Just about any hardware sampler can be connected to your ST via MIDI. However, if you want to use your ST itself as a professional 16-bit sampler (possibly being driven from an external sequencer), take a look at the FORMAT Gold rated Pro-Series 16 from AVR (☎ 0582 457348) for £350.

Modem choice



What do I have to take into account before buying a modem for my ST?

Steven Burn, Essex

Freeze Dried Terminal v2.10 (demo)
Copyright ©1991 Aaron Hopkins

Main Menu:

- The Autodialer
- Quick Dial
- Init Strings
- Capture Buffer
- Scrollback
- Capture Setup
- Script Files
- Execute .00
- Stop Current .00

Transfers

- Receive File
- Send File
- Edit Batch Queue
- ASCII Send
- Text Editor
- Disk Commands
- Default Paths

Macros

- Macro Editor
- Along/mac Editor
- Offline Amacs
- Other
- Rs-232 Config
- System Setup
- Font Installation
- Save Accessories
- Save Setup

- Return Online - Exit F205Term

■ The Freeze Dried Terminal is getting increasingly popular in this country. Something to do with that colourful interface, perhaps?

stf: Along with most other peripherals, modems are dropping in price all the time. You must ensure that a modem is Hayes compatible (a modem command language) and can operate at a minimum speed of 2400 baud (bits transmitted per second).

99% of all new modems are Hayes compatible and work with any PD comms software, usually using the default settings. HCS (081 777 0751) can provide the Best Data Smart One 2400 baud modem complete with lead and software for £59.95 while First Choice (0532 319444) supply the Supra 2400 modem for £79.95, again including a modem lead and software.

Good PD comms packages include Uniterm v2.0e which has a plethora of features, Vanterm v3.8 - Disk COM 27 - which is particularly easy for beginners to get to grips with and the Freeze Dried Terminal - Disk TMP 32 - which has a very user-friendly graphical interface. You can get all these disks from the ST Club (0602 410241) for £14.5.

Spaced out



On the circuit board of my STFM there are spaces for a blitter and other chips. Does this mean that I can install a blitter chip in my machine? My TOS version is 1.4.

Tudor Boddorn-Whetham, Gloucester

stf: Yes, you can add a blitter to your machine. System Solutions (0753 832212) can supply a blitter chip and socket (without instructions) for £29.95. They can also install the chip in your machine for you for £30.00, this option is recommended for non-technical types.

WARNING: Using a soldering iron on your ST's PCB (printed circuit board) can cause a huge amount of damage to the circuitry. Do not attempt to install anything in your machine if you are not conversant with a soldering iron.

See you later (modulator)



Does the ST have a modulator? I have a Matsui portable TV connected to a 520 STFM with an aerial lead - the TV shows the ST output OK but there is a ghost on it. If you change the frequency of the ST output using a modulator, can this cure the problem?

David Gordon, Shropshire

stf: First of all, you cannot change the output RF frequency of your machine without

ASSEMBLY POINTERS

Tony Wagstaff shows you this month's collection of assembly hints, tips and tricks

ACC or .PRG

I write quite a few programs that run as Accessories, but I would also like to run them as programs. How do I find the program's name once loaded to determine which it is?

Gary Morris, Ayr

stf: You don't need the program's name to do this, just find its id by calling `APPL_INIT`. If this is zero, it was run from the Desktop, otherwise it is an Accessory, in which case you would call it `MENU_REGISTER`.

FILE DISPLAY

How can I load and display an ASCII file in assembly language? Rowland Shaw, Didcot

stf: The following little snippet can do what you want. It does need some improving - well, you didn't think we'd let you get away without doing some work yourself! As it stands, it fills a high res screen, and scrolls forwards with each key press. It

doesn't like tabs or line feeds so that's something you can work on yourself. First, open the file:

```
clr.w    -(sp)
move.l   -filename,(sp)
move.w   #3dB, -(sp)
tra      #1
addq.l   #8, sp
```

Enough data is read in to fill the screen, change this and the buffer to 40*24 for low res. After the trap, 40 contains zero if the end of file has been reached, which you can use to write an exit routine: The `l` symbol means no line return yet

```
move.w   d0, filehandle.l
readfile
move.l   #buffer, -(a7)
move.l   #80*24, -(a7)
move.w   d0, -(a7)
move.w   #3BF, -(a7)
trap     #1
lea      12(a7), a7
```

Null-terminate the string (put a nought on the end in non-Dalek language), and print it:

```
clr.b    nullterm
move.l   #buffer, -(a7)
move.w   #9, -(a7)
trap     #1
```

```
addq.l   #6, a7
```

Wait for a key press and repeat:

```
move.w   #2, -(a7)
move.w   #2, -(a7)
trap     #13
addq.l   #4, a7
move.w   filehandle, d0
bra      readfile
data
filename  dc.b
"A:\EXAMPLE.TXT", 0
bss
buffer    ds.b
80*24
nullterm  ds.b    1
filehandle ds.w    1
```

MALLOC

How is memory space obtained from, and returned to, TOS? Dave Woolen, Sheffield

stf: If, after calling `Mshrink` at the top of your program, you need to get some memory back, use the `Malloc` call:

```
move.l   #Space, -(a7)
move.l   #548, -(a7)
trap     #1
addq.l   #6, -(a7)
```

Space is the number of bytes of memory requested. `D0` contains the address of the

memory block, or zero if there isn't enough memory to allocate. Unfortunately, in some versions of TOS, there is a bug in this routine which shows itself if `Malloc` is called more than once. It is good policy, therefore, to get all your memory in one go, rather than ask for several small batches. The memory is returned using `Mfree`, address containing the address found in `D0`.

```
move.l   #address, -(a7)
move.l   #549, -(a7)
trap     #1
addq.l   #6, -(a7)
```

WHERE'S THE DOC?

The book *Introducing Atari ST Machine Code* refers to a DOC file containing information on the line-A routines. Does it exist, if not where can I obtain this information? Chris Hemsley, Rochester

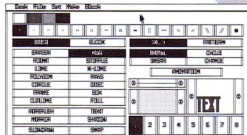
stf: Contact `zzSoft` on 0245 762965 to find out where the missing file should be. If you have no luck, then South West Software Library (PO Box 562, Wimbourne, Dorset BH21 2YD) can supply a disk with information on many aspects of programming, including the line-A.



dismantling it. Second, the modulator is an internal component of the ST which is not designed to be tampered with or adjusted in any way. Third, adjusting the frequency is unlikely to make any difference at all to the display quality on your TV – it sounds like the TV itself has the problem.

Try the ST on a different colour TV, if the picture is OK then you know that it is your TV. Try tuning some of the other channels to your ST signal, the best results are usually obtained from either the market VTR or Video.

If you still cannot get a decent picture, either return the TV to the supplier or contact a TV repair shop and explain the problem to them.



Guaranteed?



I own an STFM and intend to upgrade it to 1MByte of memory. Many companies advertise the "no soldering required, do-it-yourself" upgrades – surely opening your machine invalidates this guarantee?

Andrew Veltch, Glasgow

stf: All STFM machines are well out of guarantee by now because none have been produced for several years, therefore you shouldn't worry about opening your machine to install an upgrade.

Upgrade path



I wish to upgrade my new STE to 1MByte of RAM, but opening my machine will invalidate the guarantee. What should I do?

Gavin Sayce, Gwent

■ An attack of double vision brought on not by an excess of alcohol but by a rogue portable TV with a tuning problem it doesn't like to talk about.

stf: The STE is so easy to upgrade using SIMMs modules that it is unlikely that anything could go wrong. If you are worried about installing the SIMMs yourself then take the STE to your local computer shop and ask them to install them for you. Most computer stores are happy to do this for a small fee.

Cola problem



I got an Atari STE for my birthday. My best friend accidentally spilt cola over the keys and now it won't work at all. What is wrong with it? I cannot afford to get it repaired because I am only 12. If my Dad finds out he will kill me. I hate Craig now and don't want to go around with him anymore.

Anonymous, West Sussex

stf: From your description it sounds as if the cola may have got onto your machine's main circuit board and caused a short circuit. The only thing you can do is tell your father and send it off to be repaired. Don't worry so much about telling your father – parents can

Order Disk 1465 (PRO-16) at £39.95.

PROFESSIONAL

What is the best programming language for professional use? Paul Fox, West Yorkshire

stf: There is no standard language for programming – most professionals use either assembly language specific to one make of computer, or use a language that can be easily transferred from machine to machine, such as C or Pascal. However, if you are a beginner, it is probably more beneficial to learn BASIC – you still learn computing skills, and making the transition later should not be too difficult.

A lot of colleges and universities teach computing at some level; contact your local colleges to find out the sort of qualifications you need. Don't expect to make a fortune as a programmer, though, it's possible to make a reasonable living but don't expect too much.

RELOCATE

If you describe the relocation table found at the start of all

.PRG files? Derek Fountain, Aylesbury

stf: The first 28 bytes of a program, including .TOS and .TTP applications, contain information about the length of the program. The first two bytes contain a "magic number," \$601A. Then follow four longwords, giving the length of the TEXT, DATA, BSS, and symbol tables. The next longword is reserved, after which comes a longword containing various flags. If set, bit nought speeds up loading of the program, bit one indicates that TT RAM may be used, bit two that Malloc calls can use TT RAM, while bits 28 to 31, again for the TT only, are a request for TT memory. The next word, if set to zero, informs GEM that there is a relocation table, although earlier versions of TOS do not support this.

The relocation table itself comes at the end of a program. Since GEM doesn't always load a program into the same area of memory each time it's run, some instructions – for example, those that branch to a particular address – need to

have that address calculated when they're loaded. Enter the relocation table. The first longword is the number of bytes into the TEXT segment that the first address occurs. From then on, each byte gives the distance to the next address from the current address. Since each address to be altered must occur on a word boundary, these are all even numbers. The only exception is a \$01, indicating that the next byte needs to be added to 254 to obtain the offset. A zero indicates the end of the table, and for compatibility with earlier versions of TOS, the first longword should be zero if a relocation table is not used.

SPECTRUM

Is there a routine for displaying Spectrum 512 pictures? Daniel Coe, Ramsgate

stf: The ST Club (≡ 0602 410241) can supply a program SP SLIDE9, on Disk GRA.120, which can do the job. If you want to have a go at writing a routine, you have to use Horizontal Blanks to change the palette because Spectrum pictures

use more than the standard 16 colours. Spectrum pictures are formatted as follows: the first 16,000 words contain the picture data, followed by 9,552 words containing three palettes for each horizontal line, excluding the uppermost which Spectrum 512 doesn't use.

SQUASHED TEXT

How do you change from low to medium res with XBIOS 5? Ijaz Hussain, Birmingham

stf: There are two differences between the resolutions that have to be taken into account.

First, low res has only 40 characters per line, unlike the 80 characters per line obtained in medium res. A line of text that fills a low res screen only half fills a medium res screen so you have to adjust your program accordingly.

Second, low res uses colour register 15 for the pen colour. Medium res uses register number three which, when you switch, still contains the value for yellow. It needs to be changed, using XBIOS 7, to \$0000, the value for black.

often be more understanding than you imagine. Perhaps your (ex) friend's parents can help with the cost of the repair because he caused the problem in the first place. Contact WTS Electronics on 0582 491949, they offer a repair service for £49.95.

Lack of contact



I have got a Minimodem 3005 Modem. When I connect to a BBS I don't seem to get anything from it except the odd letter or symbol. Is the 25-pin connection for this modem the same as other modems? I tried to use the modem with the VTS2 emulator supplied with the ST Language disk. Andrew Taylor, Cleveland

stf: The pinout connections are standard on this modem, so the problem probably lies with your choice of communications software. Get yourself Vanterm 3.8 (we gave you this comms program free on Cover Disk 17 or you can get it from the ST Club on disk COM 27) and get your modem and ST connected up.

You now need to check to see if the modem understands the Hayes command set - this is a set of commands which the ST can send to control the modem. The simplest way to check if a modem is Hayes compatible from within Vanterm is to press the left key to switch to on-line mode, type <A>, <T> and then press the <Return> key.

If an "OK" message appears on-screen then that means the modem is Hayes compatible and you can control it directly from Vanterm's default settings. If you don't get the OK message then the modem uses its own command set. These are detailed in the modem's manual and you then have to configure Vanterm to use the new commands. Vanterm is an excellent program to learn comms on the ST and has a built-in help facility which explains all functions of the program in great detail. Vanterm costs £1.45 from the ST Club on 0602 410241.

Setting modem control strings

OLD Bauding Prefix	(usually) ATDT	?	ATDT
OLD Dialing Suffix	(usually) 4 for CD	?	ATZ
OLD Init String	(usually) ATZ2	?	ATZ
OLD Connect String 1	(usually) CONNECT	?	CONNECT 300
OLD Connect String 2	(usually) CONNECT 1200	?	CONNECT 1200
OLD Connect String 3	(usually) CONNECT 2400	?	On line at 2400 baud
OLD Fail String 1	(usually) BUSY	?	END
OLD Fail String 2	(usually) NO CARRIER	?	NO CARRIER
OLD Fail String 3	(usually) NO DIALTONE	?	NO DIALTONE

New Prefix	?	ATDT
New Suffix	?	ATZ
New Init String	?	ATZ
New Connect String 1	?	CONNECT 300
New Connect String 2	?	CONNECT 1200
New Connect String 3	?	On line at 2400 baud

Use Backspace, Delete, and arrow keys to edit

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■ The screen in Vanterm which enables the modem control strings to be edited to your heart's content. All options in Vanterm are fully configurable and explained in a unique on-line help feature.

GFA Basic 2, is it PD?



Can you get GFA Basic v2 from PD libraries?
Jasper Calvin, West Sussex

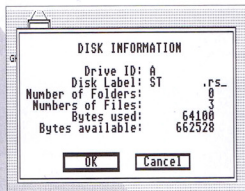
stf: No, GFA Basic v2 is not PD. It was distributed under licence on ST FORMAT Cover Disks 1 and 19 and is also being distributed under licence by Goodmans International on disk GDS00 for £2.75. Call Goodmans on 0782 335650.

Vanishing space



How can I check how much space is left on a disk? When I use the Show Info option from the File menu at the Desktop, the bytes used and the bytes available totals do not add up to the total number of bytes available on a newly formatted floppy disk. Why is this?

Andrew McRobbie, Denny



■ The disk information alert showing details of the disk in drive A. The bytes used and the bytes available do not necessarily add up to the total capacity of the disk. It's all very logical, really it is.

stf: The reason that you are getting odd figures is because of the way that a file is stored on a floppy disk. Most files do not exactly fit into multiples of 512 bytes, which is the length of one sector on a floppy disk. If a file has just one or two bytes written to the final sector then the whole 512 bytes are marked as unavailable for use, but are not marked as used. Only the actual number of bytes used by files is shown as used. In this way, the capacity of a disk appears to shrink. As an extreme example 1,000 files each 10 bytes in length would actually use up 500K of disk space (1,000 x 512 = 512,000 bytes = 500K) even though only 10,000 bytes (just under 10K) of data are stored.

Odd character



When using ST Basic (or any other version of BASIC, for that matter) why do the lines

Print Chr\$(7)

and

Print Chr\$(10)

result in nothing being printed on-screen even though symbols are assigned to these values in the ASCII character set listings?

Claude Goshey, Kent

stf: These symbols are non-printable from within BASIC Print statements. You can get around this from within GFA Basic v3 (given away on ST FORMAT Cover Disk 35, and if you don't have it, turn to page 50 to order your copy) by using the Text command instead of the Print command. Use a few lines similar to the following.

```
x$="This is the bell symbol "+Chr$(10)
Text 10,10,x$
```

Another advantage of using the Text command instead of the Print command is that text can be printed at pixel points instead of at character positions giving more accurate placement of text on the screen.

Added delights



I have a PC keyboard interface and an IBM (who?) keyboard connected to my STFM. Why can't I use the backslash <\> and the <Print Screen> keys on the PC keyboard?

Andy Rountree, Lincoln

stf: The Print Screen and backslash commands on a PC keyboard's numeric keypad relate to the hardware of a PC - contemptible, not the ST. Therefore they have no effect upon ST software.

Let's get floptical



I have the chance to purchase an insite floptical disk drive from Ideal Hardware. At work I can use this with a Compaq 386 PC but I would like to use it with my 1040 STF at home. The drive accepts 720K and 1.44MByte floppy disks as well as 21.5MByte optical disks.

Is there any way that I can get the 1040 STF to recognise the optical drive or do I need a special interface? I plan to buy a Falcon 030 next year, will the drive work with that?

Howard Angel, Harrogate

stf: If the floptical drive has a SCSI interface then it may be possible to link it to your ST using an SCSI host adaptor and special software. Your best course is to contact System Solutions on 0753 832212, they specialise in this kind of upgrade for the entire range of Atari machines from the 1040 through to the TT.

The Falcon will be able to interface directly with optical, floptical, magneto-optical, CD-ROM drives and all sorts of other goodies via its DSP port. See the feature about the Falcon in last month's ST FORMAT - turn to page 50 to order your copy if you don't have it. Also look at the News story on page 24 for the latest gen.

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Botan's Blood LXI	£16.99 £16.99	Deadheads	£20.99 £20.99	Kick Off (83 Meg)	N/A £14.99	Master Blaster LXXXVIII	£9.99
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Botan's Blood LXIII	£16.99 £16.99	Deadheads	£20.99 £20.99	Kick Off (85 Meg)	N/A £14.99	Master Blaster LXXXX	£9.99
Botan's Blood LXIV	£16.99 £16.99	Deadheads	£20.99 £20.99	Kick Off (86 Meg)	N/A £14.99	Master Blaster LXXXXI	£9.99
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Botan's Blood LXIX	£16.99 £16.99	Deadheads	£20.99 £20.99	Kick Off (91 Meg)	N/A £14.99	Master Blaster LXXXXVI	£9.99
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Botan's Blood LXXVIII	£16.99 £16.99	Deadheads	£20.99 £20.99	Kick Off (100 Meg)	N/A £14.99	Master Blaster LXXXXXV	£9.99
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FUTURE MUSIC

MAKING MUSIC WITH MODERN TECHNOLOGY

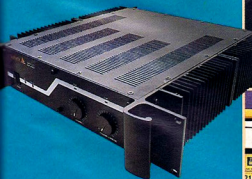
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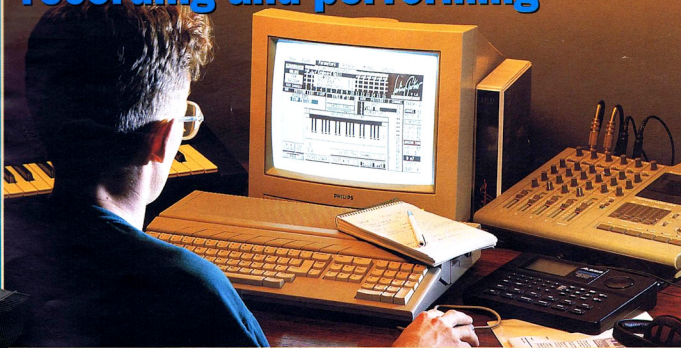
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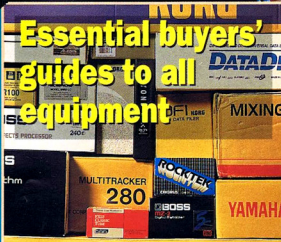
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Welcome to the future

Contents



♦ Generous? Forgiving? Hah. You can tell by the body language that this man insists on the best.

THE ST IS AN INVALUABLE TOOL for many musicians and has been in the forefront of the music technology revolution, making music creation affordable and accessible to all. The arrival of the Falcon is adding fresh impetus to the ST's push into the music world, making it a great time to launch a magazine dealing with music technology – *Future Music*.

As an *ST Format* reader you're already aware of the exciting possibilities that the ST and other high-tech devices have opened up. It's now possible to create, perform and record impressive music of any kind using relatively cheap equipment. There are professional musicians all over the country who use exactly the same computer as you to help them create chart-topping hits, and we will be showing you exactly how you can do it yourself.

Don't confuse the technology with the styles of music – whether you like industrial techno, Eurovision pop, rave or any other style of music, the technology is relevant to all of them.

We won't just be dealing with the cold pieces of hardware and software either. Above all this is a magazine about people making music. What we will be doing is trying to help you make better music and guide you to the right equipment for you at the right price. We'll be talking to experienced musicians who can give practical advice on getting the best results and involving them in reviews so that hardware and software get tested out under real conditions.

We're determined to get rid of all the jargon and techno-wibble that is so often associated with music technology and give you the same sort of clear, concise and entertaining read you would expect from a sister magazine of *ST Format*.

I hope that you enjoy this special taster of *Future Music* and, if you're not already aware of the musical capabilities of your ST, that it helps to open up this exciting new world for you.

Bob Wade

4 **Falcon preview**

Atari's new computer includes such marvels as direct-to-disk sampling, which could put it at the forefront of music computing. Find out what all the fuss is about.

6 **The British Music Fair**

The British Music Fair at Olympia 2 recently was host to many new launches and announcements that every ST musician should know about.

8 **Questions and answers**

We tackle some common ST music problems and give you a taste of the technical help you can expect from *Future Music*. Plus we ask you for some help in return.

10 **How to get Future Music**

Take advantage of a special introductory subscription offer and find out more about what you can expect from *Future Music* – a new kind of music magazine.

Coming soon

Issue one of *Future Music* comes out on Thursday 15 October, and it's absolutely packed with reviews, tutorials, profiles, tips, buyers' guides and much more. It costs just £1.95 and comes with a free book that is sure to be an invaluable asset to all modern musicians.

The book is full of essential information for everyone from inexperienced beginners to professional musicians. Included in it are a complete technical glossary, MIDI codes, General MIDI protocols, venue guide, hardware and software company contacts, copyright facts, music organisations and training courses, and much more. You'll never want to be without it.

If that isn't enough to whet your appetite, then how about the fact that inside *Future Music* we're revealing what the next big developments in music technology will be. We've talked to the people in the know and on Thursday 15 October we'll be telling you what they said.

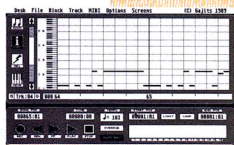
Don't miss the first issue of *Future Music*, or you'll be missing the beginning of a new era in music technology.



♦ Squint your eyes a bit and imagine it's some time after Christmas. Hey presto, it's a Falcon!



♦ The British Music Fair – an Olympia-ful of new music goodies you should know about.



♦ Sequencer One, part 12 – or, everything you still haven't quite got the hang of, explained.



**FUTURE
MUSIC**

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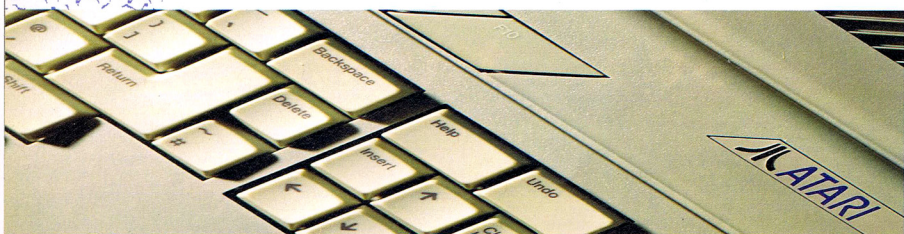
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FUTURE MUSIC
OCTOBER 1992

Soaring to new



Although the ST is still seen as an industry standard music machine, it may be time to move on. Atari's new Falcon could be the machine to turn heads in the music world. Maff Evans goes hunting and assesses the possibilities.

WHEN THE ST WAS LAUNCHED back in 1985, it stirred up a lot of commotion in the computer world. At last the kind of power only found in serious corporate machines could be brought into the home, albeit at a price – over £1,000. Musicians were attracted by its built-in MIDI interface, which meant that there was a computer you could use for controlling an entire musical setup without having to buy any additional hardware.

Software developers quickly picked up on this potential, producing a wide range of sequencers, editors, librarians and other MIDI systems to build up an incredibly extensive musical catalogue. However, the world of electronic music has moved on considerably in the past seven years, with digital recording, more extensive MIDI control and direct-to-disk recording, so what happens to the ST now?

One option is to "retro-fit" the machine with add-on boxes to open the possibilities of digital mastering and MIDI control. The other is to come up with the next step in

the ST's history. Pretty soon, this next step will be upon us, in the shape of the new Atari Falcon, due this year at £500 upwards.

The new machine's specifications are quite a leap on from the ST, from the power

of the central processor chip, through the incredible graphics to the amazing sound capabilities. Although the machine is "downwardly compatible" (that is, existing ST software can be run on it), meaning that you won't have to get rid of all your MIDI software, it opens up a whole new vista of possibilities as far as music is concerned. Just have a look at these specifications:

- ♦ Eight channels of 16-bit digital sound, so that you can produce eight-track songs just on the machine itself.
- ♦ Stereo 16-bit audio input and output, enabling you to use the Falcon as a powerful effects system.
- ♦ Built-in 16-bit sampling (using Atari's powerful SDMA sound processors) with sampling rates up to an impressive 50 kHz.

These specifications go way beyond the sound facilities of any other computer, taking it more into the range of a serious musical instrument rather than a simple home machine. The potential of this impressive system is quite incredible:

- ♦ The built-in sampling system makes the new machine an attractive alternative to buying a dedicated sampler. If the music

software companies support the machine (which, given the success of the ST in the music world, they should), you could run your MIDI sequencer with eight tracks of internal, 16-bit, sampled sound also playing.

♦ Atari's specially designed SDMA "audio signal coprocessors," coupled with the

If a picture's worth 1,000 words

As you'd expect, any new machine that appears on the scene these days should have a pretty powerful graphics capability. The PC no longer has the edge in terms of visuals, since not only can the Falcon display Super VGA im-



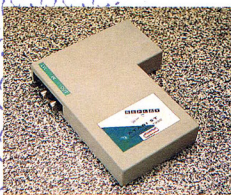
♦ You needn't wait until 2001 for Super VGA graphics like this – the Falcon can do it all.

ages (640 x 480 pixels in 256 colours), but it can display graphics almost to "True Colour" standard. In 16-bit mode, it can use 65,536 colours on a 320 x 480 pixel screen, but there is also a 15-bit mode which, used in conjunction with the built-in genlock, can provide incredible video-overlays, rather than simple, two-colour captions.

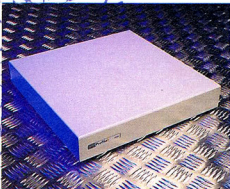
The colours can be picked from a palette of 262,144 – a lot more than the 256 available on an ST or even the 4,096 on an STE. Obviously, a beefed-up PC running an SVGA card (and a generous helping of memory) has a more extensive palette (getting close to around eight thousand million), but this kind of system is by no means as cheap as the proposed price for the Falcon.



♦ The Atari TT, currently favoured by musicians, could soon be surpassed by Atari's new beast.



♦ The built-in sampling functions of the Falcon mean that add-on cartridges aren't needed.



♦ Using a hard drive via the Falcon's SCSI port enables direct-to-hard-disk digital recording.

heights



◆ The Falcon is also fitted with a SCSI port, so that it can talk to most standard storage devices (such as hard disk drives). This opens up the possibility of built-in direct to disk recording, the only extra cost involved being that of a hard drive – possibly as low as £350 or so for 120MBytes.

Although the various advancements in graphics and sound may make the Falcon seem like a souped-up games machine to take on the consoles, the sheer power of

Soon enough, more updates of a similar nature could start appearing, which would bode well for the musical future of the Falcon.

Computer musicians who are being lured away from the ST should look long and hard at the Falcon before buying a new music machine. This kind of technology doesn't come along at this price every day, so keep your eyes peeled for what could be *the* hot music computer of the '90s.

Band name.....

Equipment used.....

Musical Influences.....

Contact name.....

Address.....

.....Postcode.....

Phone number.....

Main aim for the band.....

Reader ads, *Future Music*, 30 Monmouth Street, Bath, Avon BA1 2BW

Fairground



Recently the biggest names in the musical instrument industry got together at Olympia in London to show off all their latest wares. **Future Music's Maff Evans and Dave Robinson** jumped into the playground to see the toys you could be playing with soon.

IN THE COMING YEAR YOU SHOULD be able to edit digitally recorded sound as easily as editing MIDI sequences, apply incredible effects to sampled sound, or perhaps play a new guitar synth. These are just some of the possibilities promised by new hardware and software shown at the recent British Music Fair.

This year's fair was a much more restrained affair than previous occasions, since the 1992 show was a trade-only event. However, despite dire predictions from industry pundits that there isn't enough interest in new musical technology, there was a great deal of new hardware and software on display, attracting a lot of interest from the show visitors. Here are some of the exciting new offerings to watch out for.

Computers and recording

Most of the software and recording systems at the fair centred on the digital domain.

Alesis Adat

£3,499

Alesis was proudly presenting its modular, digital eight-track system which uses moderately cheap SVHS tapes for recording. The system can be built up in sections, with all the modules linking together via a single control device which offers remote control of the tapes, full auto-location and synchronisation. The real breakthrough is the relatively low cost – it may still sound like a lot of money, but that's only because it is. When compared with previous digital multi-track systems, which cost tens of thousands of pounds, it's a

bargain, and it's available now.

Sound Technology Tel: 0462 480000

Cubase Audio Time Bandit

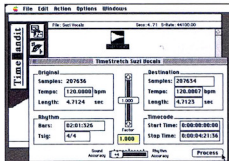
£669

£399

If you want more control over your recordings before you commit yourself to tape, Steinberg's latest addition to the *Cubase* range could be of interest. *Cubase Audio*,

available for the ST/TT range next year, enables you to handle digitally recorded sound (via a sampler such as an Akai S1100, which was used to demonstrate the software at the fair) and edit it in the same way as editing MIDI sequences. Sections of samples can be moved around, truncated or repeated, just like notes in a normal sequencer.

The currently-Mac-based *Time Bandit* software had many ST users drooling with anticipation. Using *Time Bandit*, you can also change the pitch of a sample without



♦ Time stretch and pitch conversion on samples is now easy, thanks to Steinberg's *Time Bandit*.

altering the speed, or change the speed while keeping the same pitch. Doing this by hand is a very complex process, but the results you can achieve using *Time Bandit* are flawless, opening up a new range of possibilities in digital mixing.

A firm release date and price for ST versions of *Cubase Audio* and *Time Bandit* are yet to be set, but *Future Music* will bring you the details as soon as they're available. Harman Audio Tel: 0753 576911

Percussion

Electronic percussion no longer means "thump-hiss" drum machines and drum pads made out of solid black plastic. These days, electronic drums are far more flexible.

Roland TD-7

£1,659

One of the most impressive-looking items on the Roland stand was the TD-7 Total Drum System. This set of small grey drum pads has a very sleek appearance, which seems very strange compared to previous electronic kits. Although they're small, the response from the pads is incredible, with separate, fully velocity sensitive response from both the drum surface and the drum rim. When coupled with the superb sounds

from the sound trigger module, the TD-7 makes for one of the most expressive and powerful-sounding kits available.

If you can't afford the full-blown kit, a stripped-down version (without the hi-hat controller and drum-pad holders) is available for £1,150, but even this provides you with an impressive system.

Roland UK

Tel: 0252 816181

KAT Electronic Drums

DrumKAT 3.0

£887

KITI Pro Kit

£362

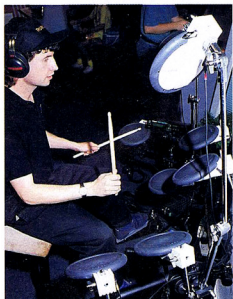
MIDI Trigger

£25

Drum and cymbal specialists Zildjian make a blast into the electronic drum market with the latest additions to the KAT percussion range. The drum pads themselves have been revamped, with new designs and pickup technology making them sleeker and more sensitive.

The KITI (KAT Intelligent Trigger Interface) not only provides a link between the drum pads and MIDI units, it also enables you to record patterns into the unit. These can then be called up when a bank of fills is struck, in effect giving you a bank of fills that can be played whenever needed.

For a more compact and versatile unit, the DrumKAT EZ (now with the latest version 3.0 software) gives ten sensitive pads, dynamic layering, stereo trigger inputs and



♦ Style, feel, versatility and great sounds come together in Roland's latest electronic drumkit.



♦ Alesis' Adat digital multi-track brings the cost of digital recording and mixing right down.

attractions



♦ Zildjian's KAT Electronic Drums offer a flexible and expandable option in the drum-pad field.

the ability to add further controllers (such as foot pedals) for more expressive playing. Although it lacks some of the extensive options of the Roland TD-7 KIT, the KAT system's price makes it a very promising option for drummers wanting to access the world of MIDI.

Zildjian

Tel: 0344 872262

Boss Dr Rhythm DR-660

£335

The Dr Rhythm series of drum machines from Boss has quite a pedigree history. The DR-660 continues this tradition, providing 255 preset sounds in a small, compact unit (including all the sounds from a TR-808).

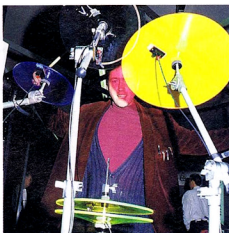
The sounds can be organised into 32 kits, each comprising 32 sounds, with the sounds being accessed via 16 velocity-sensitive pads. The sounds can be altered according to velocity in a number of ways, changing the timbre, decay, volume, pitch and overall expression of a sound. Add to this the 100 preset patterns, 150 user-programmable patterns, built in reverb and chorus effects and the ability to trigger patterns from an external MIDI controller, and you've got a flexible, expressive little rhythm unit.

Roland UK

Tel: 0252 816181

Visu-Lite Cymbals from £100 (10 inch crash)

There are quite a few electronic drum kits available these days, but you've probably noticed that they are all based on snare/tom pads and kick pedals – either that or they are just a collection of pads in a single unit. What about the drummer who wants that loose, active feel of a real cymbal, but wants to control MIDI systems? This is where the Visu-Lite Cymbals come in. Available in a range of crash, ride and hi-hat cymbals, these solid plastic systems have a pickup attached to their underside, linked to a remote sound unit which triggers the sounds. Some models enable you not only to trigger a note, but also to stop it by grabbing the cymbal – in the same way as the



♦ The visually striking Visu-Lite Cymbals bring MIDI to the world of the humble cymbal.

"choking" technique used on real cymbals. Their striking fluorescent colours make these highly noticeable items, but it still remains to be seen how well they will be received in the real world.

MCMLXIX

Tel: 081 963 0663

Synths and Samplers

Has this year spawned anything to join the D50 or the S100 in the synthesis and sampling Hall of Fame?

Yamaha SY85 and TG500

£1,399
£999

The SY85 is Yamaha's new mid-range synth, with an emphasis on easy real-time performance control. Eight sliders enable fast editing of parameters such as attack and release times, cut-off level and resonance, and a "mode select matrix" removes the need for complex menus when you're trying to find a function. 256 voices are held internally, to be played individually or layered and stored in one of the 128 performance presets, and more samples for voice creation can be loaded from waveform cards, 3.5 inch disk or MIDI Sample Dump. Two separate chips effects, and there's a nine track, ten song, 20,000 note sequencer which saves Standard MIDI files too. The sounds are big and whistler quality in a very refined tone of voice.

The TG500 is the rack mount equivalent of the SY85, but has 384 presets, including 252 voices, four multi-instrument drum voices and 128 performance combinations. Internal memory provides storage for another 126 voices, two drum voices and 64 performance combinations. Only 16 multi-timbral setups are available – you might expect more from a unit with so many sounds. There is no floppy disk drive, but external samples can be loaded from waveform cards or the MIDI Sample Dump standard. There are four outputs in addition to the standard stereo outs – a necessity, considering that the beast has 64 note polyphony. Is this a record? Yamaha-Kemble Tel: 0908 366700

Roland JW-50

£1,349

The JW-50, the new Roland workstation, is out this month, with a full five octaves, 317 sounds plus 128 user-programmable tones, 16 part multi-timbral capability and 24 voice polyphony. The JW-50 conforms to Roland's General Standard, their slightly extended version of General MIDI. With a powerful sequencer, nine rhythm sets, eight digital effects, 30 different styles of backing tracks when creating

note patterns and a disk drive that saves Standard MIDI files, it's everything the D-20 wasn't.

Roland UK

Tel: 0252 816181

DJ-70 Sampling Keyboard

£1,799

This is the innards of Roland's flagship S750 sampler in a bigger box with a three octave keyboard and many short cuts to enable fast and easy sampling. 24 voice polyphony and two megabytes

of memory (expandable to four) feature alongside the expected 16-bit CD quality sampling and 3.5 inch floppy disk drive. The resynthesis abilities are very impressive: the demonstrator at the BMF produced a convincing analogue synth bass sound from a Michael Jackson drum loop faster than you could say "plastic surgery." The nifty alpha-dial for data entry reappears on this unit, and the large panel buttons feel positive beneath the fingers. But the most notable addition is the scratch-wheel. This is used for "dropping in" samples as a DJ with turntables and mixer would. A nice toy, but not as effective as the real thing.

Roland UK

Tel: 0252 816181

Roland GR-1 Guitar Synthesizer

£895

GK-2 Guitar Synth Driver

£135

With the new GR-1, available this month, Roland is attempting to revitalise the guitar synth. The complete floor unit (no additional pedals required) comes with 200 PCM sampled sounds, expandable to 400, many of which are unique to the synth. It's four part multi-timbral, has built-in reverb, chorus and delay, and includes MIDI for hooking up to other modules. An on-board four-track recorder makes experimentation with ideas and riffs simple. You can even play the original guitar sound with the synthesized voice; alternatively, strum a MIDI chord, hold it with the pedal, turn up the guitar and solo away. The GK-2 guitar pickup and synth driver) didn't miss a single note or nuance during the demo. The whole package, synth unit and pick-up, will cost you just over a grand – a lot to pay if breathing life into the whole concept of the guitar synth turns out to be flogging an extinct nag. Roland UK Tel: 0792 310247



♦ Epic sounds and immediate control are now possible with the new Yamaha SY85 synth.



♦ Roland's new GR-1 takes sound and control further than any other guitar synth.

Sound advice

We know how it can be. You've got it all together in assembly programming, hard disks are easy for you and you can't see much in graphics – what you really need to know about is music. Now there's somewhere you can turn. **Future Music's team of experts answers some of your common queries.**

Deal me a package

I am thinking of buying a MIDI keyboard. We have a Roland D5 and C-Lab Creator at school and I found them easy to use. Is this a good keyboard and software package? How much should I expect to pay?

If you're happy with the results you got from the D5 and Creator, then they seem like the equipment for you. Now for the bad news. A new D5 will cost you £687 from Roland (0792 310248), though if you look around you should find shop and second-hand bargains.

Multi-timbral synths in a similar price range are the new Yamaha SY35 (£599, Yamaha 0908 366700) and the Kawai K4 (around £499 from music shops – Kawai's RRP is a ridiculous £919). You could pick up a Roland D10 for about £400 second-hand, or a new Yamaha SY22 for £450; either would be suitable for use with Creator. C-Lab Creator itself is around £250 from music shops, but again watch out for deals. Cheaper sequencers you might like to look at are

get a MIDI Thru box so you can drive the Yamaha and the Amiga from the STE without tampering with the leads. The Philip Rees V3 provides you with three Thrus and one input. It's £14.95 from Philip Rees 0608 811215, or try your local music shop. Second, you can get around having to use your Amiga at all by buying a "MIDI expander," giving you access to more MIDI channels. The 16+ cartridge, £29.95 from Hands On MIDI 0705 221162, provides 32 channels in total and can run happily with the MROS multi-tasking system used in Cubase v2.0.

Monster!

If I bought the Monster Stereo Cartridge, would there be a way to connect it to my hi-fi, which has no AUCX or CD inputs? Where can I get the cartridge?

MPH, who made the Monster Stereo Cartridge, ceased to exist at least six months ago. You'll have to wait the second-hand columns or search the shops to find one now. Regarding your hi-fi, any input for Tape, Phono or Tuner (in fact, anything marked "in" or "input") should be okay for connection, though you might have to buy a new adapter for your leads.

Ed lines

Can you tell me about "generic" editors, what they do and how much they cost?

Generic or "universal" editors are programs that contain the System Exclusive data to enable you to get into most MIDI synthesizers

and alter their parameters. If you have a healthy interest in creating your own sounds and at least two synths (or you're thinking of expanding your setup), generic patch editors are a good investment. Always check before you buy to make sure the software supports your instruments. Suggested editors: *GenEdit 2.0* (£199, Atlantic Audio 071 272 8944), *X-OR* (£219, Zone Distribution 071 738 5444) and *Lizard* (£165, Music Pro Import UK 081 789 8641 – though this one comes with a Korg M1 editor only, and you have to buy further disks for other synths at £35 each).

Hearing voices

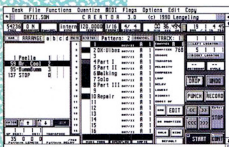
I am thinking about buying a MIDI keyboard to connect to my ST. How much polyphony would you say is advisable on a multi-timbral keyboard?

In four words, as much as possible! The new General MIDI (GM) standard requires 24-voice polyphony, or 16 voices for melody and eight for percussion, so you can be sure of having enough voices for most applications with a GM synth. Other recent synths usually have at least 16-note polyphony, which should be ample. Beware of some units, like the Roland SC-55, which has only 24 partial polyphony. A quarter of the sounds use two partials per voice, resulting in 12-note polyphony. Try to play too many notes with these sounds and some of the partials will start to drop out.

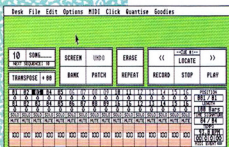
A neat little tidy-up

What is quantising and why are there so many different types?

Quantising is the process of arranging the timings of the events in a piece of music into a series of predefined intervals. All the notes entered when you play a piece of music into a sequencer have a certain margin of error as far as rhythmic accuracy is concerned. Quantising the notes can correct this by pulling the offending note into, say, the nearest semiquaver position to give the track a more polished sound. This is a very useful feature especially well suited to tidying up drum tracks, providing a solid foundation for the rest of a song. Some people are of the opinion that quantising destroys the human feel of music. To avoid this, many sequencers include a "human feel" quantise option with user-defined strength which can pull notes in marginally towards



◆ Creator displaying track and song data on a song just loaded in. See "Deal me a package."



◆ A cheaper, and inevitably a bit more modest, alternative to Creator is Trackman 2.

Steinberg's *Cubase* (a smaller version of the famous *Cubase*) at £89 from Evenloode Soundworks 0993 898484 or *Trackman 2*, £99 from Hollis Research 0481 728286.

Wiring worries

I would like to know whether it is possible to connect an Atari STE to an Amiga 500 to enable me to use a total of 32 MIDI channels. My STE, running Cubase v2.0, would be controlling a Yamaha keyboard and the Amiga, while the Amiga would be controlling a Roland keyboard. I have constructed a lead that splits up the MIDI Thru from the MIDI Out on the STE. Is this wiring correct?

Rewiring your MIDI leads is not really advisable. You can't do any real damage to your computers with faulty leads, they just won't pass the MIDI data. There are two more practical solutions to your problem. First,

Write now!

The most important thing about *Future Music*, just like *ST Format*, will be you. Without you there would be no magazine – so we want to hear from you. Why not write to us about whatever's on your mind regarding music and the ST? We want to hear about whatever is currently keeping your mind awake at nights, causing arguments down the pub or threatening to split up your band. So, whether it's the sampling debate, the piece of gear you can't do without, your worst gig experience or anything else about music and technology, write to us now at:

**Future Music, 30 Monmouth Street,
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their correct value but leave the music with a certain degree of the musician's original feel. There is sometimes a "style feel" or "groove" quantise which adjusts the note positions to give the music the feel of a specific music type – for example, swing or blues. All these types of quantising mean you can achieve exactly the result you want.

Make the connection

I've been told that the ST's MIDI ports are non-standard and that this can lead to problems when I try to run certain programs. Is this true?

The ST/STE/TT's MIDI Out port is not standard in that it uses pins 1 and 3 of the MIDI Out connection instead of a separate socket to carry a MIDI Thru signal. However, this should not be a problem if you use proper MIDI cables. If you use hi-fi cables instead you might find that some manufacturers short these pins to the MIDI Out connection and you won't be able to disable the MIDI Thru facility. Normally, pins 1 and 3 should have no connection; but some cheaper leads have some solder between pins 1 and 4, and 3 and 5, which can cause chaos thanks to the resultant loop between the ST's MIDI Thru and MIDI Out. Again, it is worth using only proper MIDI cables – it prevents all kinds of problems.

And make me some tea as well

Is there a sequencing program for the ST that incorporates sample replay and also enables playback from a MIDI instrument at the same time?

There are two such programs available at the moment. They are the recently released *Concerto* (£39.99, Microdeal 0726 68020) and the ubiquitous *Sequencer One* by Galits (061 236 2515) given away with *ST Format* 30. However, in the case of *Concerto*, an STE is necessary to take advantage of the internal sample option.

A sampling of your questions

Sample range

What add-on samplers could I buy to use with my ST?

Without recording direct to hard disk, which is not an option on a standard ST, there are several hardware add-on samplers to choose from, all of which plug into the cartridge port and can give stereo CD quality output. Some of the best are Stereo Replay 8, £79.95 from AVR 0582 457348, and the new Pro-Series 16, £350, which replaces Replay Pro. Contact Microdeal on 0726 68020. Microdeal, the leading sampler producer for the ST, also makes several other units including the Pro-Series 12 Sound sampler for £199.99 and Stereo Master at a modest £39.95.

Try this for a sample

Are there any reasonably priced packages for editing samples on the ST?

Steinberg *Avalon* v2.0 is probably the most comprehensive sample editor available for the ST. The package costs £299 and is available from Eneclode Soundworks 0993



◆ The entire ST range has this non-standard pin-out arrangement. See "Make the connection."

Keep it live

How can I play my sequences live without carting my ST and monitor on to the stage?

As long as you can save your sequences as Standard MIDI Files, there are two solutions, depending on how much cash you have to spare. Hands On MIDI make the OnSTAGE, for £99.99, which enables your ST to play back sequences without the need for a monitor. It's a combination of hardware and software, giving storage of up to 32 songs. Contact Hands On MIDI 0705 221162.

A more expensive answer is to buy a MIDI File player, so you can leave your ST at home. Examples of these are the Yamaha MD2F (£299, Yamaha-Kemble 0908 366700), the Alessi DataDisc S9 rackmount (£399, Sound Technology 0462 480000) or the



◆ Select any sample from the palette to play in *Sequencer One*. See "And make me some tea..."

Roland SB-55 Sound Brush, which comes complete with a handy remote control (£499, Roland UK 0792 310247).

There is a third solution. It is even more costly but gets around the need for saving in Standard MIDI File format: invest in Atari's

998484. It is generic and supports many leading samplers, so it may be expensive for most – who can afford more than one sampler? If you're on a budget, editors are also available in the public domain. Phone the ST Club on 0602 410241 for details of what's available or contact your own favourite PD library.

Move it

I have an Akai S900 sound sampler and want to process sampled sounds with my ST. It's possible to transfer samples via the RS232 port on the sampler but it takes ages. Can I read Akai disks directly?

Not quite. What you need to do is buy a program to convert Akai samples into a format which the ST can read. This can be done with a piece of software called (remarkably enough) *Akai Sample Converter* from Premier Music Services Ltd 0703 260485. The program will set you back £10, although it provides access to a massive library of samples. Premier also offers its own sample library for the ST – contact Premier for details.

new ST Book portable ST and you should find it's a lot easier to carry around: super-twist mono screen and 20 Mbyte hard disk drive are built in and the whole unit weighs just over four pounds. The Book should run any program you can run on an STE with no problems, it promises up to ten hours' battery life, and a system for transferring data between the Book and other STs is included, though you do need to buy a special adapter to plug any cartridges into the Book. The drawback is that the Book costs about £1,295. For details of availability, contact Silica Systems 081 309 1111.

First notes

I want to explore the musical aspect of my ST but I don't know where to start. What should someone like me on a limited budget do to get started?

A good first step would be to try using one of the many sample sequencers available for the ST. Microdeal's *Quartet* (£51, Microdeal 0726 68020) or *TCB Tracker*, now available in the public domain, are probably the best around. If you already own a MIDI keyboard and would like to experiment with sequencing before committing yourself, then get hold of a public domain sequencer such as *Accompanist* by Henry Cosh. A reliable PD library is the ST Club (0602 410241), for one nearer you, check *ST Format*'s regular directory.

Open a library

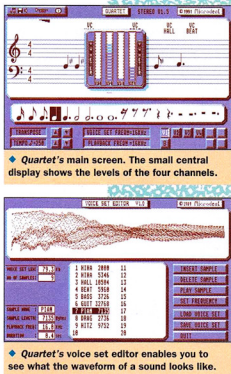
Can you suggest a librarian program I could use for storing the patch data from my SY22 and K1?

Try *Chameleon* (£89.95, Keynote 0761 432610). Most librarians seem to come as an editor package now, and are at least twice as expensive. See "Ed lines" on the opposite page for details of some of these.

FM means mono

I have an STEM, and I'm planning to experiment with its sound capabilities. Is there anything I should know before buying software designed for the STE (as most of it seems to be)?

The STE has a chip for producing stereo sound different from the sound chip in the STEF, which is capable of mono output only. Consequently, any software written specifically for the STE's sound chip does not play on the STEF. Tracker software written for any format of ST – that is, any program that uses the machine's internal sounds – does not sound as good as specialised programs running on an STE, because the former is designed to work on all STs including the STEF, which doesn't have the sample-playback capabilities of the STE.



◆ Quartet's main screen. The small central display shows the levels of the four channels.


◆ Quartet's voice set editor enables you to see what the waveform of a sound looks like.

Help offered

Future Music will have a regular question and answers section where our experts will deal with all your music technology problems. If you're in need of help on anything from interactive phase synthesizing in *Cubase* to finding out what *Cubase* is in the first place, then write to our panel of experts for the best advice in the business. Write to: **Interface, Future Music, 30 Monmouth Street, Bath, Avon BA1 2BW**

Take our sound advice

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Kneel to the Boss

With the price of multi effects units dropping, it's getting harder to pick the best of the bunch. Can these low price units still produce quality results? Matt Evans gets distracted and listens to the latest compact unit from Boss.

DATA DISK

YAMAHA R

REVIEW

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Choosing a sequencer from the many packages available for your ST is no easy task.

Steve Wright rounds up the top six and puts them through their paces

SIX OF THE BEST

Atari made an extremely wise decision when they stuck those MIDI ports on the side of the ST. It meant that the ST was at the forefront of the MIDI revolution when electronic music moved out of the studio and into the back bedroom. Even today the vast majority of studios have a humble ST quite happily running entire setups.

As a result of all this, loads of sequencing programs appeared. Initially these were dull, simple affairs which lacked features you can even get in PD programs today. However, as synthesizers and all the allied chunks of

hardware became increasingly sophisticated, so did the MIDI software which controlled it.

Today the best MIDI programs have the ability to transform the simplest tune into a multi-layered orchestral affair which could easily grace the Top 20. These packages are used by professional musicians all over the world. MIDI software at this level isn't cheap, but each package has at least one entry-level version with the option to upgrade at a later date, so you can get onto the first rung of the ladder. Have no doubts - this is music software you can build a career on.

Cubase

PRICE: £575

FROM: HARMAN AUDIO

CONTACT: 0753 576911

MACHINES: ANY ST WITH 1MBYTE OR MORE. HIGH RESOLUTION MONITOR RECOMMENDED

Cubase is Steinberg's most highly graphical and powerful music package to date and has become very well established among professional musicians.

If you're kitting out a studio, your choice of program is likely to fall between *Cubase* or *Notator*. Musicians like *Cubase* because of its slightly more intuitive feel, while studio technicians prefer *Notator*'s more technical features.

Cubase has an Arrange window which enables sections of recorded music to be treated like strips of paper to be cut, copied, pasted and moved around. Click on an item in the toolbox and the mouse becomes a rubber, a pair of scissors or a tube of glue - it's



all incredibly quick, easy and accurate. *Cubase* has plenty of editing options with a drum edit screen, a piano-roll editor, a grid/event edit page and more. The name of the *Cubase* multi-tasking environment is MROS.

Also available from Steinberg: *Cubase Lite* is the lowest entry level for the *Cubase* line - although it only has 12 tracks, it does operate in more or less the same way and costs only £90. *Cubase* is a higher entry-point, giving 64-track recording for £198. You can use *Cubase Audio*, which is going to be released sometime in the New Year, with the Yamaha D5 4-track direct-to-disk recorder.



Notator SL

PRICE: £550

FROM: SOUND TECHNOLOGY

CONTACT: 0462 480000

MACHINE: ANY ST WITH 1MBYTE OR MORE. HIGH RESOLUTION MONITOR

RECOMMENDED

C-Lab's *Notator SL* is without doubt the best sequencer if you need a built-in scorewriting facility. *SL* stands for Soft Link, which is a multi-tasking system that enables other programs to be run simultaneously. Immensely popular among professional musicians and recording studios, *Notator* has very advanced editing and quantization options.

Few people can afford *Notator*'s hefty price tag and fewer still are going to get to grips with all its functions. *Notator* comes with a huge manual which covers all the program's features in depth, but if you haven't sequenced before you're probably better off trying a cheaper and simpler



package. The score-based editing and score printing facilities within *Notator* are unbeaten, and the package has very comprehensive printer support. If there is any minor criticism to be made, it's that the program tries to fit too much into just two screens. A new version of this package, *Notator Logic*, designed to give you greater control of the screen layouts, is soon to be released.

Also from C-Lab: *Creator SL* is basically the same program but without the notation facilities. It is available for £330. *Notator Alpha* at £225 is a budget version with a maximum of eight staves of notation, fewer features and no external synchronisation.



WHO'S BETTER, WHO'S BEST?

If you asked all the professional ST-owning musicians, producers and studio engineers in the world to name the best ST sequencer most would mention *Cubase* or *Notator*. So, which one should you buy? If you want to obtain high-quality printouts of your music scores, then *Notator* has the edge.

However, *Cubase* is better if you need to see clearly what you're doing when arranging your music. When choosing a sequencer, consider these questions:

- How many tracks do you need?
- Do you want to run other music software such as an editor or scorewriter at the same time? Would you need to

upgrade your memory to do so?

- Which type of music editing would you feel most comfortable with?
- What does your local recording studio use? Get the same package and you could get involved in some programming when you book a session.
- What can you afford?

Sequencer One Plus

PRICE: £129.95

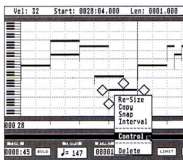
FROM: GAJITS MUSIC

SOFTWARE

CONTACT: ☎ 061 236 2515

MACHINES: ALL STs

Sequencer One Plus is the next step up from *Sequencer One* that we gave away on Cover Disk 30, *Sequencer One Plus* isn't the kind of package you'd expect to find at Abbey Road Studios, but that doesn't mean it's without virtue – on the contrary, *Sequencer One Plus* has some wonderful fea-



tures. In particular, the Diamond Drag note editing system is an outstanding innovation, and is entirely unique to this package. The juke box and the tempo map screens are also big bonuses. Have a look at page 86 for a full review. *Sequencer One Plus* is suited to a home studio environment, because it's cheap and it's easy to find your way around. Most importantly, it synchronises very well with other software packages and items of hardware.

84
STANDARD
RATING

Virtuoso

PRICE: £305

FROM: THE DIGITAL MUSE

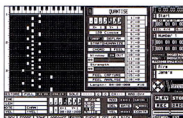
CONTACT: ☎ 071 828 9462

MACHINES: ALL STs. HIGH

RESOLUTION MONITOR

Among *Virtuoso*'s advantages are its excellent smooth-scrolling grid editing and its instantaneous screen re-draws, both of which are a result of the program having been written in machine code. *Virtuoso* has its own multi-tasking operating system which actually enables parts of the program to be temporarily removed – that's how you can fit it onto a 520 ST. Even cleverer, by pressing a couple of keys you can hook it straight into GEM to load and run other programs.

Virtuoso is a unique and attractive program that probably deserves more success than it has enjoyed. If you create music at home, then you are going to appreciate the features which



Prodigy, *Virtuoso*'s little brother, has. Most notable is the program's ability to run in colour – most sequencer programs rely on high resolution and are thus restricted to those with a mono monitor.

Also available: *Prodigy* costs £135 – and it's good value for money. It runs in colour or mono, has 32 tracks (as opposed to 99). A separate Score Edit module is available for £40. *Rave* is even more of a cut-down – limited features, but 32 tracks and an attractive price tag of £39.99.

79
STANDARD
RATING

KCS Omega

PRICE: £299

FROM: ZONE DISTRIBUTION

CONTACT: ☎ 071 738 5444

MACHINES: ALL STs WITH

1MBYTE. MEDIUM OR HIGH

RESOLUTION MONITOR

RECOMMENDED

KCS stands for Keyboard Controlled Sequencer, and *Omega* is the name for the present package. It's actually a selection of programs – KCS plus three modules, namely PVG (the Programmable Variations Generator), Master Editor, and Tiger. They all run under Dr T's own multi-tasking system known as MPE (Multi Programming Environment). PVG enables you to tell your ST to create musical variations on what you have done. The Master Editor works alongside PVG and provides powerful editing facilities. Tiger is the part that enables you to graphically edit notes. Widely used by



professionals, especially in America, KCS is renowned for its rock steady timing and the fact that you can choose from several different methods of building up a piece of music. It has been criticised for lacking a graphic song arrangement feature, but its flexibility, power and low price have kept it at the top.

Also available from Dr T's: *Tiger Cub* is the entry-level version and costs £99. It only has 12 tracks and no synchronisation facilities, but it features one of the best piano-roll editing screens around.

74
STANDARD
RATING

SMPTTrack Gold by Hybrid Arts

PRICE: £465.30

FROM: ATLANTIC AUDIO

CONTACT: ☎ 071 272 8944

EXT 248

MACHINES: ALL STs WITH

1MBYTE OF RAM

SMPTTrack Gold comes with a SMPTE (Society of Motion Pictures and Television Engineers) synchronisation interface. These signals are often used in recording studios to synchronise sound with pictures. This is particularly useful if you already have a tape-based recording setup. The program is reliable, powerful and easy to use, with plenty of graphics but no score editing – although a separate program, *EZ-Score*, can convert sequences into notation and print them.

If you've got a vast MIDI setup then you can add an extra



64 MIDI channels by purchasing a device called a MIDIPlexer. *SMPTTrack Gold* may be of interest to schools and colleges because it's not copy protected and there's no licence fee for multiple use within one organisation.

Also available from Atlantic Audio: *EditTrack Gold* costs £116.30 and is virtually the same as above, but without the SMPTE unit. *EZ-Track* is a simple version of the program, and although it's no longer available as a complete package, Atlantic Audio can supply you with appraisal copies of the disk.

72
STANDARD
RATING

HEY! WHAT ABOUT US?

We haven't described every ST sequencer on the market. But the least we can do is give you a chance to do some research of your own. So here they are – the best of the rest – in descending order of price:

- *Vivace*, £234
- Desert Software ☎ 051 430 7400
- *Geordie StarTrack*, £149
- Newtronic ☎ 081 691 1087

- *Prodigy*, £135
- The Digital Muse, ☎ 071 828 9462
- *Dr T Realtime*, £129
- Zone Distribution ☎ 071 738 5444
- *MidiStudio Master*, £99.99
- Ladbroke Computing International ☎ 0772 203166
- *Trackman 2*, £99.95
- Hollis Research ☎ 0481 728286
- *Tiger Club*, £99
- Zone Distribution, ☎ 0481 728286

- *Tenrax*, £99
- Roland (UK) Ltd ☎ 0792 310247
- *Passport Trax* £69.33
- MCMXCIX ☎ 081 963 0663
- *Geordie 1st Track*, £69
- Newtronic ☎ 081 691 1087
- *Concerto*, £39.95
- Microdeal ☎ 0726 68020
- *MidiStudio Junior*, £29.99
- Ladbroke Computing International ☎ 0772 203166

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REVIEW

ON THE SERIOUS SIDE

CLIVE PARKER

He's our technical man-in-a-white-coat. He knows which is the serious end of a soldering iron, the atomic density of New Fairy Ultra and he can even recite the colour band codes for resistors. He can make a great cup of char, too.



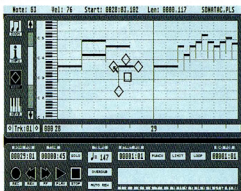
■ The Replay 16 is a rather nice, non-white package. If the time comes when you need light colour, select this one and then alter it.



SOFTWARE

MUSIC

Sequencer One Plus features an innovative "Diamond Drag" system and a simple, intuitive graphical front end. But is it really any cop when compared to the C-Labs or Cubases of this ST world? Turn to page 86.



■ SEQUENCER ONE PLUS

The matrix display included in many modern sequencers means you don't need to be able to read music if you want to make music.

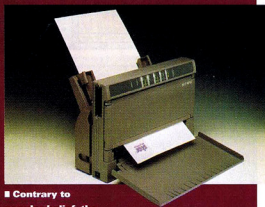
HARDWARE

IT'S SQUARE AND HARD

This month two new printers from Star get the pointy screw-driver treatment: the Laser Printer 4 and the Starjet SJ-48. Turn to page 76 for the full story.

Replay 16, Microdeal's latest (and last?) ST sampler is tested to the point of exhaustion and then doused in cold water. It's cooling its toes on page 83. If you're thinking of buying a sampler then turn to page 85 for a neat way of amplifying your efforts. And finally, Brian, on page 81 we

review the latest version of Spectre GCR.



■ Contrary to popular belief, the Starjet SJ-48 is an inkjet printer and not a sub-orbital passenger vehicle from Boeing. It makes its debut on page 76.



WS

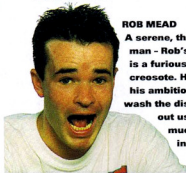
ON THE OTHER SIDE

GAMES



ANDY LOWE

A man out of time - he's always late. He lists his hobbies as growing Lou Reed albums, attempting to feed pigeons with Clive Barker novels and turning off Masterchef.



ROB MEAD

A serene, thoughtful man - Rob's only flaw is a furious hatred of croissants. He's 26 and his ambition is to wash the dishes without using too much washing-up liquid.

PLAYABLE



SENSIBLE SOCCER
"Over 'ere, on me 'ead!" on page 91.



CRAZY CARS 3
Hard-drivin' action from Titus page 94.



D/GENERATION
Virtual reality Neogens - page 96.



PUSH-OVER
Quavers, ants and canines - page 98.



FASCINATION
Airline pilot fantasies - page 102.

SENSIBLE SOCCER



Now, there's nothing sensible about standing around in the rain watching football - so check out our review of Sensible Soccer instead. You know it makes sense.



■ What a shot! What a goal! What a caption. George Best - now he could play, couldn't he? Er, yes.

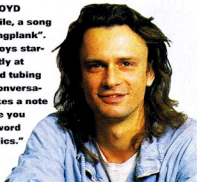
IT'S THIS DARNED JOYSTICK!

Do you fiddle with a game for five minutes before diving for the cheat mode? You're a sad individual - turn to page 116 now, old bean.



PUBLIC DOMAIN

CHRIS LLOYD
Or "A smile, a song and a gangplank". Chris enjoys staring intently at cardboard tubing and, in conversation, makes a note each time you use the word "cryogenics."



RATHER CHEAP REALLY

Those Public Domain disks are back in town again, and everyone's stepping out to greet them with open hearts, warm smiles and slightly moist handshakes...



■ Grandad - the lovable rogue who smells a bit funny gets a shiny new gold bar for his crusty mantelpiece at home.

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- Don't waste your cash on ludicrously expensive commercial programs – we review and rate over 20 shareware and PD programs
- The best games are always released for the PC. Find out what we think of *A-Train*, *Hook*, *Grand Prix Unlimited*, *Leather Goddesses 2* and more!
- American prices often look cheaper than their UK equivalents but what are the hidden costs? We tell you all you need to know to buy software from the States
- No PC jargon here! We explain every technical term you're likely to meet



If *SimCity* and *Railroad Tycoon* were your all-time fave games then *A-Train* will blow your mind. It's a lethal combination of both classic game genres.



Dither it, stipple it, reduce the red, adjust the number of colours and bingo – you've got yourself the perfect pic! We tell you how it's done.



As graphics become more realistic games are slowly taking on their own frightening reality. Has the time come for them to be censored?

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PRINTSHOP

■ The Star Laser Printer 4 is an attractive and compact machine, not too big and bulky for home use.



Star Laser Printer 4
MACHINE: ALL STs
PRICE: £1,644
FROM: STAR MICRONICS
CONTACT: 0494 471111



To get high quality printed output from your ST you need a PostScript laser printer. PostScript is a page description language – widely used on Macintoshes and PCs – which offers excellent quality and versatility, so you can produce good-looking text in a variety of sizes and styles. Unfortunately, PostScript printers are prohibitively expensive. However, there are a couple of ways to get PostScript quality without owning a PostScript printer. You can either use *CompoScript*, reviewed in *STF 38* (see page 50

If you think of stars, what springs to mind? Your future? The sky? The flag of the USA? Peter Crush thinks of printers

to get your copy if you don't have it) which is a software emulator for PostScript, or you could go in for a PostScript laser "clone" such as the Laser Printer 4 with StarScript.

The Star Laser Printer 4 is a rather neat-looking machine with a small LCD screen which indicates various modes and settings adjustable from panel switches – the printer's settings can be altered easily and saved as defaults. A flap on the left side of the printer opens down to form a paper tray. The printing drum and laser toner powder are all in one easily changed unit – an industry standard cartridge costs about £50. The cartridge has a claimed life of 3,500 text pages – less if there are a lot of graphics – while the laser engine should last a minimum of 150,000 pages. The printer can be used in three different modes: Hewlett Packard Series 2, Epson, or StarScript, ensuring compatibility with a wide range of software. The Laser Printer 4 measures 416mm wide by 387mm deep by 185mm high. 2MBytes of RAM are included. To test the Laser Printer 4 we used an *STF* test page

output via the word processor which took 40 seconds in HP2 mode. To try out the StarScript option, a page from an imaginary newspaper put together using PageStream was printed using its PostScript printer driver. The results were impressive – most lasers take about 15-20 minutes to produce graphics output from *PageStream* – the Laser Printer 4 took a mere 90 seconds. The quality was perfect even in StarScript mode. The best laser printer in its class in the world, probably.

control, Czechoslovakia, (which could now be attacked from the north, south and west) containing a 20% German population, was bound to be his next territorial

■ We've looked at loads of printouts in our time, but the results from the Star Laser Printer 4 must be the very best – crisp and beautifully formed.

Starjet SJ-48
MACHINE: ALL STs
PRICE: £405.00
FROM: STAR MICRONICS
CONTACT: 0494 471111

Physically, the Starjet bears a startling resemblance to Canon's revolutionary Bubblejet and only the snazzy Star logo on its lid enables you to tell them apart – in fact the two machines are so similar you can use a Canon sheet-feeder on a Starjet with no problem at all. However, while the Bubblejet's printing head has 64 nozzles the Starjet's only has 48. Having fewer nozzles doesn't significantly affect the Starjet's print quality and it can still produce 360 dpi (dots per inch) with ease. By opting for the wide-spread Epson or IBM printer emulations, the Starjet is compatible with virtually all software, be it text, graphics or DTP.

The Starjet looks more like a portable computer than a conventional printer. Its lid, when open, also doubles as a paper guide. Initially, the five multi-function switches on the

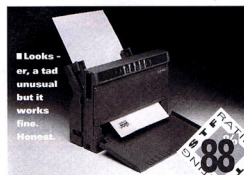
top control panel can be tricky to work out. A standard Centronics parallel printer port is situated on the side of the Starjet.

The print operation is trouble-free and fairly quiet. There are two print options – Economy and Letter Quality – which you can select from the top panel switches. Economy is good if you need a draft of your document, while Letter Quality produces a higher quality printout.

quality" was printed and the time taken printed out in better speed and enabling

■ The Starjet SJ-48 prints out like this in letter quality mode. Pretty good, eh? See, it can do letters, numbers – even sentences.

DIP switches, used to change the printer's emulation, are located inside the printer. Various international character sets and all the usual techie functions are set with these switches, but the printer manual is clear and explains all you need to know.



■ Looks - or, a tad unusual but it works fine. Honest.

STARJET SPEC

SIZE: A neat 310 mm wide x 217 mm deep x 48mm high. It weighs 1.8kg.

FONTS: Roman, a versatile typewriter font, and H-Gothic which is a clear, modern font with no serifs. Both fonts can be printed at pitches of 10, 12, 15, 17 and 20 cpi, with

proportional spacing.

PRINT SPEED: 83 characters/second in Economy and Letter Quality mode –

MEDIA: Prints on A4, Letter and Legal size paper, as well as envelopes in Commercial 10 size. Has an optional sheet-feeder.

PRINT METHOD: Via a 48 nozzle, combined print-head/link reservoir with a claimed life of 700,000 characters. Replacement cartridges plug in. There are two print direction options – bi-directional or uni-directional. Capable of print resolutions of up to 360 x 360 dpi.

ixty lines of text included were not c, Condensed, Enla these styles of pri

■ The SJ-48 prints well in a good range of character spacings – this is proportional. All the standard effects like underline, bold, italics, superscript and subscript are available.

**Get
your
head
round
this!**



Five





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IN-SPECTRE GADGET

When is an Apple Mac not an Apple Mac? When it's an ST, of course. Using the almost supernatural Spectre GCR cartridge Clive Parker takes a look at this amazingly spooky device

SPECTRE GCR MAC EMULATOR V3
FROM: HCS
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If you could choose a computer to work on – that's nine to five for five days a week – regardless of cost, you'd probably choose an Apple Macintosh. OK, you might be tempted to use your ST, but, for business purposes, a Mac is incredibly easy to use and has a wide range of professional applications available for it. Macs are used for all kinds of applications but are best noted for their graphic design, document processing and page layout packages. At Future Publishing we use Apple Macs for all aspects of the design, layout and production of *ST FORMAT*. Real live Macs are very expensive – normally beyond the reach of home users. This is where the Spectre GCR comes in.

What is Spectre GCR?

Well, it's an ST cartridge containing the main 128K ROMs from a Mac Plus along with some electronics to enable the ROMs to take over the ST's operating system. So you can have the best of both worlds – your ST and a Mac. A cable connects the cartridge to the floppy disk port to enable access to the disk drive circuitry of the ST – there is a throughport provided on the cartridge for a second drive. The Mac ROMs can

then directly drive the ST's sound, video, RAM and logic circuitry. With the main Spectre software, the ROMs can boot up the ST as if it were a Mac. The Spectre GCR actually enables your ST to run about 20% faster than the Mac Plus it emulates – and that can't be said for PC emulators.

GCR stands for Group Code Recording – how Macs read and write data to disk. Normally, STs cannot read Mac disks because of this format, but the Spectre cartridge takes control of the disk drive away from the WD1772 chip and drives them itself. This means that STs can run Mac programs direct from the original floppy disk. On the previous cartridge, Spectre 128, data had to be transferred to a specially formatted disk – an in-between format that could be read by a Mac and by the ST using the emulator cartridge. On the GCR cartridge there is no need for any of this messing about.

Installation

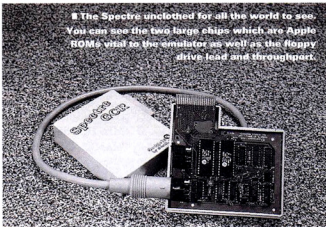
Spectre plugs into the cartridge port and the connecting lead runs to the floppy drive port. Turn on the ST and run the Spectre software – it comes up with menus so the cartridge can be configured, with options to format a hard drive partition to Spectre format, to set up RAM usage, printer setup, autoboot a Spectre partition, and enable and disable sound.

The Spectre manual is rather eccentrically written by David Small, the creator of Spectre, but covers the installation and running procedures without getting too technical. There is also a manual dealing with the differences between the GCR and the 128 – some sections of which contradict the main manual.

Hardware required to use Spectre

To use Apple software on the Spectre, you need a set of original Apple system disks you can get these from any registered Apple dealer.

The minimum hardware required to run Apple Mac software is 2Mbytes of RAM (4Mbytes recommended), twin floppies and a hard drive. Mac programs are huge and normally involve a lot of disk accessing while running, so a hard drive is a must. The other pre-requisite is a high resolution monitor. Although the emulator works in medium resolution, you end up with an "emulated" full screen display rather like using an ST mono emulator.



Colour mode uses 64K of valuable RAM which could be better used by Mac software. Using the mono monitor also results in a 30% larger screen area than a "real" Mac Plus because of the higher ST display resolution.

What has improved?

The Spectre GCR has been around for some time but has been upgraded to v3 to improve compatibility with Systems 6 and 7 (the Mac operating systems loaded from disk drive) and to rectify some small bugs in previous versions.

The improvements include better disk handling routines enabling high speed hard drive access, automatic parking of the hard drive heads by using the Apple Shutdown option, 16 hard drive partitions that can be used at any size up to 256Mbytes, MS-DOS format floppies that can be read while in Mac mode (using the Apple File Exchange program) and Mac format and Spectre format disks can be formatted from Mac mode.

The emulator works with 68030 processors and is compatible with the TT and Gadgets 68030 SST accelerator board, the resulting emulation mode runs software faster than a Mac 2 SE. The emulator is expected to run, with a little modification, on the Falcon 030. There is also a new feature which attempts to "uncrash" the system and carry on with the program if there is a software error. In most cases when this happens you do not know that the system has crashed. Mac sound is better supported on the new software, although valuable processor time is used emulating the Mac sound hardware.

The Spectre GCR is not cheap but it can give you a relatively inexpensive route into Mac Plus applications. *sf*

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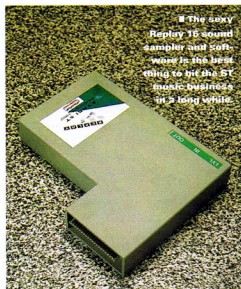
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What's new in the shops for you to treat yourself to? Clive Parker looks at three of the latest releases

OGLE AT THESE



REPLAY 16
FROM: MICRODEAL
PRICE: £129.95
CONTACT: 0762 68020



At last there's a 16 bit sound sampler at a price that make the big boys in the music business sit up and take notice. At under £130, the Replay 16 cartridge and software is less than half the price of its nearest rival and, with sampling rates of up to 50 kHz, it has better than CD quality sampling and reproduction.

It can also perform MIDI sample transfers between the program and sampling keyboards, so keyboards such as those in the Akai S1000 range can download a sample via MIDI leads to the software for editing, and then have the sample uploaded back to the keyboard. Professional sample editors that perform this function start at about £500 and are not as versatile as the Replay 16 editing software. The main work area has five icons: the disk icon accesses files on floppy or hard drive, the keyboard icon

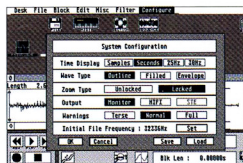
accesses the MIDI set-up and dragging samples to the dustbin wipes them from memory. The sequence option enables a series of samples to be stored in memory and played according to a script – you can play samples as many times as you want and in any order. The sequence is broken down into sections which you can then edit individually. You can only play back sequences via the external output of the sampler – not through your monitor or TV speaker.

At the bottom of the screen there's a large bar containing the tape deck with play, record, fast forward, rewind and stop controls on it. There's also information on how much memory you've used, block length, pointer position and icons for zooming in and out, looping samples, joining samples, marking and editing samples.

The hardware can sample at rates from 5.5 kHz up to 50 kHz, although sampling and playback at frequencies higher than 32 kHz can only be performed if the sampler output is con-



■ The main display area of the Replay 16 Editor software. The top part of the screen shows the main function icons and the dustbin. Directly beneath are three icons signifying samples held in memory. The central window shows an 8-bit sample that is being worked on, while the bottom section shows the tape controls and the editing icons.



■ This is the main system configuration where you can select the general program parameters. Clicking on the Set option brings up a menu which enables you to select the standard and STE DMA frequencies.

nected to a stereo system or a set of Zi-Fi speakers – see page 85. The four STE internal DMA sampling rates are supported, along with controls for adjusting the STE and TT left and right channel volume, treble and bass levels.

The program is fully configurable and you can get at every option from the drop down menus. There is a large range of special effects that can be performed on samples: fade, volume, reverse, overlay, repeat, gap, fill, loop fade, cross fade (for stereo samples), pan image and filtering. You can also manipulate files and format disks from within the program.

Stereo samples can be loaded and edited, and 16 bit stereo samples can be created from mono samples. You can even sample the left and right channel of a CD separately then mix the two mono samples to create a single stereo sample, or mix two different mono samples together to create a new stereo sample.

Replay 16 is a great step forward in sampling technology making high quality sampling easy to achieve. If MIDI and sampling's your thing, this is a must. **STF**

ST FORMAT
issue 39
OCTOBER

MORE THAN JUST A SAMPLER

As well as the cartridge and editor software, you get two fully featured MIDI programs with Replay 16. *MIDI Play* is a keyboard emulator program which enables any MIDI keyboard to directly play samples (voices) held in memory on the ST. Up to 128 samples can be held in

memory (depending on available RAM) and assigned to keys on the MIDI keyboard. Up to four samples can be played simultaneously giving true four voice polyphony. Each voice can have separate attributes assigned to it such as Pitch Blend and Looping. In effect, any MIDI

keyboard can become a powerful sample keyboard.

Also supplied is *Drumbeat*, a MIDI sampling drum machine. There are 30 drum positions that samples can be loaded into to create a drum kit. *Drumbeat* uses pattern and songs to create sequences with up to 50 pat-

terns being held in memory at once. MIDI enables the drum machine to be synchronized to a MIDI external clock or to act as a master system clock. MIDI drum pads can be connected to your ST enabling drum samples in memory to be played directly from the drum machine.

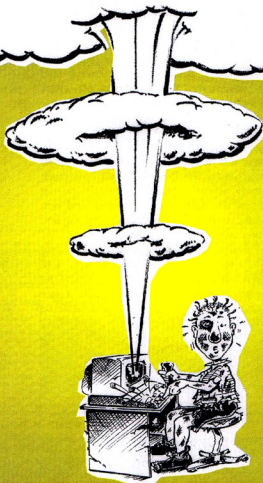


"That war is an evil is something that we all know, and it would be pointless to go on cataloguing all the disadvantages involved in it. No one is forced into war by ignorance, nor, if he thinks he will gain from it, is he kept out of it by fear. That fact is that one side thinks that the profits to be won outweigh the risks to be incurred, and the other side is ready to face danger rather than accept an immediate loss."

Thucydides circa 471 BC

"But that was war. Just about all he could find in its favour was that it paid well and liberated children from the pernicious influence of their parents."

Joseph Heller circa 1961 AD

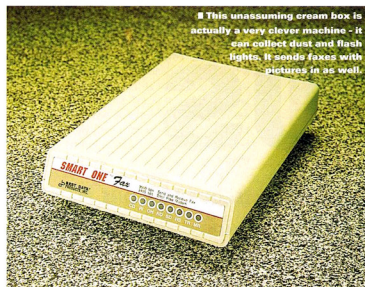


ST FORMAT

The next explosive issue of **ST FORMAT** dons khaki fatigues and gets all jingoistic. We're going to be looking at war, the ST and the kind of human folly which Thucydides spotted 2,500 years ago. It leaps from the womb, grows up a bit, disappoints its parents then joins up on Thursday 8 October 1992. Don't miss it, it's going to be a blast.

**ST FORMAT ON SALE
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FROM: HCS
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CONTACT: 081 777 0751

A fax modem for your ST enables you to plug your ST into a telecom wall socket and connect to the world of information technology. The Best fax modem can operate as a 2,400 baud standard data modem with built-in error correction. It uses the standard Hayes command set, so all comms packages can work with it using their normal default settings. In fax mode the modem can operate at 9,600 baud, 7,200 baud, 4,800 baud and 2,400 transmission speeds and can communicate with any group 2 or group 3 fax machine. All this means is that it is compatible with all modern fax machines.

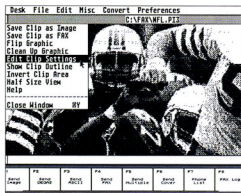
The fax modem is connected to your ST in the same way as any other modem using a 25-pin serial connection between the ST and the modem (not supplied) and a lead from the modem to the telephone socket (supplied). It can determine if an incoming call is a normal modem call or an incoming fax and switch itself accordingly.

Straight Fax enables IMG files, *Degas* pictures, ASCII files and previously prepared faxes to be transmitted directly from disk. *Degas*, IMG and ASCII files can also be converted to the manufacturer's (Joppa) unique facsimile file format. When

picture files are loaded you can play with the images - cropping them, reducing them, flipping them vertically, inverting and then saving them as IMG or fax files.

The image can also be cleaned up to improve the contrast for better transmission quality. There are basic cut and paste commands so you can copy portions of images between files.

There's also an enormous phone list facility, the option to automatically record faxes sent and received in separate log files, the ability to schedule faxes to be sent at specific times and printer drivers for *Calamus* and *PageStream*. These drivers enable both *Calamus* and *PageStream* to print pages directly to disk in Joppa fax file format from within the programs. These files can then be transmitted directly by



■ A *Degas* PIC picture being edited for use within a fax. Note the row of function key options along the bottom of the screen - these functions can be accessed at all times. The chap in the 89 shirt is the Editor who excels at non-contact sports.

the fax software. Also included are GDOS and FSM-GDOS drivers so all GDOS programs can produce ready-to-use fax files.

Another useful facility is the Multiple File option - a fax can be made up of a sequence of separate IMG, *Degas*, ASCII and Fax files on disk by creating a table of files to be sent. Each file is selected in the order that they are to be sent - the list can store up to 33 filenames for transmission.

You can configure all aspects of the program from the preferences options - that is, from the modem RS232 settings to the number of rings before the modem answers the incoming call. This modem and software bundle complement each other well, putting a fax facility within reach. **stf**

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PLAYING
GAMES

AUDIO BLASTER

ZI-FI AMPLIFIED STEREO SPEAKER SYSTEM
FROM: EVESHAM MICROS
PRICE: £39.99
CONTACT: 0386 765500

Do you ever get fed up of the sound quality from the TV or monitor speaker when you're playing the latest thrash-em-up on your machine? Want some serious output volume? Let's face it, the sound output from the ST monitor port is appalling, and only the advent of the STE with its phono sockets enabling connection to a stereo system brought any relief to the audio disadvantaged.

The Zi-Fi system is a pair of 8 watt speakers complete with a built-in amplifier and integral power supply. The speaker units measure 152 x 102 x 76 mm and are cream in colour. Mounted on the right speaker are volume controls for the sound channels as well as a power switch. There's a stereo connection cable complete with a 3.5mm stereo jack plug, and a twin

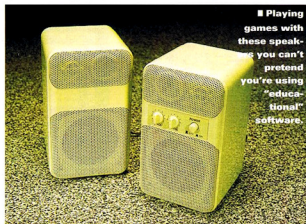
phono to 3.5mm jack socket adaptor so you can connect a STE, Mega STE, TT or Falcon to the speakers. The 3.5mm plug can also be used to connect a personal hi-fi or portable CD player to the speakers.

You can connect AVR Replay cartridges to Zi-Fi to enhance the quality of sample reproduction. Many of the newer cartridges do not sample at higher rates than 32kHz without a hi-fi connection being made - Zi-Fi is ideal for this. The Stereo Playback cartridge (£29.95 from Microdeal ☎ 0726 68020) can also be used with the Zi-Fi, giving stereo sound reproduction to owners of pre-STE machines.

The best application for the Zi-Fi is for games. It is amazing how a bit of ear deafening sound amplification improves the quality of even old games. Sound enhanced games such as *Captain Blood*, *Purple Saturn Day* and *Epic* have to be heard via the Zi-Fi to be believed. Even

those with bad sound seem better than they were before. If you are an avid games player then you must get the Zi-Fi - it may seem to be a bit on the expensive side, but it costs no more than a couple of good games. Recommended. **stf**

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PLAYING
GAMES



SEQUENCER ONE PLUS

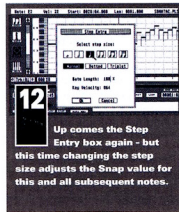
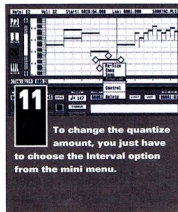
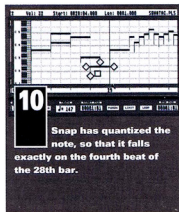
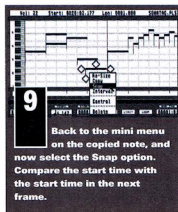
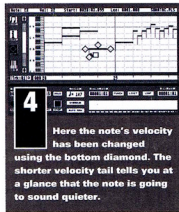
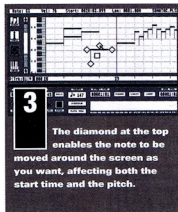
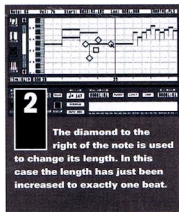
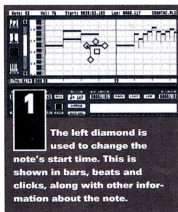
Unless you missed the giveaway of the century, you already have *Sequencer One*, the complete sequencing package that came with *STF 30*. *Sequencer One Plus* is Gajits' latest offering, so what's special about it and is it worth upgrading? Steve Wright explains what's so new and exciting about this sequencer

SEQUENCER ONE PLUS

MACHINE: ALL COLOUR STS.
0.5MBYTE OF MEMORY REQUIRED
PRICE: £129.95 BUT £49.95 AS AN
UPGRADE TO SEQUENCER ONE
FROM: GAJITS
CONTACT: 061 236 2515

Even if you never thought of yourself as being particularly musical, you've probably been messing around with *Sequencer One* since we gave it away with *STF 30*. You know that you don't need to be able to play a note of music to have great fun and create fantastic sounds with this package – your hidden talents have, at last, found a way of getting out into the big wide world. And now the upgrade is here – *Sequencer One Plus* is on the streets just ready and waiting for you to snap it up and create even better groovin' tunes. But is it worth

LOOK IN HERE TO SEE DIAMOND DRAG





it? Should you upgrade? Is anything substantially different?

What's new?

When you load *Sequencer One Plus*, you see two new features among the tape deck controls. The Loop and Limit buttons have moved to the right to make way for a Punch button, and a Solo button has nudged its way onto the display. The rest of the Track screen looks the same. Move to the Screens menu and you see two completely new screens – Tempo Map and Juke Box. Look through the other menus and you see that many existing options have been extended and some new items have appeared. The best bit of all is on the Step Editor Screen.

Let's start with the new additions to the tape deck controls. The Punch feature is for recording over a part of a track without affecting what comes before or after that part. The limit markers are used to indicate the section that you want to record over – the left marker is where recording automatically begins and the right marker is where it ends. With Punch selected, you can press Record and even play your keyboard before the punch-in point, but *Sequencer One Plus* ignores everything you do unless it occurs inside the punch points. Solo is what you'd expect – it mutes all tracks apart from the selected one. You can also listen to other tracks in solo mode by clicking on their mute buttons.

The Bar Editor screen is unchanged from *Sequencer One*, and the Step Editor screen looks much the same, too – except that the old "Del" icon has been replaced with one which says "Edit." The graphic depiction of notes is, how-

THREE BIG PLUSES

1. DIAMOND DRAG EDITING

The jewel in *Plus's* crown. A set of diamond-shaped icons appear around any selected note in the step editor screen, enabling you to very easily change the note's parameters with the mouse. A square icon leads to a mini-menu with more note-editing features. Diamond Drag is an entirely new idea in sequencing and a jolly good one, too.

2. JUKE BOX

The juke box screen enables you to be able to chain songs together so they play one after another in sequence. It's clever – while one song is playing, the next is being loaded from disk. The interval between songs can be set, and there are plenty of over-ride facilities. This feature is great if you're a performer because you can now set up all your songs in the right order before the curtain goes up.

3. TEMPO MAP SCREEN

A graphic screen for editing changes in tempo. Some types of music really need to have changes of speed so they don't sound too mechanical. This screen offers an easy way of adding, deleting and editing tempo changes, using the diamond drag editing system. It's all done with simple left mouse button clicks – what a doddle!

ever, different. Instead of a horizontal bar, each note is represented as a rotated "L" shape. The thick horizontal part of the "L" is the same as in *Sequencer One*, and corresponds to the note's length, while the new vertical stem (the "tail") indicates its velocity – a longer tail means a louder note. This is not really an innovation – a similar system is used in Dr T's sequencer *Tiger Cub*. Click on a note, though, and you experience the Diamond Drag note editing system.

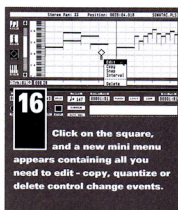
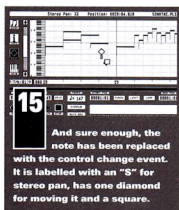
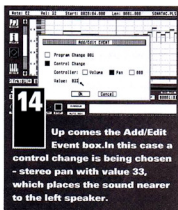
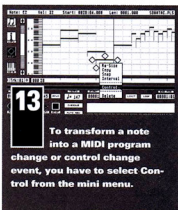
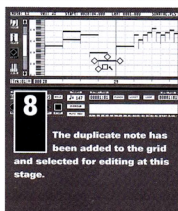
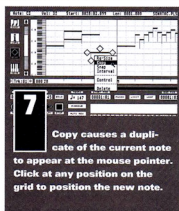
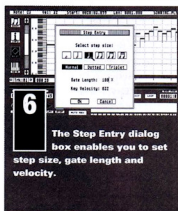
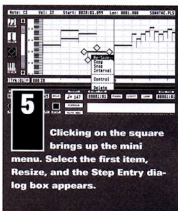
Dragging diamonds

As you click, the note sounds. By holding down the button and moving the mouse, you can listen to all the notes in the vicinity to make sure that you've got the right one. At the same time,

five shapes – four diamonds and a square – appear around the note, and relevant information – pitch, velocity, start time and length – is shown at the top of the screen in place of the menu bar. Look closer at a selected note and you see that the lowest diamond is attached to the end of the vertical velocity line, while the other three touch the horizontal part – one at the top of it and one on each side. The square shape sits on its own, further down and to the right. The purpose of these shapes is to act as "handles" which may be clicked on easily, no matter how small the note is.

Each diamond has a different function corresponding to different editable parameters of the note. The bottom diamond is used to

IN ACTION



change the note's velocity. Move the mouse up or down while holding the left mouse button down and the note's velocity tail stretches or shrinks. The shifts in loudness are also shown by a changing value at the top of the screen – this is the actual MIDI velocity for the note.

To change the note's start time, you use the left diamond. Clicking and dragging here moves the note back and forth in time without affecting its pitch, length or velocity. The diamond on the right changes the length of the note without affecting any other parameters, while you use the one at the top for moving the note anywhere on the grid, giving simultaneous control of pitch and start time.

Clicking on the square box opens a mini menu with six items. The first is called **Resize** – choose this and the step-entry box appears, offering a choice of standard note-lengths such as semi-quavers, quavers and crotchets. The step entry box also has an option called **Gate Size** which you can use to set intermediate lengths for the note. As if that's not enough, the note's velocity can also be set at this point.

Copy creates an exact replica of the note you have selected and places it on the tip of the mouse pointer, ready for placement elsewhere on the grid at any pitch or time. This may seem a simple idea – and it is – but it's incredibly useful. In many programs, adding a note can often be a laborious task because the velocity and length of the notes have to be set separately. But with this function, when you want to add a note you can avoid all the messing around just by taking a copy of a suitable nearby note. Snap puts the note at the current step interval – it's just like a kind of one-note quantize. If the interval value is not as you wish, all you have to do is re-set it using the Interval option.

Interval works a bit like **Re-size** in that it brings up the step entry box, but this time the note length value affects all notes to be added, not just the current note, and tells the Snap option the use the new interval. Finally, **Control** enables note information to be turned into MIDI control change data. Control changes can be used to set volume, pan, and other parameters on MIDI instruments. The **Diamond Drag** graphic editing system is one of the best ideas not only in *Sequencer One Plus*, but in software sequencers generally – you never have to have one eyeball touching the screen to see what you are doing, and you never get into those horrible situations where you're trying to position the mouse to the nearest billionth of a centimetre. Why did no one think of it before?

Now to the new screens. The **Tempo Map** screen is in the form of a graph, with song

IS THERE AN ALTERNATIVE?

Sequencer One Plus is in the "inexpensive but serious" category of sequencers – and it's not the only one. Here are a few of the alternatives

All the following sequencers run on colour and mono monitors.

	Price	No of tracks	Memory required	Graphic note editor	Graphic song display	STF Rating Issue reviewed	Distributor Contact number
EditTrack Gold	£116.30	60	1MByte	Yes	No	86% 30	Atlantic Audio ☎ 071 272 8944
Midistudio Master	£99.95	100	1MByte	No	Yes	91% 30	Ladbroke Computing ☎ 0772 203166
Prodigy	£135.00	32	0.5MByte	Yes	No	59% 8	The Digital Muse ☎ 071 828 9462
Sequencer One Plus	£129.95	32	0.5MByte	Yes	Yes	84% 39	Gajits ☎ 061 236 2515
Tiger Cub	£99.00	12	1MByte	Yes	No	85% 10	Zone Distribution ☎ 071 738 5444
Trackman 2	£99.95	32	0.5MByte	Yes	No	97% 22	Hollis Research ☎ 0481 728286

tempo (vertical axis) plotted against time (horizontal). A song which stays at the same tempo all the way through has a single, straight horizontal line. Where there's a tempo change, there's a small cross on the line, and the vertical position of the line steps up or down to show the new tempo from that point.

Entering a tempo change couldn't be easier – you just click once, move to the desired position, and click again. The **Diamond Drag** system is used for editing tempo changes, except that this time there is only one diamond and one square. The diamond moves the point and the square brings up the tempo change mini menu which has three of the items from the step entry mini menu – **Snap**, **Interval** and **Delete**. They work in the same way here.

The **Juke Box** screen enables you to link up to 32 songs into an "album." While one song is playing, *Sequencer One Plus* gets on with loading the next song in the list, so it's ready to be played as soon as the first song has ended. This facility could be used for live performances, or for recording all your songs to a tape without having to pause the tape to load the next song. It could also come in handy for showing off to family, friends and Amoeba owners.

You put an album together by selecting song files from a normal item selector box, each time clicking on an empty position in the list. You can change the playing order and remove songs just as easily. When an album is playing, you can control it in much the same way as you control a CD player. You can advance to the next song or go back to the previous one by clicking on CD-style **Search** buttons – there's a **Pause** option, too. All the CD control buttons can be operated by the mouse or from the STF's numerical entry pad. You can instruct the songs

to be played in any order, or even in a random order! You can set the gap between songs, and there's a facility for automatically pausing between songs so that you start the next song by clicking on **Pause** or pressing a key.

And still more

There are also extra quantize options enabling you to set the strength of quantize. In the **Alter Notes** box, you can now shift or scale note lengths, and you can change notes of a particular pitch to another pitch – great for swapping individual drum sounds.

New MIDI options include the ability to record MIDI System Exclusive data sent by an instrument. This means that *Sequencer One Plus* can remember the parameters of your synth's sounds for a particular song and then "remind" your synth what they were next time you want to go back the same song. Handy, or what? Talking about handy, Gajits have also added a **Count In** facility.

There are some improvements to the sample replay facilities, too – displayed next to each sample name on the sample palette is the note on which it was originally recorded, indicating the approximate pitch which it should be played at. The **SPL** and **AVR** sample file formats are supported as well as **IFF**, and there are mono and stereo output options for people using the **AVR/Microdeal** sound cartridges. **STF**

■ If you have *Sequencer One*, you can upgrade for £49.95 or you can take advantage of the special offer – you can upgrade to *Plus* for £39.95, making a saving of £80.

BY STEVE WRIGHT



RANT

Jon Hare of Sensible Software on:

“The ST... “You can never fulfil the potential of a game with the ST because you always have to go for the lowest common denominator. For a start, the screen on the ST is smaller than on the Amiga. One thing we’ve been quite lucky with in our new soccer game, *Sensible Soccer*, is that, because the ST version was done slightly after the Amiga, the control system had to be tweaked a bit. So it’s probably a better control system than the one on the Amiga. Sound’s always a problem on the ST. Even the speech samples on *Mega Lo Mania* are subtly downgraded from the Amiga. We’ve always seen the ST version as a downgrade yet the games have been received as top-notch ST stuff. I think the ST has got quite a damaged reputation at the moment, frankly – there were nearly twice as many copies of *Gods* sold for the Amiga as for the ST. Our soccer game has, so far, sold 41,000 and that’s 36,000 for the Amiga, and only 5,000 ST...” **Hated games...** “I’ll tell you what I think is appalling – *Kick Off 2* on the ST. The scrolling is so crap. There aren’t even any solid goals. The presentation’s diabolical – really crap. That’s why our soccer game’s such an improvement on *Kick Off 2*, specially on the ST – the fact that the presentation’s so much better. As for licences, I went into a service station and saw a Simpsons game and a Turtles arcade game – they were the same game with different sprites. One of them was the Simpsons with hooovers in it and the other was the Turtles with their weapons. That’s what licences mean to me...” **Religion...** “So much innocent life is wasted because of religions. There has been so much oppression because of religions. All because people can’t face up to the fact that they’re going to die and they’re going to be forgotten. Don’t get me wrong, churches are fine places to meet people and socialise, but you don’t need some sort of religious banner to hang it all under...” **Football...** “What really annoys me is that they took Linneker off in the Sweden game. It annoys me that Tony Daley wasn’t in the team. It annoys me that the guy upstairs, Chris, who’s a Liverpool fan is moaning ‘cos they haven’t got any money to spend this year and every other flipping year, they’re the only team that *has* got money to spend. Now he’s moaning that Blackburn can spend money and Liverpool can’t. I can’t stand Liverpool fans... **Norwich City...** are my team and whenever they get anywhere, like making it to a semi-final or the cup they *always* lose, they just can’t put it away on the big day. They’ve lost the few big matches they play by *one* goal. Now they never get slaughtered, they just throw it away. It’s just unbelievable.”



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SENSIBLE SOCCER

If satellite TV has deprived you of your usual diet of footy, why not get your own back and set up a few games yourself? Andy Lowe puts on his Accrington Stanley shirt and creates his own one team Super League

SOFTWARE HOUSE: **RENEGADE**
PRICE: **£25.99**

ST footy games aren't exactly in short supply. There are around 15 different variations of the game that you can sample in pixel form, with Anco's *Kick Off 2* being widely accepted as the ultimate benchmark. So, why on earth do we need one more? Wasn't it John Paul Getty who said, "a saturated market is a dead market?" Or Richard Branson, or Pete Beale – someone like that, anyway.



John Hare's reaction on seeing Sensible Soccer go STFORMAT GOLD: "Well, Brian... what can I say? We're over the moon, top of the world, happy as sandboys. Is that enough cliches now?"

New Balls, Please

Hopelessly addicted to *Kick Off 2*, the chaps at Sensible Software came to the conclusion that, although the overall format of the game was excellent, it could do with a spot of enhancing and tinkering with. And lo, it came to pass that *Sensible Soccer* was born.

It's that overhead view again, with the players passing, booting and battling for possession over the length and breadth of a

scrolling pitch. The skeleton of the program offers a hectic game of footy with, of course, the winners being lauded and the losers being ridiculed. Get the ball into the back of your opponent's net, don't inadvertently cave in anyone's shins, don't get too abusive with the referee and, er, that's about it. Except it isn't.

Jim Morrison

You have, at your fingertips, such an awesome array of options and customisable features that – once you've finished messing with them – it's a wonder you're left with a game that resembles football at all. Team members, kit colours, formations, crowd chanting and cheering, game length, replays and savable highlights, music and even the weather can be altered and redefined beyond recognition. You can call up original national teams, club sides and your own custom teams – the



ST
FORMAT

issue

39

OCTOBER

SCORE THAT GOAL

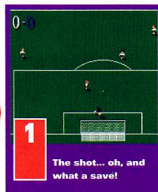
Follow the tips over the next three pages to hammer 'em in with passion



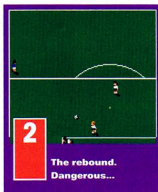
Watch out for this rather irritating situation: occasionally the goalie appears to have safely nabbed the ball. However, he then drops it and the opposition muscles in and polishes off the goal. This is one of the disadvantages of not having complete control over the goalie. Then again, it might be a bug.

THE JAMMY METHOD

or how how to make a cake from a bladder and some jam



The shot... oh, and what a save!



The rebound. Dangerous...



The goal. 'Nuff said.

Yeah but... a better goalie can save the ball and keep it, offering you no chance whatsoever to exploit the rebound. Oh well.

MOTSON'S COMMANDMENTS - TEN FOOTBALL CLICHES

1. At the end of the day...
2. It's a funny old game.
3. It's a game of two halves, so let's not write them off yet.
4. The lads went out there and they played football and, when all's said and done, that's what it's all about.

5. Well, the Irish team are going to be celebrating with a pint or two of pints of Guinness in the hotel bar tonight.
6. Well, Brian, obviously, I think we were very lucky to come away with a result.
7. I think we've seen some good

football from both teams but, in the end, the best team won.
8. It was a terrific match and when the final whistle blew, it was the team with the highest amount of goals who won.
9. I bet <Insert winning team> are over the moon but <insert

losing team> are as sick as parrots. The lads done well.
10. It's a funny old game and, at the end of the day, it's a game of two halves. That's why they went out there and played football because, after all, that's what it's all about.

program comes with a disk to show you the general idea. The custom teams can be composed of whoever you like – famous idiots, dead people, favourite movie stars – which means you have the joy of watching Bogart dribbling his way around Ronald Reagan or Jim Morrison before putting one away in the 38th minute. And that's not all... if you happen to have one or two friends, you can set up Leagues, Super Leagues, European Cups, Egg Cups and Chicken Leagues... honest. So, if because of some unlikely and manic whim, you fancy representing our illustrious national side with your own joystick's manoeuvring abilities, in a test of skill and judgment against your chums' choices of

teams, you can. Alternatively, if your buddies are washing their hair or down the pub, you can just choose two teams and enjoy a plain and simple friendly match with nothing at stake but your ego. Even if you have no friends whatsoever – which is extremely unlikely, isn't it? – you can still play through all of the leagues, cups and friendlies with your ever-reliable chum, your ST.

Joystick control is weird and wonderful. Passing the ball to team colleagues requires pointing yourself in roughly the right direction and tapping the <Fire> button. For those more complex moves, the game offers several ways in which you can kick – you do this by firmly pressing <Fire> and moving the joy-

stick accordingly. Possible manoeuvres include swerving kicks, "up and unders" and lobs. Many of these more sophisticated moves can be devastatingly effective when you use them in the right situation.

VERDICT

Let's slice through the garbage – is *Sensible Soccer* any good? How does it improve on *Kick Off 2*? During a particularly intense session of sky-staring, Alfred Lord Tennyson said "...God fulfils himself in many ways..." Indeed, God is most definitely in charge here. *Sensible Soccer* is achingly wonderful and its name is set to become firmly implanted in the minds of football enthusiasts as the ultimate in ST sports simulations.

As with *Lemmings*, the incredible and immediate appeal of the game lies in its simplicity. The method of joystick control is, at first, difficult to master but soon feels natural and instinctive. If you are unimpressed with the initial dwarfish look of the graphics, take a tip from Robert

THINGS TO SAY TO PEOPLE PLAYING SENSIBLE SOCCER...

1. You should have bent that shot a bit more.
2. No, you're playing down the field.
3. That would have been a brilliant goal... if it had gone in.
4. You should have shot then.
5. Brilliant bit of passing, is he one of yours?

6. What a cynical foul!
7. Oh, it's really difficult to tell the colours apart.
8. It's a bit like *Kick Off 2*, isn't it?
9. 'Ere, give us a goal!
10. You know Gazza? That's your mum, that is.
11. Have you always been crap at football?

THE PENALTY METHOD

Some scoundrel sticks his foot out and someone takes a dive



1 First, choose your direction and hold it. The goalie jumps randomly left or right so it's really just a matter of intuition.



2 He shoots! But, ahem, it's the wrong way and the goalie saves it. Reminds you a bit of that moment in the 1990 England vs West Germany World Cup semi-final, doesn't it? Grrr...

DIRECT APPROACH



1 Leg it right down to the penalty area, blow a raspberry at the goalie and shoot the ball diagonally into the back of the net.
2 Ignore the second part of (1).

Yeah, but... this requires quite a high level of dribbling skill. If you haven't familiarised yourself with the joystick control system first, you end up having the ball robbed off by you, the goalie and have to stand in front of him.

COMPETITION - VISIT A FOOTY MATCH

British football – best in the world. Who would argue, particularly under threat of having your head kicked in? To sample this great pastime, we at *STF* have devised a devious, downright demonic of a competition.

A serious football fanatic, you know all about those players who changed the history of the game, who offered a downright visionary appeal, who stormed the world of football with blistering goals, exceptional saves, unbelievably original play and, er, displayed other such impressive attributes.

Well, imagine you have the ability to resurrect the dead and can therefore bring together an awesome team consisting of 11

of these dream players. Of course, they don't have to be dead – you can construct the team of a mixture of dead and alive players if you like. You may feel that the 1966 England squad is quite adequate. If so, send it in. We just don't care. You get the idea – Pat Jennings in goal, Pele, George Best...

We want a team of 11 players – one goalie and a decent smattering of defenders, midfielders and forwards. Of course, if you're feeling particularly creative, you could try including one or two people who don't have anything to do with football. Whatever. Teams will be judged by the Sensible Software programmers and the creator of

the best team, in their judgment, will duly receive two tickets to any UK league football game of his choice. Travelling expenses will, within reason, be paid and please mention whether or not you own *Sensible Soccer* already – then we can also offer one or two copies of the game to the right people – winners or losers.

So, get out those tatty old football annuals, juice up the inspiration and send your list to Dream Team, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW by, oh, let's say Monday 19 October 1992.

RULES: 1. Employees, their pets or relations of either Future

Publishing or Sensible Software found entering the competition will be tipped upside-down in a vat of margarine and have their toes sucked by a member of HM Government. And you still won't win. 2. Multiple entries will all be lost down the back of the company sofa. 3. Entries received after the closing date shall appear as guest singers on the *Eldorado* Christmas sing-along LP. 4. While we welcome all manner of bribes – fast cars, super holidays, new shoelaces – they won't influence our decision one jot. If you lose, you lose. 5. There will be no alternative prizes, no cash and definitely no visits to Mitzi's magnificent massage parlour.

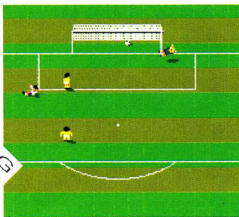
The Bruce and persevere. You're not going to throw away a brilliant book because you don't like the typeface, are you? The game's graphics are actually pretty effective and expressive in spite of their small size.

When you're playing with friends, the pace and challenge of the game evokes a brilliant and very real sense of excitement. You're going to be amazed at the feeling of involvement and fun *Sensible Soccer* creates – effortlessly amplifying and elevating the experience of messing around with *ST* games. *Kick Off 2's* influence is obvious, but *Sensible Soccer* never ventures into lazy, rip-off territory. If you subscribe to the "you can never have too much of a good thing" philosophy, then the only time you're going to be able to drag yourself away is to get some-

thing to eat and drink. *Sensible Soccer* is wonderful stuff – a veritable black hole of depth with acres and acres of playability thrown in. If you like football, this is your promised land. If you don't, it's a superb game anyway.

By far the best and most effective footy game around – *Sensible Soccer* looks wonderful, plays beautifully and has an incredibly user-friendly set of customising options – the most fun you can have indoors without taking your team scarf off.

ANDY LOWE



■ What's this? The Sliders and Divers Convention, 1992? Yes, folks, there's a lot to take in at once in the zippy paced *Sensible Soccer*.

THE CHEEKY APPROACH



1. Manoeuvre the ball into a half-decent position just inside your opponent's half.
2. Chip the ball – using aftertouch – towards the goal, putting a slight swerve on it.

Yeah, but... get it right and it looks spectacular. Get it wrong and it's the most hilariously pathetic spectacle in the history of football.

THE SLIMY APPROACH

or how to charm the ref into sending off all of the opposing team



1

Sneak down to your opponent's penalty area and make like you're going to just run off the pitch with the ball and instigate a goal kick. Instead turn and shoot across, swerving the ball immediately towards the goal...



2

...the ball will defy all the goalie's attempts to stop it and curl around into the net. You hope.

Yeah, but... if you run too far the ball slips over the line and, well, that's that.

CRAZY CARS 3

Has the racing
sim made its
final trip to the
pit-stop?

**Andy Lowe
fastens his lap
strap, puts his
foot down and
suffers an
attack of
motorway
madness**

SOFTWARE HOUSE: **TITUS**
PRICE: **£25.99**

You have a dream. A glorious, technicolour dream of epic proportions. It involves a well-known variety of citrus fruit, a length of stretchy PVC and two talking squid. Your psychiatrist is baffled. Oh, and you also have this other really strange dream about becoming a millionaire via the ruthless, cut-throat world of American Saturday Night Races – an organised tournament of illegal and colossally dangerous highway challenges.

Diablo

You arrive in the United States, approach the underground network of race organisers and psyche yourself up for your first races in humble Division Four of the competition. Then it happens. Someone takes you aside

and politely reminds you that you haven't got a car. Cringing with embarrassment, you wander the streets until – by an astonishing coincidence – you run into an old acquaintance who sells you a cheap Lamborghini Diablo. Luckily, you've still got enough cash left over to enter the races – this means you have the opportunity to build up your race experience and so compete in the Division Challenges – coveted events which promote winners into the higher divisions. As you notch up a few wins and build up the bank balance, you get to buy various accessories for your car. These range from super-turbo boosters – stolen from the Batmobile – to rather wonderful snow-tyres for extra grip in icy conditions.

The Lord of the Flies

But all this is far from a doddle. As usual, there are plenty of hazards for you to nego-

■ "You know, seeing those gorgeous background graphics makes me want to sing a song to them about another kind of graphic – the sprite graphic..." NB: this is directly ripped off from Vic Reeves so if you don't understand it or think it's crap, that's OK.



■ A gaggle of abhorrent low-lives – you included – lounge around in the bar, placing huge wagers on the forthcoming race. Spot the Michael Jackson look-a-like.



■ Here you are in Boston. Once famous for its tea parties, it's now better known for its skyscrapers, rock bands and stranglers.



■ New York - the cops are on your trail. "OK, wiseass, pull over." "Leave me alone, copper. I have cheat modes in high places - cheat modes that could take you outta this game for good." "Ah. In that case... have a nice day."

tiate. For example, in some areas the local police lie in wait behind billboards, ready to pounce on you for committing the slightest misdemeanour. You also have to pit your wits against your fellow race competitors. These people include Sal Capone, who has a "friend" in the police force, or Joe Spencer, who knows a few shortcuts. All this ensures you don't become a millionaire two hours after loading the game.

VERDICT

Yet again, the tried and trusted formula of the 3D perspective gets dusted off, beaten into submission and dragged into another ST driving affair. But, for all its familiarity, *Crazy Cars 3* emerges as one of the more impressive attempts at the genre.

Gameplay is convincing and realistic, while the superior graphics give the program depth - when you're driving at night you

have to squint at the headlights of the cars in front to judge their distance and speed. This game is fast, involving and immensely challenging offering the right balance of arcade skills and strategic thinking. In fact, as you get carried away in the accessories shop and the betting scenes, you realise how awful you are with money and you don't get anywhere unless you overcome this problem.



ANDY LOWE



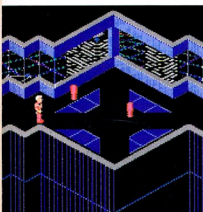
■ The fee to enter the Boston race is \$6,000.

The local drivers are amateurs, there are no police hanging around and the weather's dry. The food's a bit greasy, though the chalet isn't too bad. Wish you were here...

WELCOME TO PART-EXCHANGE PARADISE

You're down to your last \$6,000 and yet you still can't resist the temptations of the accessories shop

<p>MONKEY</p> <p>MONEY: \$6000</p>		
<p>RADAR DETECTOR: warns of police speed-trap ahead.</p> <p>\$4000</p> <p>BUY</p>	<p>\$15000</p> <p>BUY</p>	<p>FIVE-SPEED MANUAL GEARBOX: top speed 304km/h.</p> <p>\$15000</p> <p>BUY</p>
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■ It's those dratted plasma barriers - precise positioning with the joystick is essential if you don't want your internal organs, lunch 'n' all, splatted up the walls.



■ You know that warm, glowing feeling you get when you eat a certain brand of hot oat cereal? Standing on an electric floor-plate can have the same effect.



■ The cylinders are really little brothers encased in line who love to jump up and down on unsuspecting family pets and giggle with maniacal glee.

D/GENERATION

Bruce Forsyth on a space hopper? Miss Ford battling with humanoids disguised as filing cabinets? This toupee is armed, dangerous and out for revenge

SOFTWARE HOUSE - MINDSCAPE
PRICE - £19.99

You're an intercontinental Postman Pat, delivering parcels around the globe, with only your tin canary - erm, your itinerary for company. You touch down on the 80th floor of Genoq Corp's HQ, dodge the security system and find a receptionist skulking behind her desk. Chance for some small talk, you think as you wave your first-day covers provocatively. The receptionist tells you that Derrida, Genoq's head scientist, urgently needs you to take the parcel to him on the 90th floor or unknown horrors and cheesy crisps shall befall you all.

D/Generation is a fast-moving arcade-type adventure with a labyrinth of cutaway rooms, levels and hidden perils that you have to negotiate. Genoq's biotech lab has unleashed four generations of nasties called Neogens for you to battle with. The worst of these is the *D/Generation* of the title - a virtual reality meanie and close personal friend to Anthea Redfern, it's equipped with neuro-holographic camouflage and impressive armour. You also have to contend with killer periscopes, plasma barriers and electrified floor-plates helpfully provided by Genoq Corp to defend the building. Makes you wish you'd stayed at home and knitted tea cosies, doesn't it?

Luckily you find various weapons lying around - a laser gun, bombs and a shield, for example - to help you on your quest. As you search from room to room, you come across survivors who can provide you with useful information about Derrida's whereabouts. The control mechanism, operated via

the joystick or the keyboard, is easy to use so moving around isn't too much of a problem.

VERDICT

D/Generation is an entertaining, addictive, game that also manages to be annoying and incredibly frustrating at the same time. Not recommended if you've a nervous disposition or any kind of social life because you are going to be blundering around at 3am, muttering about space-hoppers and coffee, before spending another ten hours in front of your ST. Get stuck on one level for too long, though, and you could end up flicking the off-switch.

BY ROB MEAD

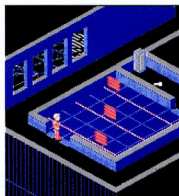


Education:
BS Chemical Engineering
University of Exeter 1985
PhD Physics 1987
PhD Chemistry 1987
PhD Mathematics 1987
PhD 2000
Present Employment:
British Broadcasting
National Defence Ministry
Biomechanical Systems
General Technical - Argentina
Project:
Development of next
generation video
platforms - *D/Generation*

■ Derrida hasn't only been responsible for unleashing *D/Generation* on an unsuspecting world - he's also deconstructed the meaning of language by giving Gaza election lessons.



■ Spacehoppers are the nearest you can get to human ten-pin bowling. Just launch yourself at a crowd of happy shoppers and watch those bodies fly.



■ If you've ever managed to survive the ticket barriers at King's Cross station, getting the key at the end of this bit is easy-peasy.

RICOH PCL5 LASER PRINTER

Ricoh UK Ltd is part of the worldwide Ricoh Group of companies, originally established in Japan, in 1936. With a turnover of over \$5 billion and 37,000 employees, Ricoh has been producing computers and peripherals since 1971 and are the world's second largest manufacturer of Laser Printer engines. Ricoh have employed their expertise to produce a "first" in laser printers for the world market, the LP1200 with FLASH ROM.

Fully HP LaserJet III™ compatible, the new LP1200 employs industry proven laser technology. Unlike LED page printers, which use light emitting diodes, the LP1200's laser light source, focussed by high quality lenses, is able to produce the most accurate and intense printed images. It has 2Mb of RAM built-in and requires no additional RAM to print a full A4 page of graphics at 300dpi. Its fast, efficient processor and engine, together with a straight paper path design, allows printing at a full 6 pages per minute. Unlike its competitors, this advanced laser engine enables the LP1200 to address a range of print resolutions up to 400dpi. A new driver will soon enable the Ricoh LP1200 to print at 400dpi from Windows 3.0 (2Mb RAM upgrade required).

Again, unlike the competition, the LP1200 includes a powerful document description language as standard. This language, "LAYOUT", offers unique opportunities to develop custom-made printing systems. Forms and document templates can be designed and stored electronically in the LP1200's FLASH ROM, alleviating the need for pre-printed forms!

DUAL BIN
OPTION SHOWN

FULLY HP LASERJET III™ COMPATIBLE

400 dpi 2 Mb RAM 6 PPM

FLASH ROM UPGRADABLE!

COMPUTER SHOPPER
BEST BUY

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Using a straight paper path
- PCL5 - INC HP-GL/2
Latest version with scalable fonts
- SHARP EDGED PRINTING
Ricoch FIAL (Fine Image ALgorithm) enhances resolution
- 400dpi RESOLUTION (Requires 4Mb RAM)
Default resolution - 300dpi. Will address 200, 240 and 400dpi.
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For a full A4 page of graphics at 300dpi.
- UNIQUE FLASH ROM
For controller upgrade and storage
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For programmable FLASH ROM cards
- EXPANSION BOARD SLOT
For improved connectivity to additional systems eg. Coax/Twinax, PC-LAN etc
- LAYOUT
Document Description Language
- SERIAL + PARALLEL PORTS
For connection to PC compatibles and other computers
- 1 YEAR ON-SITE WARRANTY
Next working day response

The Ricoh LP1200 is a genuine laser printer and not an LED printer. Make sure you check out the competition!

See how the Ricoh LP1200 compares to the Laser Printer Competitors

FEATURES	EPSON EP4140HP	HP LJET III	MTM TALLY M7004+	IBM 4025 Model 010	RICOH LP1200
Average Sheet Price (est. VAT) (per page)	£569	£699	£699	£750	£699
Official RRP (est. VAT)	£345	£1,119	£1,099	£1,099	£1,195
Maximum resolution in dots per inch	300 x 300	300 x 300	300 x 300	300 x 300	400 x 400
Windows 3 Driver @ 400 dpi (August)	-	-	-	-	YES
Print Speed	6ppm	4ppm	4ppm	5ppm	6ppm
Straight Paper Path	YES	YES	YES	YES	YES
PCL5 Printer Command Language	-	YES	YES	YES	YES
HP-GL/2 Vector Graphics included	-	YES	YES	YES	YES
Font Improvement/Enhancement	YES	YES	YES	YES	YES
Standard RAM	0.5Mb	1Mb	1Mb	1Mb	2Mb
Full A4/300 dpi graphics with standard RAM	-	-	-	-	YES
Warm Up Time	<45 secs	<60 secs	<60 secs	<33 secs	<45 secs
First Page of Test Output	<20 secs	<40 secs	<40 secs	<20 secs	<15 secs
Document Description Language included	-	-	-	-	YES
Flash ROM	-	-	-	-	YES
Upgradable Firmware	-	-	-	-	YES
IC Card Slot	YES	-	-	YES	YES
Scalable Resident Fonts - in HP LJ III Emulation	-	8	8	0	8
Resident Bit-Mapped Fonts	11	14	14	16	14
Hi-Res Intelligent Scalable Font Technology	-	YES	YES	-	YES
HP LaserJet III Emulation included	-	YES	YES	-	YES
EPSON FX Emulation included	YES	-	YES	-	YES
IBM ProPrinter Emulation included	-	-	-	-	YES
Standard Paper Capacity	100	70	100	200	100
Protective cover on standard tray	YES	YES	YES	YES	YES
Cost per copy**	1.85p	2.12p	2.12p	1.85p	1.85p
Min-Max Paper Weight in gram	60-157	60-105	60-157	60-157	60-157
Min-Max Paper Weight in gram	60-157	60-105	60-157	60-157	60-157
Ability to print on OHP Film	YES	YES	YES	YES	YES
Able to print on card (157gsm - Manual Feed)	YES	YES	YES	YES	YES
Standby Noise Level	<40dB	31.7dB	<35dB	38 dB	<36dB
Printing Noise Level	<50dB	43.3dB	<46dB	50 dB	<46dB

* Price quoted by manufacturers - 2/9/92

** In accordance with EN 50470

Silica Systems are pleased to introduce the revolutionary, new Ricoh LP1200. It has all of the specifications that you would expect to see in today's most technically advanced laser printers, plus a unique additional feature which places it far ahead of the competition - FLASH ROM. This "Future Proof" technology protects the investment you make when you buy a Ricoh LP1200, as it enables you to keep up to date with new laser firmware developments. FLASH ROM is an area of memory inside the LP1200 which holds the printer's controller instruction firmware. If new firmware is developed, updated printer command languages etc, can be downloaded into this memory. Other manufacturers would require you to buy a new printer! Fonts, macros, graphics and additional emulations can also be stored in FLASH ROM, or on removable, industry standard FLASH ROM IC cards. The new Ricoh LP1200 is the only laser printer to offer this FLASH ROM facility.

LP1200 WITH SINGLE BIN & 2Mb RAM SILICA PRICE:
£699
+VAT=£821.33 Ref: LAS 5200

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Save money now by purchasing the LP1200 with the dual bin and 4Mb RAM upgrade.
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Price if purchased with LP1200 £1100+vat.
save £50

Normal price of extra 2Mb RAM £230+vat.
Price if purchased with LP1200 £190+vat.
save £40

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4Mb RAM **£849** (VAT) Ref: LAS 5200 + LAA 5200

DUAL BIN

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

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Opening Hours: Mon-Sat 9.00am-6.30pm Late Night: Friday until 7pm Fax: 081-309 0701

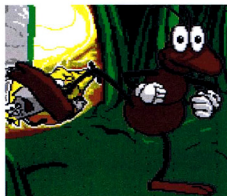
To: Silica Systems, ST109-75, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

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Tel (Home): _____ Tel (Work): _____
Which computer(s), if any, do you own? _____ 75F

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PUSH-OVER



■ "Hi, I'm GI Ant. A damned quirky individual of the highest order. That Dave Attenborough - he's my best mate, he is. Incidentally, did you know that, as ants, we have meticulously ordered and highly effective societies?"

Fish have fingers, cats have whiskers and dogs have fleas. Colin Curly bucks the doggy trend and opts for an ant instead. Andy Lowe investigates this topsy-turvy world and comes out smelling cheesy

SOFTWARE HOUSE: RED RAT/OCEAN
PRICE: £25.99

Colin is not a happy canine. He'd rather eat strange, yellow, curly snacks than ordinary dog food and, in a particularly reckless spot of prancing about in the countryside, he dropped them down an anthill. Now, Colin may be a bit of a prat but he's no fool - instead of calling the fire brigade or the lost-crispy-curly-snack helpline, he asks a passing soldier-ant - GI Ant - for help. Sure enough GI vows to return the mislaid munchies and dives valiantly into the offending cavity.

Domino Effect

Push-Over presents you with a series of levels each littered with a number of blocks. Many of these obstacles can be pushed by GI Ant and - as is the case with most blocks - once they've fallen, they stay fallen. However, there are eight other varieties of block with rather different physical characteristics which behave in



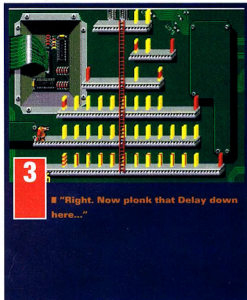
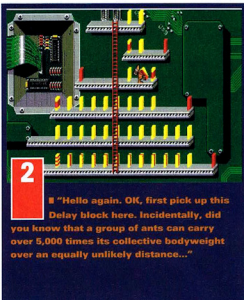
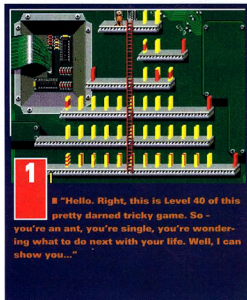
distinctly odd, but gladly predictable, ways. Oh, there's also one block, the Stopper, which refuses to budge no matter what shoves it, explodes near it or threatens it with extreme and radical physical rearrangement. Your job is to manipulate these blocks in such a way as to bring about a chain reaction - a sort of domino effect - of falling blocks. This may sound easy, but there are one or two little rules...

Distinctly Heavy Rules Bit

Rule One: the last block to fall must always be the Trigger - see Blocks Away diagram opposite - and all other blocks, apart from the Stoppers, must have fallen before the Trigger. Rule Two: GI Ant can pick up, carry around and rearrange all the blocks - er, apart from the Trigger. Rule Three: he can only fall a certain distance and, strong as he is, he cannot take a block falling directly onto his bonce. Rule Four: once you've rearranged the blocks to your taste, you get one push to shift them - if they

■ "Duh - gee, GI Ant - and that's where I lost 'em. D'ya think you can, like, get 'em back for me - huh?" "Sure, Colin. You're not too bright and kinda irritating - but what the hell... I'll do it."

HOW TO GET ON TO THE NEXT LEVEL - AN



BLOCKS AWAY!

The markings and properties of those Push-Over blocks...

STOPPER: blocks simply rebound off it. It cannot tumble itself.

STANDARD: if it gets hit, it topples. No more, no less.

DELAY: doesn't fall for a few seconds when hit and makes the block that hits it rebound.

BRIDGER: bridges a gap – handy for walking over.

VANISH: as it topples, it just disappears.



SPLITTER: slices itself into two pieces when it's hit and topples any blocks either side of it.

EXPLODER: blows up, leaving a ruddy great hole behind it.

TUMBLER: continues tumbling Slinky style, until it's stopped by a fallen block.

ASCENDER: floats upwards when hit. Upon bumping into an instruction it tumbles in the same direction until stopped by a surface.

TRIGGER: the one that can't be moved around, but which must fall last.

move correctly you have to go through the exit door within a time limit. If not, it's *Lemmings*-style start again time

When a screen is completed promptly and successfully, you're awarded with a token. This can be used in two ways – either to help you go on to the next screen if your time limit has expired, or for replaying a failed screen from the point before the push. To get to the final level you also need to collect a total of ten packets of cheesy snacks which can be found in various locations along the way.

VERDICT

Unfortunately, product endorsements are often an indication of a software house's lack of confidence in a game and its ability to stand alone as an example of good program-

ming. There are many instances of hastily tacked-on endorsements, masking poor and unexciting software – fortunately, *Push-Over* is not one of them.

This is a fantastic game. At first, there may seem to be very little to do apart from wander around, carting different coloured blocks around the scenes, but the game has you firmly in its grip as soon as you succeed on the first level. There's no need for ultra-fast reflexes or lightning dexterity here, but that doesn't necessarily make things dull.

Any comparisons to *Lemmings* must stop at the fact that *Push-Over* is, predominantly, a puzzle game – and so a bit of thought and planning is

needed to take on the game in its entirety. It has humour, playability, durability, originality and a beautiful simplicity which instantly melts the sour taste of the hype – which, in these cynical times, no one believes anyway. A wonderful achievement. The Red Rat programming team have finally established themselves as a force to be reckoned with.

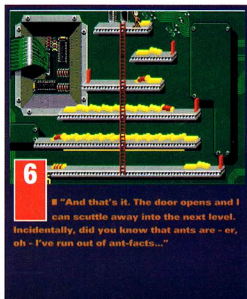
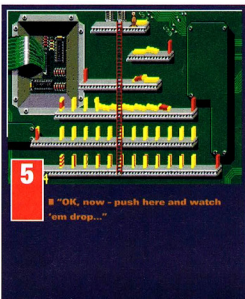
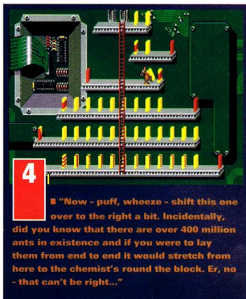
■ **GI Ant** is strong. He can hold up Colin and still keep a smile on his face. Give that insect a sort of curly, yellow coloured snack-food.



STEERING
92
STEERING

BY ANDY LOWE

INSECT'S GUIDE



Mega *meg* (ə-), very big, **100%** Sega Mega Drive, comin' at ya on Thursday 17 September (that's soon). Magazine designed for all serious Sega gamersplayers. aka: the mag with the most, *The* guide to **Mega Drive and beyond...** Slogan: Got a SNES? That's you stuffed then. Philosophy: to be the best. From the makers of *ST Format* comes the ultimate guide to 16-bit Sega gamesplaying: essential news, in-depth reviews, gamesplaying guides and dirty cheats. Be part of it.

MEGA

100% PURE SEGA MEGA DRIVE...

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M016	CASIO CZ SOUNDS & EDITOR
M020	XBIO Music Const. Kit.
M021	PERCUSSIONMAN 4 track, 16 instrument, synthesised sequencer
M022	SOUNTRACKER PLAYER & MODULES. D_DREAD1, D_DREAD2, MFX, RMB, DEMO, SPREAD.
M025	MFP Music design package. "DMX"
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M035	ACCOMPANIST 2.4, 16 voice shareware sequencer.
M040	EDSYNTH1 1.2 music synthesiser.

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E019 SOLAR SYSTEM GEOGRAPHY
E020 GEOGRAPHY TUTOR
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0118 STEEL.
0119 HEDGEHOG, Frogger clone. "S"
0120 THE NAME GAME, editor.
0121 MARK, great adventure.
0122 BATTLE FOR THE THRONE.
0123 LANDING, shoot 'em up.
0124 VIDEO POKER, Las Vegas style playing machine.
0125 MURDER DRAGON, platform, shoot 'em up & puzzle game in one.
0126 NORRA Fantasy RPG, "S"
0127 SHOOT 'EM UP, BUSTERS "S"
0128 DUNGEON, multi player fantasy adventure with some humor.
0129 HAKMAN, 50 levels, Pacman clone.
0130 LIVES! SLAYS! A2.
0131 TARMARE, Various levels, blast alien craft on your way.
0132 NIGHT OF THE LIVING DEAD.
0133 STEEL GAME, rearrange the letters.
0134 SOKO, 50 lives many puzzles.
0135 REAGANSDON, SPACDOD, SPACEWAGON, BUGS
0136 BATTLE SCAPE 2, player fantasy war-gaming.

C002	Human figures, cartoons, titles	C013	Humorous clips, Letters A-Z
C003	Sports figures, July 4th logos	C015	Babies, boys and girls
C010	Occasional Clips, Characters etc.	C016	Girls, Scrolls and Occasional Clips
C011	Loads more fruit, vegetables	C017	Art deco, Baby boy & girl
C012	Herbs & Kitchen parts.	C018	Varied Humorous Clips.

W001-006	TEX, 8 Disk Pack, document processor. "M"
W008	1st WORD wordprocessor. Professional fully GEM based
W009	Easy Text v1.2 fully working DTP demo (w/10 for DS users)
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FASCINATION



Interactive ST games – what turns you on about them? Is it in the way they play? Their incredible sense of humour? Or perhaps you prefer glossy graphics and a spot of sleaze? Andy Lowe switches into soft focus and reviews that which is the essence of *Fascination*



THAT FIRST SCREEN



TIP

1. First, click on the briefcase and enter the code AARGH
2. Open the drawer, take the adaptor and plug it in. Then, plug in the toothbrush – change the setting to 110V and turn it on via the green switch.
3. Take the vial from the toothbrush compartment.
4. Open the fridge and have a few drinks – pour them into the empty glass.
5. Unplug the toothbrush, remove the adaptor and plug in the fridge.
6. Pick up the jug of water and pour it into the ice tray.
7. Now, use the vial on the ice tray. The vial is now

safely hidden.

8. Close the fridge and make a note of the Quantum Laboratory phone number – in the directory near the fridge.
9. Take a quick shower and head off down to the lobby. Now you're on your own!



HOTEL PELICAN - Key Biscayne - Miami

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Doralice, is, apparently, the sexiest captain on the Paris – Miami flight. Of course, the fact that the assistant captain just happens to be a rather wizened 56 year old man with gigantic warts and saliva constantly trickling from the side of his mouth is irrelevant.

For what it's worth, the plot involves Jeffrey Miller, the Chairman and General Manager of the Quantum Unlimited Laboratory – he's a Florida billionaire who made his money from pharmaceutical research. He discovers a cerebral chemical which looks set to cause a bit of a stir in the scientific community. However, there's a crew of ruthless nutters led by disgraced plastic surgeon, Peter Hillgate, who fancy using the chemical for their own, warped ends and who are on the trail of Miller and his employees. One of these people is Fayard Nichols, and he happens to be on board the flight FAS 458 to Miami.

This is the plane of which you, as Doralice, are captain. Unfortunately, Mr Nichols inconveniences you by keeling over and dying on your plane at the same time as giving you his briefcase and groaning: "Here, take this – be sure it doesn't fall into the wrong... into the wrong... ugh." The briefcase contains a vial of the chemical and it's your task to get it to safety, being careful to avoid the not-very-friendly attentions of Hillgate's heavy boys.

■ A good example of both the best – the graphics – and the worst – the dialogue – of the game. Is this man for real? Er, no – actually – he's just an ST game character. Oh.

Harold Robbins, *Eldorado*

The game operates from a mouse point-and-click interface with a fast and simple control system – point to the object, click with the left button to use or manipulate it, click with the right button to place the object in inventory. Objects in inventory can be produced and used on other objects or people in the scene – you often have to experiment and offer unlikely and uninteresting objects to your somewhat shallow game colleagues if you want to get anything out of them at all.

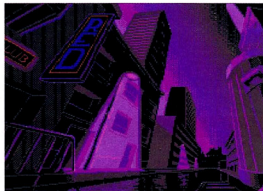
VERDICT

So, is *Fascination* just a load of old lip gloss? The problems switch from the obvious and ridiculously easy to the downright obscure and irritating. It has a relentless linear structure which doesn't let you leave a particular room until you've done everything.

At times, the dialogue seems to be taken straight from a Harold Robbins pulp novel and the sleazy, Bond-film mood it tries to evoke is prone to straying into wobbly *Eldorado* territory, providing plenty of unintentional smirks and guffaws. But, like some tacky continental movie – it's slick, rather predictable and at the same time strangely enjoyable. There are

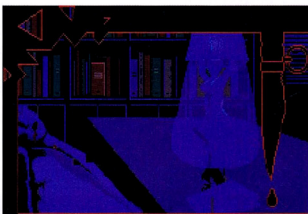
■ **Hi! Guess what I'm doing? That's right. I'm having a pedicure.**



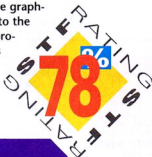


■ The blue-red club. Note the over-inquisitive guy on the top right. Could he just be harmlessly closing his curtains and heading for his cup of cocoa - or perhaps he plays a larger, more sinister part in all this?

■ Things begin to take a distinctly sinister turn at the beginning of Act Three, as film critics call it - and Disk Two, as ST gameplayers call it. This poor unfortunate happens to be none other than... Ah, but that would be spoiling it now, wouldn't it?



one or two more "adult" elements and it's too easy to recommend to old hands, but there's some great music and the graphics are terrific - actually adding to the experience instead of merely providing cover for the blemishes on the gameplay. So, put the kiddies to bed, turn off *Prisoner, Cell Block H* and indulge in an hour or two of *Fascination*.

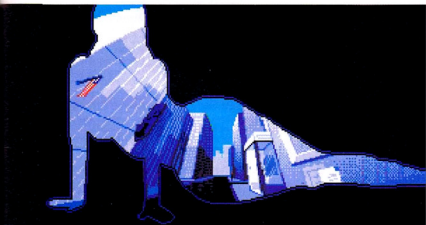


ANDY LOWE



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- The, ahem, nipple on the statue in Miller's office.
- The posters in the secret room in the lingerie shop.
- The - er, "thingy" on the skeleton in the lavatory.



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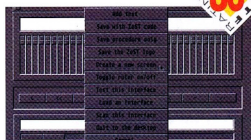
Many problems are caused by the concept of duality, the clash of value systems and lack of cheap good quality software. Just remember: everything is a shade of grey, all values are subjective and there are zillions of PD disks going for a song. Chris Lloyd misses the point and starts singing

UTILITIES

AUTOZEST CALEDONIA PDL - DISK AU 173

You might have seen programs knocking around the Public Domain circuits using the ZeST interface - a very handsome affair that apes the expensive NeXT machine. Written in GFA Basic, and deservedly popular, it's been followed up by Auto ZeST - a utility for adding the ZeST interface system to your own programs. It's a simple procedure - just position your buttons, sliders, windows and text boxes on the screen, add your text and save it out as a listing ready to be merged into the GFA Basic editor. Now you can give your own proggies a finely crafted and sculptured look. It only runs in high resolution, which is a pity - a colour version would be most welcome. Adding a professional interface makes a hell of a difference to any program and fiddling around developing

your own takes ages, especially if you're going to tackle GEM. Well done, that man.

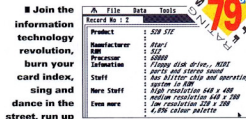


One ready-made professional interface for GFA programmers coming up courtesy of Auto ZeST - the utility that produces er, ready-made professional interfaces for GFA programmers. Easy to use and very sexy.

DATASCAPE CALEDONIA PDL - DISK AU 179

Just what the world needs - another database to store data in. No, honestly, they come in dead handy for cataloguing lists of things - any things you like. Datascape is very easy to set up and use, it has on-line help and all the functions are intuitive. You can search, sort, print and browse through records as you want. Each record is presented on a single screen which limits its size. You can alter the field names and lengths after you've defined your database. Datascape gives you the ability to have up to 1,500 records on an ST and 3,000 on a TT. You access all functions from a GEM menu or by keyboard shortcuts. Unless you've got acres of data to store, a simple card

system like this should be right up your street, Datascape fits the bill - it's easy to use and reasonably featured.



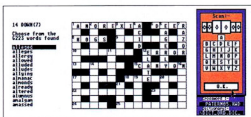
to strangers and say: "I've stored my data in a database and I want to tell the world!" Or, on second thoughts, perhaps not. Jolly good program, though.

CROSSWORD DESIGNER PD ST - DISK GL 451

Very popular things, crosswords - they must be because every newspaper seems to have one and you can get whole books stuffed full of the things. Ever fancied designing your own? Well, now's your chance. This baby does just that and it eases the whole process by searching through the dictionary for you. First step is to design the grid - you can make it any size up to 15 squares by 15 squares. Then you load in one of the ready-designed puzzle layouts or generate your own. After that, with the help of the dictionary, you pick your words - as the crossword fills up, the selections become

smaller and smaller. You might have to go back and change a word or two to complete it. Type in your clues and then you can print it out.

If you were having problems solving the newspaper crossword, you could enter its grid and use the program to solve it, assuming you can find the answer to one clue - Crossword Designer can even tackle anagrams for you. Not much fun unless you're pretty serious about using your head as a word database, but it really is the business if you're into the crossword scene. Registered users get another 31,000 word dictionary and a more powerful version of the program.



Crossword devotees will love this - the Bradsen Crossword Designer and Solver does just that using a dictionary of 36,000 common words. Print out your own creations or use it to cheat The Times. Incidentally, "control" is an anagram of "politics." Not a lot of people know that.

GAMES



■ Be careful - this encounter with the fulsome neighbour in *Grandad and the Search for the Holy Vest* can be very dangerous indeed.



GRANDAD AND THE QUEST FOR THE HOLY VEST CALEDONIA PDL - DISK GM 114

A graphic adventure with a twist - instead of some muscle-bound hero you're a grumpy old git with a lousy memory. You wake up in the hall one morning, there's a nip in the air so you decide to wear your string vest. Cue one ageist adventure as you set out around your palatial home searching for said item. During this perilous quest you get electrocuted, burnt and suffer a heart attack and,

to top it all, your wheelchair's battery runs out. You move your motorised old boy around the 3D world with the joystick or cursor keys finding and using objects. Puzzles are logical and well thought-out and the graphics are excellent.

The rather unusual approach, suspect humour and smart gameplay make it a winner that's only let down by a tedious maze section. *Grandad* is Shareware and asks you for a code halfway through - and you can only get that by registering your copy. Now, bugger off, you whippersnapper - bah!



JETPAC BUDGIE - DISK BU 104

Very simple and beautifully playable - *Jetpac* sees your little astronaut fella jetting from platform to platform - he has to build and fuel his rocket before blasting off to the next level. Alien blob things float around being obstructive, and you have to give them a good zapping. The game might bring back the odd moist eye and memories of the simpler past when summers were hotter and people were polite to you in the street.

There's no depth to *Jetpac* - you just have to wrestle with your trusty joystick, collect things and shoot other varieties of things. All in all though, it's lovingly presented and a spiffingly joyous bounce, suitable particularly if you need something simple to keep yourself out of mischief on dismal wet afternoons.



■ This is a good arcade outing - boing, bounce, blast and bugger it, get caught by a stray blob creature, now I'm wasted. *Jetpac* - a rocket, a gun and a twisted smile.



DARK CARPATHIAN NEW AGE PDL - DISK CI 02

Elizabeth Bathory is a really nasty piece of work - she keeps her youthful looks by bathing in the blood of young maidens. Now she's gone and kidnapped your sister and imprisoned her in the depths of a forbidding castle. Your mission is to go through all her things while she's not around and sell the good stuff in the local tavern. Only kidding - it's off to the castle for a sibling rescue mission for you.

Dark Carpathian is a 3D Construction Kit game involving the usual wandering around a filled-vector world solving logic puzzles that block your entry to the next bit. The objects are well-designed with the odd spot of animation thrown in and you can understand the puzzles without any problem. It suffers from the same things that all 3DCK games do - slow gameplay with lots



■ *Dark Carpathian's* moody 3D world - with convoluted puzzles based on oddly shaped colored blocks. You seem to spend a lot of the time bumping into walls as you miss the doors, though.

of time spent bumbling round a cubist world with nobody to talk to. This is one of the better of the genre and worth an outing if you like your games to proceed *er*, thoughtfully. Along with the game you get folders full of objects that the programmer has kindly created for you to use with your own 3DCK games.



THE OBSCURE NATURALIST GOODMANS PDL - DISK GD 1626

This is not, under any circumstances, to be confused with naturalists who - er, play beach-ball and try not to giggle too much. No, you are the corduroy trouser wearing type who's interested in birds. You've spotted a very rare heron and could gain loads of brownie points in ornithological circles if you get some good photographs of its chicks. The only problem is how - there's no film in your camera for starters, and the heron's nest unfortunately happens to be on an island.

The Obscure Naturalist is a text adventure written with STAC and the author's made a good job of it. It's well-crafted and free from the obvious grammatical and spelling errors that plague most text adventures - the writing is fairly rich, too, and liberally sprinkled with dry humour.



■ Advertising in the old style, just your logic and trusty typing fingers between you and ignominious defeat - or, in the case of the *Obscure Naturalist*, the bus home without that twitch.

The puzzles are logical and the graphics appealing. The gameworld could be more detailed and the syntax needed to do simple things could be less exacting, but it's a good example and worth a ramble - even if you don't get the chance to bludgeon other life-forms.



MICHAEL'S BIG ADVENTURE MERLIN PD - DISK MPD 0825

Aimed fairly and squarely at the more youthful among us, *Michael's Big Adventure* is a big colourful game that uses the *Talespin* system. Everything in it is mouse-controlled - you just have to click on the screen and up pops a little text box with your limited range of options. There are also a good few samples thrown in which live things up a bit.

Unfortunately, the graphics look as if they've been drawn by the age group the game's aimed at - they're big, bold and pretty awful. The biggest downer of *Talespin* games is the speed - each screen is loaded separately from disk which slows things down to a crawl. Gripes aside, this *Big Adventure* should pro-



■ Michael and his platonic friend Chris visit the Sea Queen's court in the wetsuits they stole - er, I mean found in the locked chest in the strange house that... What? Well, you see, it all started with this wizard... *Michael's Big Adventure*, makes other childhoods look a bit dull, really.

vide an hour or three of entertainment. Let's just hope it doesn't lead to copy-cat burglaries by the under eights.



DEMOS

HIGH FIDELITY DREAMS
NEW AGE PDL -
DISK DEMO 127

Nearly 40 minutes of good quality tracker sounds. There's a simple menu to get at the eight tunes and a screen full of raster jobs with built-in VU meters to stare at if you don't have any interesting posters.

The music is classic tracker stuff - all drums and beepy synth samples. It has a vaguely '70s disco

feel to it, which is cool. After all, the '70s are coming back, right? Sweet are definitely in. Quite what you're supposed to do with it after a listen or two is anybody's guess - you have to be pretty desperate to listen to this instead of putting on the radio or a tape if you want to listen to some sounds. Still, there's no accounting for taste.

■ Everybody in the house say: "Pardon? I didn't quite catch that." *High Fidelity Dreams* has eight pieces of above average tracker songs and some coloured bars that bounce around the screen - what have you got?

FEATURES

■■■■ DEFEAT LIPS ■■■■

HIGH FIDELITY DREAMS HAS ON
ANY ST OF SWE WITH AT LEAST
ONLY SIX NO. 1 TWO DED FEELS
NEARLY EVERY BIT OF A SIX IN
MACHINE 1 BEATHE-PICTURE-
DEFEATHE PAC TO BE INTELLED
TO SAVE THE PARE MEMORY !!
EVER DEGA-STES WERE SUPPORTED BY

KIDNEY BEAN DEMO

RIVERDENE PDL - DISK 1012

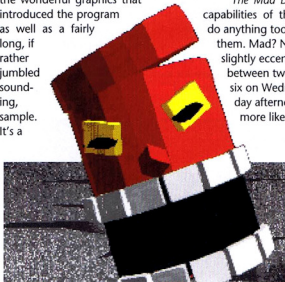
A megademo with lots of little sub-demos featuring all the old favourite effects and nothing original whatsoever. You get a combination of scrolling text, hyperactive chip music, 3D dot balls, a bit of parallax scrolling, wibbly distortions and a painfully slow plasma screen - about a dozen ideas in all. There's a scrolling guide-the-little-sprite-over-the-door demo selection screen

which you can by-pass by pressing <F1> - then you see each demo in sequence. There's a brief moment of humour with a spoof number where all the effects go wrong. The only thing that stops it from being completely naff is the fact that the whole thing is written in GFA *Basic* so it's clever and fast. Ultimately of little interest to anyone apart from GFA *Basic* enthusiasts.

■ Just look what GFA *Basic* can do - it can reproduce all the hackneyed bits from other demos, only slower. Now, there's useful.

THE MAD DEMO
STE CLUB - DISK D 53

It's a fickle old world, isn't it? Especially in the field of youth-orientated TV. Remember *Wired?* The *Mad Demo* does and gives us a taste of the wonderful graphics that introduced the program as well as a fairly long, if rather jumbled sounding, sample. It's a



short loop that you'll want to see over and over again until you get completely bored with it - fourth time round, probably. Then that's it, back to the disk box with all the other demos you've run once.

The *Mad Demo* uses the extra capabilities of the STE but doesn't do anything too impressive with them. *Mad?* Not really - slightly eccentric between two and six on Wednesday afternoons, more like.

■ Wacky full screen animation from *The Mad Demo* - looks good but unfortunately is only a few seconds long. 800K is used up at an alarming rate.

DYNAMITE MUSIC DEMO

CALEDONIA PDL -

DISK STE 39

Got nothing worthwhile to do? Well, why not lounge about earwigging this handful of sampled tracker tunes? The *Dynamite Music Demo* uses the STE's mighty DMA sound chip to replay the samples at a reasonable 25MHz and claims to be eight channel. It's in stereo, too - gasp - and you can fiddle with the volume, treble, bass and tempo.

Well, it should keep you amused for two minutes.

Unfortunately, all this is rather spoilt by the pretty terrible quality of the music itself and no amount of technical wizardry can compensate for that. *Dynamite?* An indoor firework, more like. The STE has heaps of potential in the sound department - shame this didn't really manage to make the most of it.

■ The *Dynamite Sound Demo* does an - or, interesting version of *Don't You Want Me?* by the Human League, who are hiding out in Dagenham until it goes away again.



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OF THE MONTH

Grandad - play the plummy git we'd all like to be.

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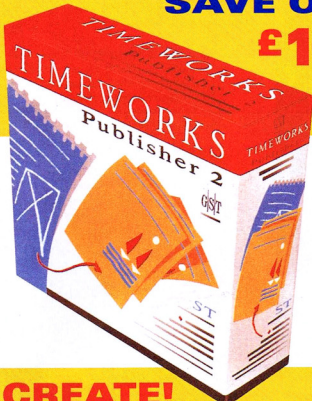
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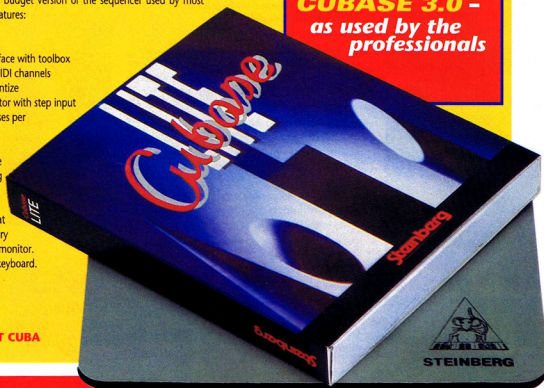
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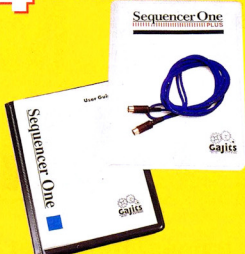
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"IT'S NOT ME, IT'S THE JOYSTICK..."

Hard things, games. Help is at hand, though, as Andy Lowe ponders such delicate issues such as shelf-life, game endings, rewards, cheats, incentives and, well, what does it all mean? Certainly not 42, that's for sure...

Do you think that games are, colloquially speaking, a segment of well-known, popular confectionery? Are you an all-round boffin who, semi-awake, slaughters all the latest releases while casually tintering with calculus homework?

PUSHOVER

(OCEAN)



Quite pleasant and cheery, really, but, considering the terrific cartoon sequence at the beginning of the game, it's a teensy bit of a swizz to battle all the way through and be rewarded with a simple little sill-shot. But then again, it's just so pretty, don't you think?

GREAT ENDINGS

You know, it becomes evident that, as you waft indolently through the misty and, well, often quite electrifyingly wonderful domain that is the ST game, one or two of those programmers out there do care about how the endings of their games turn out. And so, we present a few of the more notable ST finales in history...

ROBOCOP 3

(OCEAN)

1

The humanoid ninja enemy thoroughly wasted - Robocop can, presumably, sit back with a hot cup of oil and never worry about these tedious, highly advanced androids pestering him ever again...

2

Ah, oh dear. It appears that he had a rather powerful nuclear self-destruct system... Imminent atomic explosion... Well, that's rather a fly in the ointment, so to speak. But, depending upon Robocop's level of efficiency, he either flies away and escapes obliteration or...

3

...is obliterated in this awesome, nuclear-powered levelling of the city, complete with man-made skyscrapers! See the irony? Technology destroying itself? The terrifying double-edged sword of progress? Makes you think, doesn't it? Doesn't it?



Or perhaps you stumble precariously through each of your games, full asphyx and pile of fingernails at your side, thinking, "I'm getting old and I haven't completed a game for ages." Go on, just do a quick count of your titles – how many have you completed? Or how many have you, fuming with frustration, assigned to that battered cardboard box informally known as the dust-gathering area? If you do find yourself falling into the latter category, then perhaps you've considered turning to those fiddly, obscure little passwords and phrases included by the programmer to assist players with dodgy hand to eye co-ordination or malfunctioning lateral thinking – the cheat mode.

Of course, there's nothing actually wrong with cheating – complete a game suspiciously

quickly and you get called a cheat anyway – so why shouldn't you stoop to that level? What have you got to lose?

WIBBLE WIBBLE WIBBLE

The stigma of sitting at your ST like a hilariously sad and pathetic individual, furiously typing in "Cabbage" and "Wibble Wibble Wibble" has, largely, been eradicated. You are no longer going to be institutionalised or written off as a dangerously ill lunatic. So, go ahead – or, as the well-known saying goes, "Cheat To Complete!" Well, perhaps not that well-known... not even vaguely, in fact. Actually, it's a complete fabrication. Sorry.

ROBERT MAXWELL

Cheating has a long and exciting history. Famous cheating antics appeal us, titillate us and make us

wonder why anyone ever bothered to invent rules in the first place. Diego what-do-you-think-this-is, volleyball? Maradona, Ben Johnson, Robert Maxwell, er, the bloke who publicised Hitler's "diaries" have all (apart from Robert Maxwell, who is dead) reluctantly slouched, bashful and side-stepping, into the annals of history. They have all gone down as people who decided to dispense with the more, ahem, conventional methods and, instead, chose the way of the cheat, the charlatan, the quack, the fake, the scoundrel, the rogue, the cad, the writer who, instead of relying upon his own vocabulary, furtively turns to the thesaurus...

But why the spurious activity? Do these people feel such a strong need to prove themselves that they have to offer results

under any circumstances – even if it means not exactly playing entirely fair?

CRAP

Or, translated into the wonderful world of ST gaming, are most games just too incredibly hard to finish without cheating? Surely that's why programmers include cheat modes in the first place; because they find it impossible to get the difficulty balance right and so need to include something to assist the incompetent, the desperate or the simply crap.

THE MEANING OF EXISTENCE... REVEALED!

And another thing, what's all this moaning about not being able to get to the end of a game, anyway? Games used to be like *Space Invaders* and *Galaxian* – games that you could just play

ANOTHER WORLD

(US GOLD)

1

OK, so you've battled through this beautifully surreal and hideously difficult game. Your first sight is this rather daunting prehistoric-looking bird. You swallow hard, straining for the sounds of a rumbling stomach...

2

Exhausted and "rezzed-out" (is that the phrase ST-game characters substitute for "wasted"?), you are duly held aloft by your mate who, it turned out, survived after all. He gazes wistfully into the distance...

3

And that, as they say, is that. Off into the sunset on the wings of a sort of Pterodactylly, bat-like creature. What a contender. What a hero. What a finale!

DRAGON'S LAIR – ESCAPE FROM SINGE'S CASTLE

(READYSOFT)

1

Now, there's this evil shapeshifter fellow... and he's not exactly too chuffed about Dirk wandering into his flat uninvited with some feeble excuse about "saving the gorgeous princess from a fate worse than death"...

2

And here she is! Would you save this woman from evil on a promise of marriage and eternal carnal ecstasy? Ah, forget it – she's a just a bimbo.

3

But, Dirk being the gallant and pretty darned heroic dude that he is, decides to go ahead anyway. "Oh, thank you, thank you! Now let's get out of here and... and..." "Er, I know a pretty good Chinese restaurant - only five minutes walk from this castle."



and play and play and not give a ZX81 about whether the scenario was finite or infinite. Well, games have moved on since then. Just as we no longer sit back in front of the wireless or wander happily around the streets, whipping our tops and spinning our hoops, we also no longer drool at the thought of such simplistic, one-dimensional zappers with in-built two minute attention-spans and graphics that would be mocked by CEEFAX – the keyword now is complexity. Games like *Monkey Island* and *Another World* have it, but, at the same time, they don't sacrifice their playability or originality. It is from these kind of games that you expect a lot more for your efforts, and rightly so. You wouldn't want to pay £3.10 to get into a cinema, sit through the film and, just as it's getting really good – building up to a

magnificent climax, assailing you with superb, uncontrived plot twists and unexpected events – you find there isn't an ending at all, no heartwarming reconciliation or baddies getting their come-uppance. All that you are rewarded with having invested your time, your cash and your emotions is a blank screen.

STARION

However, (adopt in-depth *Dispatches* expose-type tone...) is the real purpose behind the cheat mode phenomenon being obscured by the droves of game players falling over each other to inform us at *ST FORMAT* that, "If you type STARION in *Outrun*, then the cheat mode can be accessed?"

Are games really that hard? Is there really such a gap in the script if the game doesn't bother

TEN THINGS TO SAY WHEN YOU'RE CRAP

1. There's something wrong with this joystick!
2. This game just isn't pitched correctly, difficulty-wise.
3. You've played this before, haven't you?
4. (Yawn) God, it's so late. I'm too tired for this.
5. Ah! I had the auto-fire switched on!
6. I shot that! Did you see the explosion?
7. Check the port, will you? It's definitely faulty.
8. I was miles away! Dodgy collision detection!
9. The light from the window's shining on the screen!
10. Look, I'm telling you, this joystick is awful.

to include something decent at the end?

We asked a few of the top-flight programming luminaries of the ST world what they had for breakfast, what their views are on the theories of Dr Stephen Hawk-

ing, why they didn't get a decent job in a bank... and then we got down to more relevant matters. Have a look at the box on page 120 to see exactly what they said, but for you if you don't want to take your eyes off the page,

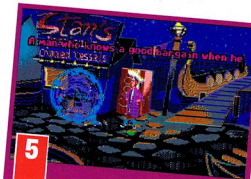
SECRET OF MONKEY ISLAND

Probably the most compelling, bleary-eyed couple of days you'll spend in front of a monitor, *The Secret Of Monkey Island* is to ST gaming what *Citizen Kane* is to cinema, what *War and Peace* is to novels, what *ST FORMAT* is to Atari magazines... The action opens on Melee Island - a barnacle-encrusted, cutlass-rattling pirate haven

where Guybrush Threepwood must prove his worth as a grog-guzzling, "ahar!"-sayer by rescuing the island's Governor from the clutches of a piece of spectral slime known as LeChuck. Follow the solution in STF 38 (turn to page 50 if you don't have it) and the phantom-pirate is reduced to a pile of steam-ing ectoplasm thus...



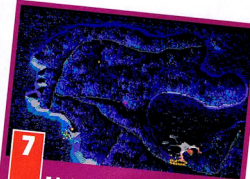
1 ■ "Er, hello LeChuck. So, here we are at our exciting and downright dramatic confrontation scene - and I'd be worried if I were you, because this is Hollywood and you, being a baddy, are bound to be hideously destroyed by my shrewd but somewhat unlikely courage and presence of mind."



5 ■ "Hey, fella - er - thing, sort-of... abstract entity, whatever. Here I am, trying to sell you one of my previously owned vessels, and all you can do is slug me into the middle of *Monkey Island 2* - which (turns to camera...) incidentally, is not being converted to the ST by Lucasfilm...so write to them and get them to change their mind - oh, but I digress... aaargh!"



6 ■ Harry Carpenter: "A superb upper-cut from LeChuck - and it looks like it's all over for the young wannabe here at Madison Square Gardens, or, sorry - Melee Island..."



7 ■ A picture of Mr Threepwood flying through the air with the greatest of unease. Superman never had it so good.



GAMES WITHOUT FRONTIERS...

Old and crusty or just dull and rusty? Here are a few rather off-smelling games with mindblowing "endings."



■ MOONWALKER (US GOLD)
A truly multi-purpose artifact: this is a tedious and subornally unattractive game. And the ending's not much better.



■ BARBARIAN 2 (Palace)
Warning. May cause drowsiness. This is the vegetarian version of a chop-'em-apart. The ending's crap as well.



■ SCRUPLES (Leisure Genius)
If you win this you end up like the person your mother enforces to you about. Sad.



■ TREBLE CHAMPIONS (Challenge)
A serious contenders for all-time turkey award. Inspires you to go to bed early.

we've picked out the most interesting bits and drawn a few rather revealing conclusions from these conversations... First, cheat modes are included for the benefit of the software house's play-testers and not for players - although you might feel that you're attempting a mini battle of wits against the programmer in

trying to find the cheat... without hacking, of course, because that's illegal. Second, games are not too hard. Granted, there are people with differing co-ordination skills and some people enjoy games but just don't have the aptitude to effortlessly progress like the hardened types - and it's important for programmers not

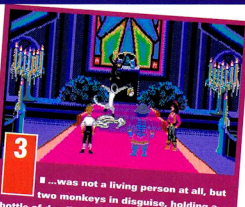
to alienate these groups. They have to spend a little more time on aiming the difficulty-pitch of their games a bit more accurately. A shoot-'em-up like *Llama-tron* quickly ascends into utter mayhem but, as the Yak pointed out, its initial waves have a fairly serene quality, enabling the less able to enjoy, appreciate and per-

haps even - gasp - get better at the game. Surely, this should be a requirement of all games, enabling the player to be drawn in, giving him the chance to experiment and explore the workings of the game before being bombarded with all manner of high on invincible flying and blasting things. **stf**



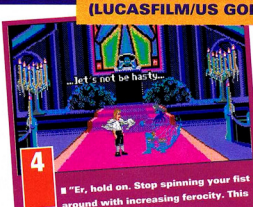
2

Enter Governor Marley who shouldn't really be in two places at once, hence Guybrush's question. LeChuck looks on, distinctly confused. Well, if you were dead and you were about to get married to a living person who, it turned out...



3

...was not a living person at all, but two monkeys in disguise, holding a bottle of deadly, dead person-annihilating root-beer, you'd be bloody confused! Anyway, the monkeys decide to run off with the beer - and here's the real downer - leave you at the mercy of LeChuck's spectral wrath...



4

"Er, hold on. Stop spinning your fist around with increasing ferocity. This isn't a cartoon, you know!"



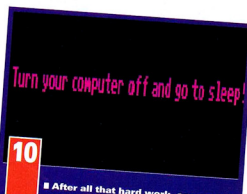
8

Now he's really mad... Guybrush kicks butt. "Ah, sir. Let me introduce the new, improved, 100% additive-free ghost-frazzling root-beer. Perhaps you'd care to try some - in your face?"



9

The evil LeChuck finally vanquished, Guybrush Threepwood and Governor Elaine Marley are, at last, together and once more Malec Island can sigh with the happy relief of, er, not having the evil LeChuck unvanquished. But, will he be back? Only if enough of you write to US Gold and get them to convert Monkey Island 2 onto the ST. (Pretty subliminal this, eh?)



10

After all that hard work, some good advice from the programmers. Strangely enough, there is more to life than computer games... And that address you need to encourage that conversion: US Gold, Units 2/3, Holford Way, Holford, Birmingham B6 7AX.



FOR GAMES THAT GO DOWN THE WRONG WAY...

The *Cheater's Digest* from True Images is Utopia in disk form if you want to get more from your games than a couple of loads and a few inept attempts to atomise some undesirables before that frustrated sigh turns into one of those excuses...

It comes in the form of a double-sided disk containing cheats, hints, tips and complete solutions for 391 ST games. If that doesn't keep you holding down A, G, Y, E and, er, the space-bar (after the credit screen) until this time next year, then

they've even thrown in three complete games and a comprehensive word processor – all for less than a fiver.

VERDICT

The word processor is adequate enough for the task and the games (*Space Invaders*, *Robotz* and *Rockfall*) are all standard freebie efforts that should keep you vaguely amused for half an hour or so.

The cheating directory is a huge word processor file so it's easy to manipulate, update and

add your own little cheats and password-things should the mood suddenly take you, one wet and dreary November evening. One or two of the inclusions that we tested didn't seem to do very much but, with luck, they're in a minority and there seems to be hundreds of workable tips for the dustier and the more recent ST games.

But it's cheap, handy and (on the whole) pretty useful. Definitely recommended.

THE FACTS:

PROGRAM: THE CHEATER'S DIGEST, VERSION 1.6

BY: TRUE IMAGES
RUNS ON: STs, STes, MEGA

STEs
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DAMAGE: £4.99 (cheques payable to PIH Publishing)
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PROGRAMMERS. WHAT THEY THINK...

Now, this ending business... If you've bought the game, that's all the programmers and software houses are bothered about. If you cheat or it's too hard or you get to the end and go bleating to Gamebusters about it, it's just not their concern. Yes, well...

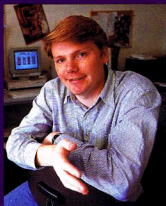


KEVIN BULMER
(Dimension Creative Designs)

Responsible for *Corporation* and the forthcoming *Legends of Valour* (with Ian Downend).

"It's hard. We start things off by actually making the games and, if you spend over a year working on something, you tend to get very good at it, so you make it harder and harder... We have our own people testing *Legends of Valour* and so we get feedback from them as to its difficulty. Often, we think it's too easy and other people think it's too hard, particularly with puzzle-games; that's because, being the programmers, we devised the puzzles and we know how to do them!

"You don't want to exclude people and so it's important to pitch your games at a broad age range."



DAVE JONES
(DMA Design)

Responsible for *Lemmings*.

"The cheat mode came about as a purely practical aid to testing the game. As for incentives, at the end of *Lemmings* you're presented with a digitised picture of the programmers and sampled clapping and cheering. But not many people actually make it, so you don't want to spend too much time on it. There's a fine balance between providing a decent ending and not letting it chew up too much memory."

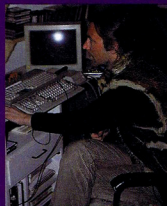


MARTIN KENWRIGHT
(Digital Image Design)

Responsible for *Epic* and *Robocop 3*.
"We've been criticised for making our games too easy as well as too hard; criticisms which are often levelled at the same game – *Epic* being a case in point. It's impossible to create the right pitch.

"Cheat modes are practical inclusions for our game-testers. Hackers disassemble the code and look for strings of text. We do leave in messages explaining that it's against the law, but it still goes on. Often, a cheat mode can be synonymous with the game name; sometimes it can get more famous than the game itself!

"As for making the cheat mode easy or difficult to find; with *Epic*, we told Ocean and they put the <Enter> cheat in the manual. We wanted to make it more accessible because we decided it was too hard. We are worried about the shelf-life of a game which can suffer as a result of cheat modes being publicised too early, but that's way below the piracy issue on the list of anxieties."



JEFF MINTER
(Llamasoft)

Responsible for anything with the word "Llama," "Camel" or "Mutant" in the title which renders you absurdly high on adrenaline-rush.

"I try to offer options for players of varying playing abilities. I like the idea of gradually increasing difficulty. My games have been criticised for being too difficult, but that's unfair because they're always easy at the outset and this gives the player the chance to become familiar with the game before it gets maniacally demanding."

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 - Graphics Resolution: 240 x 240dpi
 - Epson and IBM Emulation
 - Colour Output Available
 - FREE Silica Printer Starter Kit**
- RPP: £249
SILICA STARTER KIT £25
TOTAL VALUE: £274
SAVING: £115
SILICA PRICE: £249

24 PIN PRINTER



- 300 CPS 80 COLUMN**
- Citizen Swift 24/240C - 24 pin - 80 column
 - 300cps Draft, 240cps Draft, 80cps LQ
 - 16K Printer Buffer - 40K maximum
 - 9 LO Fonts + 2 Scalable Fonts (480dpi)
 - 4 x Font Cartridge Slot - for use in Stylus Fonts
 - Parallel Interface
 - Graphics Resolution: 360 x 360dpi
 - Epson, IBM, NEC P24 & CEL Emulations
 - Quarter Binding Facility
 - Auto Set Facility - Bi-directional I/F, Auto Emulation Detection
 - Command View II Front Control Panel
 - Ultra Quiet Mode - 44.5 dB(A)
 - Colour Printing Standard - Swift 240C
 - Colour Printing Optional - Swift 240
 - FREE Silica Printer Starter Kit**
- RPP: £299
SILICA STARTER KIT £25
TOTAL VALUE: £324
SAVING: £115
SILICA PRICE: £299



- SWIFT 240 MONO**
- SWIFT 240 COLOUR**
- RPP: £299
SILICA STARTER KIT £25
TOTAL VALUE: £324
SAVING: £115
SILICA PRICE: £299

24 PIN PRINTERS



- 192 CPS 80 COLUMN**
- Citizen Swift 24 - 24 pin - 80 column
 - 192cps Draft, 48cps NLO
 - 8K Printer Buffer + 4 Fonts
 - Parallel Interface
 - Graphics Resolution: 360 x 360dpi
 - Epson and IBM Emulation
 - FREE Colour Kit**
 - FREE Silica Printer Starter Kit**
- RPP: £199
SILICA STARTER KIT £25
TOTAL VALUE: £224
SAVING: £115
SILICA PRICE: £199



- 192 CPS 136 COLUMN**
- Citizen Swift 24 - 24 pin - 136 column
 - 192cps Draft, 48cps NLO
 - 8K Printer Buffer + 4 Fonts
 - Parallel Interface
 - Graphics Resolution: 360 x 360dpi
 - Epson, IBM and NEC P24 Emulation
 - Colour Output Available
 - FREE Silica Printer Starter Kit**
- RPP: £349
SILICA STARTER KIT £25
TOTAL VALUE: £374
SAVING: £115
SILICA PRICE: £349

INKJET PRINTER



- 360 CPS 80 COLUMN**
- Citizen Project - 80 column
 - 360cps Printing on Plain Paper
 - 30 Nozzle Head - Whipple Quiet 470dB(A)
 - 8K Printer Buffer + 3 Fonts
 - Optional HP Compatible Font cards
 - Parallel Interface
 - Graphics Resolution: 300x300dpi
 - HP Deskjet plus emulation
- RPP: £359
SILICA STARTER KIT £25
TOTAL VALUE: £384
SAVING: £115
SILICA PRICE: £359

NOTEBOOK PRINTER



- 64 CPS 80 COLUMN**
- Citizen P40 Notebook Printer
 - Non-impact Printing on Plain Paper
 - 53cps LQ - 4K Buffer + 2 Fonts
 - Rear and Bottom Paper Loading
 - Parallel Interface
 - Graphics Resolution: 360 x 360dpi
 - Epson, IBM, NEC P24 & CEL Emulation
 - Powered From Mains, Battery or Car Adapter
- RPP: £219
SILICA STARTER KIT £25
TOTAL VALUE: £244
SAVING: £115
SILICA PRICE: £219

FREE! STARTER KIT



- AMIGA PRINT MANAGER**
- WORTH £14.10
- The Amiga Print Manager drastically reduces the amount of time it takes to print. It also allows you to print multiple copies of the same page, and even lets you print to different destinations. It's a must-have for any Amiga user.
- RPP: £14.10
SILICA STARTER KIT £25
TOTAL VALUE: £39.10
SAVING: £115
SILICA PRICE: £14.10

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- FREE OVERNIGHT DELIVERY:** On all hardware orders shipped in the UK mainland.
- TECHNICAL SUPPORT HELPLINE:** Team of technical experts at your service.
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- THE FULL STOCK RANGE:** All of our requirements from one supplier.
- FREE CATALOGUES:** Will be mailed to you by email - software and peripheral details.
- PAYMENT:** Major credit cards, cash, cheque or monthly terms.

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



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



OBJECTS *Desire*

FALCON

As you can see, Falcon doesn't come in a peculiar blurred shade of mud as reported elsewhere.

It does, however, come in the standard STE case, although Atari tell us that they are in the process of redesigning it.

Anyway, as any psychology professor can tell you, it's what's inside that counts.

Falcon is set to bring a new world of video and audio entertainment to the market.

Finally there's a machine that is a worthy successor to the ST.



WIZBALL got married, had a kid...

WIZKID

WIZKID IS A GAME THAT IS SERIOUSLY OFF ITS TROLLEY!
 "IT REALLY IS FUNNY... hilarious in places. You can play it again and again and always find something new... I absolutely love this game to death... it is the most original, funny and clever arcade game I've seen in years. Buy it now! 99% THE ONE
 "WILD GRAPHICS AND AN EVIL SENSE OF HUMOUR!"
 "The most refreshing thing in years, and so individual it's as much fun to play as it obviously was to write. If you don't buy WIZKID, your life will be a lot poorer." 91% AMIGA POWER
 "UTTERLY MAD AND EXTREMELY ORIGINAL... ADDICTIVE GAMEPLAY AND STONING GRAPHICS"
 "A truly 90s game... definitely one for the collection." 92% ST FORMAT

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