

ST FORMAT

ATARI INTERVIEW

Darryl Still speaks exclusively
about Atari's future plans

PROTOS SHOWCASE

Revealed! Medusa's
Hades and C-Lab's
Falcon Mk X



MIDI MASTERCLASS

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REVIEWED THIS MONTH:

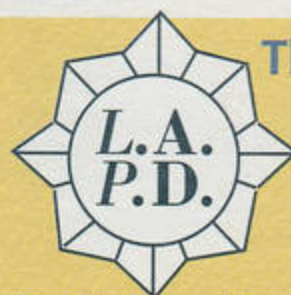
EASE 4 ● LINUX CD ● GAS
● CLIP-ART CD ● EPSON STYLUS
COLOUR 2 ● PLATONIX ● TEAM: NEW
SEASON EDITION ● ALIEN THING
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MEN CAN'T JUMP ● DEADLAND
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games

• • ARCADE • • • • •

- G.417 STAR VOYAGE: Intergalactic action - requires 2 joysticks (Ex Star Trek - TNG). (2 disks/£3.00, 1Mb)
- G.413 COMBAT: Fast action military shoot 'em up in style of Operation Wolf
- G.410 PACMAN ON E: One or two player classic 'PacMan' with sampled music
- G.405 ULTIMATE ARENA: Beat 'em up in the style of 'Mortal Kombat' (STE, 1Mb, S/W).
- G.403 SQUARE OFF: The ultimate tumbling block 'Tetris' game (STE, 1Mb) (2 disks/£3.00).
- G.398 ASTEROIDIA (STE): Classic asteroid blasting action - order G399 for STFM version (1Mb, S/W).
- G.400 FRANTICK (STE): Superb fast action kinetic combat simulator - order G401 for STFM (1Mb) (2 disks/£3.00).
- G.247 MEGAPEDE: The classic blast the caterpillar 'Centipede' game (1Mb).
- G.395 DYNABUSTER: Bomb laying and dodging arcade game (STE, 1Mb).
- G.366 DAVE MUNSIE GAMES: 9 games from the master programmer, including Frogger (1Mb).
- G.355 WING LORD: Aerial duelling game in the style of the classic 'Joust'.
- G.380 STARBALL: Pinball game - arguably the best PD game on the ST!
- G.381 MAX: Help Max find his girlfriend. A 'cute' arcade platform game (1Mb).
- G.333 SUPER PSYCHO KART: High speed platform game to rescue piglets (1Mb).
- G.286 ROCKFALL - SPECIAL EDITION: Tunnelling/diamond collecting puzzle game.
- G.281 PSYCHO PIG: Platform shoot 'em up with Rambo-esque pig. (2 disks/£3.00).
- G.279 OPERATION GARFIELD: Frantic 'Operation Wolf' type shoot 'em up action. (STE).
- G.80 TETRIS & PILE UP: Two very good versions of the 'Tetris' arcade game.
- G.171 HACMAN II: 1 megabyte version of PacMan, 100 new levels!
- G.110 LLAMATRON: 100 levels of fast arcade action with wicked sound FX.
- G.201 BLATI: 'Tetris' style three in a row, falling blocks with many added features.

• • FANTASY/ROLE-PLAY • • • • •

- G.425 ANORAKS OF DOOM: First person view fantasy role-playing game. *NEW* (2 disks/£3.00)
- G.416 DANGIMERE: Detailed fantasy role-playing game. (1Mb, 2 disks/£3.00)
- G.412 NISHIRAN: Classic sci-fi, first-person view role-playing game. (1Mb) (2 disks/£3.00).
- G.431 REALMS OF REALITY: First-person view dungeon exploration and monster-bash.
- G.351 TOWERS: First-person view role-playing fantasy adventure game (1Mb) (2 disks/£3.00).
- G.308 WALLS OF ILLUSION: The ultimate 'Dungeonmaster' clone with English instructions (1Mb).
- G.426 WYRD WAYS: Magical combat in a maze of sliding walls (1Mb, S/W).
- G.5 MORIA: A complex fantasy D&D based role-play game. (1Mb).
- G.370 MINDMELT: Fantasy adventure with an overhead view.
- G.288 DARKLYTE: 'Space Crusade' type droids wargame.
- G.262 ALIENS: Space Marines v Aliens strategy combat game.
- G.115 MYSTIC WELL: Complete 'Dungeonmaster' style adventure game.

• • PUZZLES • • • • •

- G.404 MEMORY RECALL: Challenging memory test with digl pics & sound. (1Mb)
- G.387 SPACESWEEPER: A challenging 'Minesweeper' game in three dimensions!
- G.315 SKULLS: Addictive up to date reworking of Landmines/Minefield (1Mb STE).
- G.311 JIGSAW: A computerised jigsaw puzzle (1Mb).
- G.269 QUIZMASTER: Multi-choice answer general knowledge quiz (STE).

• • ADVENTURES • • • • •

- G.411 ROBOT REVOLT: A sci-fi text adventure. *NEW*
- G.394 THE SECRET PARK: A text adventure with graphics for children.
- G.225 CAILYNVORN: D&D type fantasy adventure set on a far earth-like planet.
- G.321 INVESTIGATION: Graphic adventure in the style of Sierra On-Line. (2 disks/£3.00).
- G.200 ANARCHY ACADEMY: 3D graphic adventure to blow up the school!
- G.140 A NIGHT ON THE TOWN: An adventure with the opportunity to meet the girl of your dreams and ...well, the rest is up to you.
- G.222 GRANDAD AND THE QUEST...: 3D graphics adventure by Ian Scott. Shareware (1Mb).
- G.303 GRANDAD AND THE SEARCH FOR THE SANDWICHES: Graphic adventure (1Mb) (2 disks/£3.00).
- G.91 QUEST FOR THE HOLY GRAIL: Pythonic madcap humour.
- G.202 UNKNULIAN UNDERWORLD: Highly rated large scale text fantasy adventure.

• • STRATEGY & OTHERS • • • • •

- G.432 MIDI-WIZ: Fantasy war game with similarities to 'Civilisation'. *NEW*. (1Mb, S/W).
- G.131 STAR TREK - THE GAME: Defeat the Klingon threat to the galaxy (1Mb).
- G.427 AIR TRAFFIC CONTROLLER: Control comings and goings at a busy international airport.
- G.386 STAR TREK - KLINGON WARS: A Starship Enterprise battle simulation (1Mb).
- G.431 REALMS OF REALITY: 'Dungeonmaster' type exploration and adventure. (1Mb).
- G.421 WAR: A wargame construction kit. (1Mb).
- G.390 INTERNATIONAL MANAGER: European Nations/World Cup management game.
- G.391 ANCIENT GAME OF GO: Two computer versions of the Oriental game (Gnugo, Amigo).
- G.344 CHESS-MATE: A chess/draughts game analysis tool.
- G.332 CAESAR: Strategy game set around the Mediterranean in 200BC (S/W).
- G.330 GNU CHESS: French chess playing program for all levels.
- G.388 STRATAGEM: Two player strategy world war game. (2 disks/£3.00).
- G.329 PEGASUS: Space strategy game. Seek out and colonise planets. (1Mb) (2 disks/£3.00).
- G.287 THE COARSE ANGLER: Angling simulation game (1Mb).
- G.237 CHAOS: Madcap game of battling wizards by Martin Brownlow (1Mb or 0.5Mb).
- G.324 IMPERIAL CONQUEST: Complex ancient Mediterranean game of conquest (S/W).
- G.325 SOCCER MANAGEMENT: A complex simulation of soccer management (S/W).
- G.217 THE MAZE: 3D adventure game loosely based on 'The Crystal Maze'.
- G.173 PENGUINS: Move your penguins around the screen 'Lemming' fashion.
- G.10 VEGAS: Roulette, poker, blackjack and slots... without the Nevada sand!

budgie uk

- BU.119 FOOTBALL TACTICIAN 1: The original £19.95 Premier League version of the soccer management game!
- BU.111 INTERNATIONAL CRICKET II: Animated 3D game (1Mb).
- BU.50 SPACE INVADERS: Classic arcade action by Robert Leong.
- BU.90 MATCH IT: Possibly the most addictive game ever devised.
- BU.89 HORSE RACING SIM: Quality sim from the sale ring to the track.
- BU.30 QUEST FOR GALAXIA: The 'Galaxians' return to your ST.
- BU.70 PACMAN ST: The definitive version by Robert Leong.
- BU.71 DARK WARS: Role-playing adventure with a 3D view.

ST FORMAT TOP 10 GAMES - ONLY £12.00

A special bargain bundle of the top 10 PD and shareware games as selected by ST Format magazine in issue 75. They are 4-7-11, Colortris, Drachen, Grandad and the Quest for the Holy Vest, Grandad and the Search for the Sandwiches, Llamatron, Ozone, Starball, Stello, Super Breakout and Towers.

dave munsie games

Munsie Games, some of the most playable and fun-filled games on the Atari, can now be registered via L.A.P.D.! Send us the code number from your game and we'll send you the pass-code giving access to extra lives, extra levels, etc.

Cost is just £6.00 per title.

Games that can be registered so far are Asteroidia, Frantic and Square Off.

All registrations receive a FREE copy of Dave's SEA WOLF game!

Pre-registered versions of these incredible games may also be purchased as follows:

- L119 ASTEROIDIA: The classic game 'Asteroids' with 3D rendered asteroids. (STE, £6.00).
- L120 ASTEROIDIA: The STFM version of the above. (STFM, £7.00).
- L121 FRANTICK: Fast action kinetic combat simulator Frantic. (STE, £7.50).
- L122 FRANTICK: The STFM version of the above. (STFM, £7.50).
- L123 SQUARE OFF: Falling block puzzle game in the style of the classic 'Tetris'. (£7.50).

FREE MUNSIE DISK'O'ZINE

For a free copy of Dave Munsie's magazine disk with information and screen shots about his games just send a blank disk and an s.s.a.e. to the L.A.P.D. at the address above.

L.A.P.D. Licenceware Games

Possibly the best licenceware range on the ST

Licenceware means that for every copy you buy the author receives a royalty payment from L.A.P.D. This ensures that the authors receive suitable recompense for their hard work thus encouraging them to produce even more excellent programs for the Atari range of computers. It saves you all the fuss and hassle of shareware payments. Licenceware programs are complete and ready to run, there are no hidden fees!

strategy games

- L.128 BLUDGEON V.2 (1Mb, £3.00): Computer moderated fantasy combat system for one or more players. Includes two free adventure scenarios.
- L.129 BLUDGEON ADVENTURES #1 (£3.00): Six additional solo adventures for the above BLUDGEON game. *NEW*
- L.124 THE SANDS OF MARS (£3.00): Govern a Martian mining colony.
- L.132 SEA WAR (1Mb, £2.50): Hi-tech version of 'Battleships'. Design and fight your own fleet. *NEW*
- L.105 CONQUEST 2 (1Mb, £3.00): Rule over a medieval kingdom's economy and armies.
- L.104 WAR OVER THE REICH (£3.00): Plan and execute a campaign of WWII raids against twelve German cities.
- L.98 WORLD AT WAR (£3.00): A game of economic and military strategy on a grand scale for one to seven players.
- L.22 GRAND PRIX MANAGER (£2.50): Simulation game of running a Formula One Grand Prix team.
- L.79 DARKLYTE II (1Mb, £3.00): A sci-fi space/strategy game in which you must destroy the Darklyte forces. Reminiscent of the 'Space Crusade' game.
- L.118 THEY SOLD SEVERAL (£3.00): By Ben Weston. The five games on one disk: THE UNMAGNIFICENT 15, a simple wild west shoot 'em up game. CLAN, a Hamurabi ruling type game. QUEST KNIGHT, A fantasy game. LOGIC PROBLEMS, five challenging electronic puzzles. LOGIC PROBLEMS II, more of the same.
- L.42 OUTWORLD (£2.50): An arcade/strategy game in which you take control of a space colony.
- L.53 HOT DOG (£2.50): A game of greyhound racing for one to nine players.
- L.59 ARTHUR OF THE BRITONS (1Mb, £3.00): A strategy game with arcade sequences.
- L.60 CONQUEST (1Mb, £3.00): A 'God' game in which your task is simply to survive for one year.

arcade games

- L.130 DESERT HAWK (1Mb, £3.00): Control a Black Hawk helicopter through different missions.
- L.93 PROJECT PURIFY (£3.00): Attempt to clear twenty sectors of space debris 'Asteroids' style.
- L.87 STORM 94 (1Mb, STE, £3.00): Arcade action clearing aliens from a stricken space-freighter.
- L.91 STORM 94 (1Mb, STFM, £3.00): As L87 above but for the STFM.
- L.86 FLUFFIES (1Mb, £3.00): A platform game across many levels as you guide a blue fluffy creature in an attempt to rescue his girlfriend.
- L.80 MUNCHKIN (£2.50): The perpetually popular Pacman pastime!
- L.116 STREETS (£3.00): Drive your motorcar around the streets collecting diamonds and blasting.
- L.117 FISH TANK (£3.00): A game for younger players who must find food for their fish without getting eaten.
- L.70 CHRONIC INVADERS (£2.50): The 'Space Invaders' return in this reworking of the all time classic computer game.
- L.61 3D ASTEROIDS (1Mb, £2.50): Based on the classic 'Asteroids' game - but in 3D!

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adventure & role-playing games

- L131 WANDERING SCIENCE (£2.50): Solve the puzzles on an alien vessel. A graphic adventure.
- L125 PATHS OF GLORY (£3.00): A sword and sorcery role-playing game.
- L115 DEMON II (1Mb, £3.00): A fantasy adventure game with an overhead view and detailed point and click interface.
- L114 TIME MACHINE (£3.00): A classy text based adventure with over 100 locations and over 40 graphic screens.
- L112 CRAGHAVEN (£2.50): High adventure in a fantasy land.
- L97 STONE COLD SOBER (£4.00): A traditional adventure game but with a point and click interface.
- L69 BIO-HAZARD (1Mb, £3.00): A first person perspective game to clear a space freighter of alien creatures.
- L21 DEAD OR ALIVE (£3.00): A large, complex and humorous text adventure game.
- L31 THE CURSE OF AZRIEL (2 disks, £4.00): A graphic fantasy role-playing/trading game. (Now FALCON compatible).
- L41 MURDER ON THE ORION EXPRESS (£3.00): A murder mystery game with an almost infinite variety of solutions.
- L50 DEMON (£3.00): Trapped in a stone cell, your first task is to escape before the resident demon gets back. 3D view.

puzzles

- L110 QUICK FLIP (£3.00): A mind-bending tile flipping game.
- L106 CRAZY LETTERS (1Mb, £3.00): A word search game to find a seven letter word hidden behind a grid of squares.
- L102 DCS COMPILATION #4 (£3.00): On this disk are: BRAIN DAMAGE, test your brain to the limit. SHAPES, make shapes from 16 different pieces. LINK, form a chain across the screen. QUIZICAL, multi-choice question and answer game.
- L101 DCS COMPILATION #3 (£3.00): On this disk are: OUTRAGEOUS FORTUNE, a collection of logic and maths challenges. MATCH MAKER 2, match symbols on hidden cards. FRAME OF MIND, a gambling game. CRYPTOGRAM, based loosely on the TV program 'Countdown'.
- L100 DCS COMPILATION #2 (£3.00): On this disk are: QUEST FOR KNOWLEDGE (1Mb), seek out 12 hidden icons from mazes. REBOUND, a bat and ball game. GALACTIC FRUITBOWL, a combination of the fruit machine and the trivia quiz. GREY MATTER, a word game.
- L99 DCS COMPILATION #1 (£3.00): On this disk are: ACECHASE, a gambling program. THE WIZ, a fun program comprised of ten tests. MINDLOCK, a quiz program. MATCH MAKER, match up hidden symbols.
- L96 TILES IN SPACE (£3.00): A computer version of the sliding tile puzzle game.
- L94 GRID MANIA (£3.00): A word search game for 1 or 2 players.
- L92 BAMBOOZLE (£3.00): A puzzle game where you must turn all the symbols on a 25 square grid to higher scoring ones.
- L85 ZUFFERS (£3.00): A puzzle game where you must rescue microscopic creatures.
- L84 WORD WIZARD (£3.00): A one or two player word guessing game with different levels of difficulty.
- L83 ZIGGY (£3.00): A puzzle game of turning globes.
- L75 FREAKED OUT (£3.00): A joystick controlled puzzle game.
- L74 NICE BYTES MEGA PACK #1 (£3.00): On this disk: ATOMOMIX, place atoms of varying energies onto a grid. PURE LOGIC, a game based on Boolean logic. REGA, a tile flipping game on a 5 x 5 grid. LOGICA, a three phase logic/puzzle game.
- L66 HEARTBREAK (£3.00): An infuriating and highly addictive puzzle game played on a 7 x 7 grid.
- L11 PI SQUARED (£2.50): A puzzle game. Convert all the symbols to Pi.
- L14 DICEY (£2.50): A challenging dice game in the style of the classic 'Yahtzee'.
- L40 GRIDWORD (£2.50): A word game in which you attempt to make the longest word possible.
- L52 ENERGETIX (£3.00): A puzzle game that challenges you to find those exact procedures to start a nuclear reactor.
- L58 NICE BYTES #1 (£2.50): On this disk: GRIDWORD: A word game for up to 4. REGA: A tile-flipping strategy game.

art & graphics

- A99 MINIPICS II: All resolution picture converter and cataloguer (1Mb).
- L77 AUTO-STEREOGRAM: Create your own 3D 'Magic Eye' pictures. (1Mb) (£3.00).
- A95 VISUAL ILLUSIONS: A collection of 24 'Magic Eye' 3D pictures.
- A98 STEREOGRAM ANIMATIONS: Now see 'Magic Eye' pictures move!
- A36 KOZMIC 4: Complete version of the stunning psychedelic pattern creator.
- A1 ANI ST: Commercial quality animation program (once cost £60.00 to buy!).
- A84 GEMVIEW: Load, view, convert just about any picture format (1Mb).
- A45 CRACK ART: Demo version of the excellent German art program.
- A75 POLYFILM by Martin Brownlow. Make films from multiple 3D polygon objects.
- A44 FANTASY SLIDESHOW: Spectrum 512 pictures on fantasy theme (over 16's only).

clip art

- A106 CHRISTMAS CLIP ART (3 disks/£4.50): Over 150 images in PCX or IMG. (Please state which format).
- A103 OFFICE CLIP ART 33: IMG or PCX images of office related items. (Please state which format).
- A100 ANIMALS CLIP ART (5 disks/£7.50): Over 170 IMG or PCX images of animals. (Please state which format).
- A101 ASTROLOGY CLIP ART (3 disks/£4.50): 36 IMG or PCX images of zodiac signs. (Please state which format).
- A102 SPACE CLIP ART: 38 images of the final frontier in PCX or IMG format (please state which format).
- L26, L27, L28 TYPE WRITE CLIP ART: 4 disk sets of quality clip art in IMG format. (£10.00 per set).

music

- S4 YAMAHA PSS: Patch editor and facility to print tablature music.
- S144 EKSEQ 1: A 100 track, 240ppqn sequencer with many features.
- S145 OPTONIX MUZAK: Rip and play music from other programs.
- S8 NOISETRACKER: Soundtracker .MOD player with eight starter tunes.
- S7 ACCOMPANIST: 16 Voice Henry Cosh sequencer (full instructions on disk).
- S19 ALCHIMIE JR: Impressive Swiss multi-window, multi-task sequencer (1Mb).

utilities

- U80 ZORG: A 'Disk Doctor' type organiser.
- U77 THING: Alternative desktop (1Mb).
- L111 SUPER HACKER: Replace a picture in almost any game or demo with your own! (£3.00).
- U67 ST TOOLS: An exhaustive collection of Atari ST utilities.
- U53 TERADESK V1.36: Replacement desktop for the ST/STE (1Mb).
- U20 FASTCOPY 3: Excellent disk copier for cover disks.
- U48 PREMIER PACKERS: 13 of the best program packers, plus a de-packer.
- U42 PICTURE HUNTER: Rips picture screens from other programs.
- U66 BEFORE DAWN: Animated screen saver that will use your own animations.
- U47 PROBE ST: Handy utility. Grabs music/graphics, disk/memory editor, etc.
- U52 WALT & TURTLE: Fast hard disk back-up utilities.

ST FORMAT PRODUCTIVITY PACK

(TOP 40 UTILITIES) FOR £25.00

A special bargain pack of the top 40 PD and shareware programs (excluding games) as selected by ST Format magazine in issue 75. The programs are: Atomik 3.6, Autosort, Cardfile, Chameleon, Compact Office Manager, Crack Art, DB Master, Easy Text, Elf Backup, ESS Code, Everest, Fast Copy 3, GEM Spool, GEM View, Hypergem, Idealist, Kivi Qwk, LHArc, Marcel, Magic Story Book, Mouse-ka-Mania, Movie Master, Octalyser, Opus, POV Ray Trace, ProCalc, Revenge Document Displayer, Sagrotan, Second ST Manual, Selectric, Soundlab, SpiritEd, ST Diary, Superboot, Sweet 16, Teddy Term, Teradesk, Tom Shell, Turbo 407 and X Control.

miscellaneous

- M189 NATIONAL LOTTERY SIMULATOR: The fun way to pick your numbers. (1Mb, 2 disks/£3.00).
- M177 LOTTERY COMPANION: Valued statistical assistance with your lottery entries.
- M183 HOUSE EXPENSE MANAGER: Daily household expense management program.
- L103 LEXICON: The ideal program for word game fanatics. Solve crosswords, anagrams etc (£3.00).
- L111 SUPER-HACKER: Put your own picture into demos, games etc. (£3.00)
- M146 AWARD MAKER: Design and print awards certificates.
- M155 ROUTE FINDER: Route finding program for England, Wales and Scotland.
- M161 THE GARDENER: A special database for gardening enthusiasts.
- M175 FISHERMAN'S DATABASE: The ultimate record program for the keen angler.
- M19 AIR WARRIOR: Flight sim with World War II aircraft.
- L17 ADDRESS BOOK: Neat and easy to use database for names and addresses (£2.50).
- L18 CIRCUIT: Easy to use electrical circuit diagram producing program (£2.50).
- M93 STITCH MATRIX: Pattern making program for knitting machines.
- M77 THE BIBLE: King James authorised version (3 disks/£4.50).
- M76 FORM-FINDER: Proven horse race analysis and prediction program.
- M81 NEWSDISK: Construct your own newsletters and magazine disks.
- M100 GERMAN TRANSLATORS: Three programs to translate German text to English.
- M26 GENEALOGY: Two programs for the family historians to trace their forebears.
- M5 YOUR SECOND ATARI ST MANUAL: Text files to supplement the official manual.
- M17 WORD PUZZLE: Stuck with word games? Then this disk may help.
- M30 EXTRA WORD LIST: 70,000 extra words to use with disk M17.
- M190 YALE STAR CATALOGUE & STARCHART: Programs for the serious astronomer.
- M111 NORTHERN & EQUATORIAL STAR ATLAS: Superb serious astronomy program S/W.
- M1 PLANETARIUM: Excellent, easy to use, astronomy program.
- M8 ASTRONOMY & SKYWATCH: Programs for the technically minded sky watcher.
- M123 THE BIBLE: Complete King James, old and new testaments. (3 disks/£4.50)
- M176 FUSCHIAS DATABASE for the keen specialist gardener (or breeder of anything).
- L89 GOLF: for the golfing sportsperson. (£3.00)

programming

- F53 STOSTESTERONE: A magazine disk devoted to programming STOS on the STE (issues 1 & 2 available). ***NEW***
- P53 IMAGINARY WORLD: Easy to use language to write your own role-play adventures.
- P44 GFA V.2: Full version of language with tutorial & compiler! (N.B this disk is not PD - L.A.P.D. have permission to distribute it.)
- L68 SPRITE WORKS: New commands for games writers using GFA V3+ (2 disks/£7.00).
- DSP1 SOZOBON C: A complete C compiler with documentation.
- P24 MENU-MAKER: Make your own menus with music, sprite and scrolling message.
- P33 ZX SPECTRUM EMULATOR: Emulate the old Speccy on your ST/STE (1Mb).
- P17 68000 PROGRAMMING COURSE: 10 'How to do it' document files.
- P19 GFA EXPERT: Massive text file and help routines for GFA-Basic 3.0.
- P16 C ADVENTURE TOOL KIT: Write professional quality adventures in C.

business

- M182 ST DIARY: A computer diary for the busy executive.
- W21 MARCEL: Super word processor with built in spell checker.
- M106 ACCOUNT-ABILITY: Fully featured accounts program. 10 accounts, 2,000 transactions!
- M148 INVOICE MASTER: Excellent invoicing system for small businesses.
- M13 OPIUS 2000: A superb spreadsheet program (1Mb).
- M83 INVENTORY PRO: A stock control system.
- U23 DOUBLE SENTRY: Impressive accounts package for the small company (no VAT).
- U33 FAST BASE: A powerful and flexible database.
- W3 FIRST WORD: Word processor that set the standard for others to follow.
- W24 GDOS FONTS: A large assortment of fonts. (2 disks/£3.00)

educational

- M188 G.C.S.E MATHS & CHEMISTRY TUTOR: Two study aid programs.
- M187 TYPING TUTOR: Several courses to improve your skills.
- L20 SUPER SPELL: Teaching games for the 4 to 9 year old (£2.50).
- L37 SUPER FUN: More teaching games for the 4 to 9 year old (£2.50).
- G266 WITCHES, MICE & FAIRY TALES: Games for younger users.
- G83 NOAH'S ARK: Collect the animals, two by two - addictive for adults too!
- M95 ABOUT THE HOUSE: Excellent collection of programs for young children.
- M28 KIDZ EDUCATIONAL: Alphabet, Maths Test, Numerical-Go-Round & Number Maze.
- M37 KIDZ DISK #1: Colouring Book, Spell Pic, Word Pic and Flash Card.
- M42 KIDZ DISK #2: Dot to Dot, Keyboard Capers & Matching.
- M67 BODY SHOP: Graphic quiz-type human anatomy tutor.
- M104 SOLAR SYSTEM GEOGRAPHY: Effects of the sun & moon on tides, seasons, etc.
- M16 KIDZ COMPILATION: Kid Graph, Grid, Music, Notes, Piano, Publisher, sketch and story.. all on one disk!
- PRO.27 EARLY LEARNING MATHS 2: by Philip Rankin for 9-12 years.
- L01 ROBOT MATHS: Maths tutor for children aged 6+ (£2.95).
- L02 MOON LETTERS: Spelling game for ages 5+ (£2.95).
- L04 ROBOT WORDS: Hangman in a modern format (£2.95).
- L08 ALL BLOCKED UP: Mathematical puzzles for the young (£2.95).
- L10 DROP DOWN WORDS: Spelling/memory game for youngsters (£2.95).
- L12 MATHS FUN: Maths for children 4 to 7 years (£2.95).
- M20 G.C.S.E. STUDY AIDS: Help with Algebra, Trigonometry and Geometry.
- M153 WORLD WAR II: Home front study pack for Sec. school work (3 disks/£4.50).
- M7 HISTORY FILE: Investigate a historical murder in Scotland (3 disks/£4.50).
- M86 DEATH OF A PRESIDENT: Investigate the Kennedy assassination (3 disks/£4.50).
- M114 FRANGLAIS 3 & 4: French language tutor programs.
- M123 C.I.A. WORLD FACTBOOK: Facts and figures on countries (4 disks/£6.00).
- W22 HOMEWORK: A word processor for the younger user.

communications

- C28 INTERNET ACCESS PACK: WWW access for the Atari. ***NEW***
- L113 BBS DIRECTORY: Money saving directory of UK BBS's (£5.00).
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PRINTED CATALOGUE now available, listing hundreds of PD/Shareware/Licenceware titles. **Only £1.00** including P&P or 50p if ordered with disks. **Please state if you have a Falcon.** Please make all cheques/postal orders payable to L.A.P.D. Credit cards welcomed.



ST FORMAT

REVIEWS

- 30 EASE 4**
Discover why System Solutions' replacement desktop remains an indispensable upgrade.
- 32 LINUX CD-ROM**
Run the massively popular UNIX operating system on your Falcon and TT with this packed CD-ROM.



LINUX brings a popular operating system to the Falcon and TT.

- 33 GAS**
Put your foot on the pedal and add groovy new sounds to your compositions.
- 34 ELECTRONIC SPINSTER CLIP-ART CD**
A massive 6,000 IMG files on one CD-ROM.
- 35 EPSON STYLUS COLOUR 2**
Impressive 720dpi colour technology in a compact case, at a compact price. Sounds great to us.
- 36 PLATONIX**
Check out the latest Falcon-only puzzle game.
- 37 TEAM: NEW SEASON EDITION**
The greatest STE football game gets a welcome update for the 1995/6 Season.



Discover what we think of 16/32's latest Falcon release on page 36.

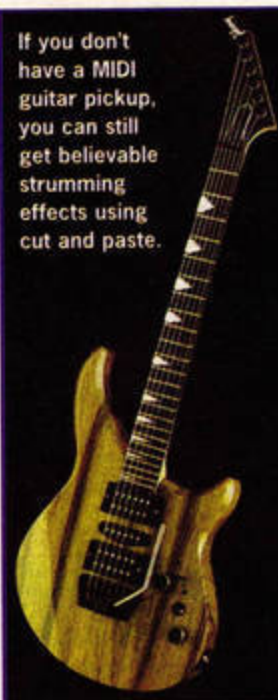
- 37 ALIEN THING: EXPERT DISK**
If, like us, you found the original release of *Alien Thing* too easy, try this. It'll scare you, big time.
- 38 PITFALL**
Run, jump and bash your way past all the opposition in this new Jag platformer.
- 39 WHITE MEN CAN'T JUMP**
Stuart Campbell can't believe how bad this film tie-in is. Find out why we aren't jumping for joy.



Pitfall, the latest pretender to the console platform throne.

REGULARS

- 6 COVER DISK**
All you need to know to get started with this month's Cover Disk.
- 10 NEWS**
Obsession on the Falcon is back on, plus all the latest news from the wonderful world of the Atari.
- 40 PD & SHAREWARE**
A fantastic game based on *Cannon Fodder* and a graphics utility take top honours in this month's low-cost software section.
- 45 ST ANSWERS**
Frank Charlton, in training for coveted title of ST Doctor, returns with another batch of useful remedies for your ST and Falcon hiccups.
- 54 THE SCORE**
Find out all there is to know about this month's fantastic MIDI file giveaway.
- 58 READER ADS**
- 59 ST DIRECTORY**
- 60 MAIL ORDER**
- 61 BACK ISSUES**
- 62 GAMEBUSTERS**
If you're experiencing trouble with the *STario* series, or are desperate to advance your cause in *Evolution Dino Dudes*, look no further than our glorious tips section.
- 65 FEEDBACK**
Karen collates, sifts and analyses the mail, laughs maniacally and replies to those of you brave enough to write in.
- 66 NEXT MONTH**
No-one knows what tomorrow might bring, but you can find out what plans we have for the next exciting installment of *ST FORMAT*.



If you don't have a MIDI guitar pickup, you can still get believable strumming effects using cut and paste.

21 Turn your song-writing dreams into sequencer reality with our MIDI masterclass and Cover Disk software.

DIGITAL DREAMS



FEATURES

13 PROTO SHOWCASE

It's the big show for German ST owners, and John Allen was there to report on all the products worth looking out for in 1996.

18 INSIDE ATARI UK

Frank Charlton probes Darryl Still of Atari UK for his views on the Jaguar's future – and the ST's past.

21 DIGITAL DREAMS

load up your Cover Disk and learn the secrets of great music composition with the help of our MIDI and Music maestro, Andy Curtis.

52 HTML CODING MADE EASY

Frank Charlton continues his authoritative tutorial using last month's Cover Disk *Internet Access Pack*.

56 PROJECT DSP

Paul Hills concludes his series on programming the Falcon's DSP with a look at sound sampling.

ProTOS Showcase



13 The biggest Atari Show in Europe had new TOS-based machines, exciting updates and a host of tasty programs. John Allen reports from Germany.

Inside Atari UK



18 Atari's Darryl Still reveals the company's plans for the future.

COVER DISK 79

THIS MONTH...



BREAKTHRU: An exclusive demo of Software Technology's flagship MIDI sequencer with sample support. All Ataris, 1MByte. Uncompressed size: 725K

TRAPPED 2: Prepare to get seriously addicted to the ultimate light cycles game! All STs, 512K required. Not Falcon compatible. Uncompressed size: 281K

SUPERCARD 3.13: We reckon this is the greatest shareware database ever, and here's the latest version for you to find out why. All Ataris. Uncompressed size: 237K

TIMETALK: Our exclusive demo of this musicians' tool gives you a fully working delay calculator. All Ataris, high resolution only. Uncompressed size: 90K

COMMERCIAL MIDI FILES: MIDI Magic has provided no fewer than 15 commercial MIDI files for your personal delectation. All Ataris, sequencer or FIMP required. Uncompressed size: 138K

HTML FILES: Make the most of last month's *Internet Access Pack* Cover Disk with these example files and images. Uncompressed size: 70K

COLA CALC: Discreet yet easily accessible, this programmers' calculator will suit everyone. Size: 22K

BACK UP: Don't risk losing all that precious data – back up your disk! Size: 12K



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Cover Disk

There's not much left in the January sales now, so why not try out the latest Cover Disk instead, in the dubious company of Nick Peers, aged 23³/₄ (almost)?

Breakthru

By: Software Technology
Machines: All Ataris

Resolution: ST medium/high
Memory required: 1MByte
Uncompressed size: 725K

This month we're proud to offer you an exclusive demo of Software Technology's flagship sequencing package *Breakthru*, which you can use to follow the sequencing guides in our Digital Dreams feature. *Breakthru* also

supports sound samples, so non-MIDI users can also discover what this program is capable of.

I Want It All

Breakthru makes music-making incredibly straightforward, as our cover feature on page 21 demonstrates. Despite the competition from *Cubase* and *Notator*, it has attracted its own loyal followers, chiefly

due to a couple of unique features. The pioneering diamond drag system takes the hassles out of editing of your music, and *Breakthru* is the only sequencing package that enables you to play up to four samples alongside the rest of your music.

Our exclusive working demo version has a number of restrictions. Although you can save whatever you've created (for use with the full version of the program), you can only re-load the first 16 beats of

your composition. Other load/save functions are also restricted, and the Score and Drum Edit pages are disabled. Note that our demo is of version one of *Breakthru*; version two boasts a vastly superior score edit screen.

You'll find a full tour of

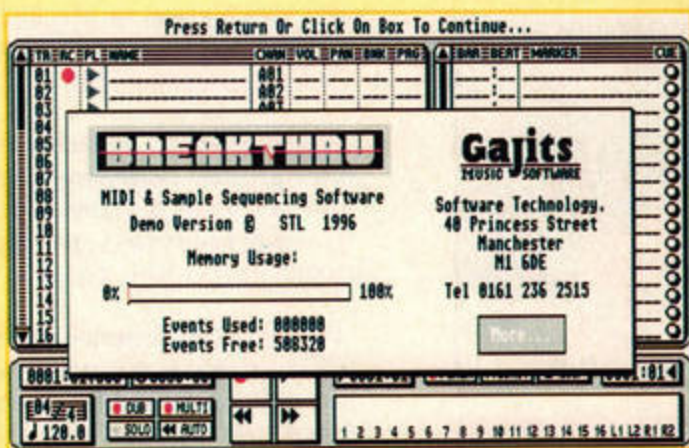
the program on page 22. If you're interested in getting the full version, Software Technology is offering ST

FORMAT readers a £25 discount on *Sequencer One Plus* and all versions of *Breakthru* - see the coupon below for details.

Dearchiving

Because *Breakthru* is so large, you'll need to follow these instructions very carefully if you're dearchiving it to a floppy disk.

First, format two blank disks. Disk one should be formatted to 80 tracks and ten sectors. Next, copy BRK-THRU1.TOS to this disk and



Any sequencer sharing its name with a Queen song has to be good, and *Breakthru* doesn't disappoint.

STE ENHANCEMENTS

Look out for the enhanced version of *Trapped 2* for STE owners, which features sampled sound effects and extra graphics to make the game even better. We've put the extra files on this month's subscribers' Wonder Disk; other readers can get the STE version of the game from Ad.Lib PD (☎ 0191 3702496).

Save £25 on Software Technology Sequencers

As a special offer for ST FORMAT readers, Software Technology is making several software programs available at a £25 discount. To qualify for these special prices, fill in this coupon (photocopies not acceptable) and send it, along with a cheque made payable to Software Technology, to: ST FORMAT Special Offer, Freepost MR9455, Manchester M1 8DJ.

Program (please tick)	Normal Price	Offer Price
<input type="checkbox"/> Sequencer One Plus	£49.95	£24.95
<input type="checkbox"/> Breakthru 1	£99.95	£74.95
<input type="checkbox"/> Breakthru 1 Plus	£129.95	£104.95
<input type="checkbox"/> Breakthru 2	£129.95*	£104.95
<input type="checkbox"/> Breakthru 2 Plus	£149.95**	£124.95

(* RRP 149.95 **RRP 179.95)

Please add £3.50 per order for P&P.

Name:

Address:

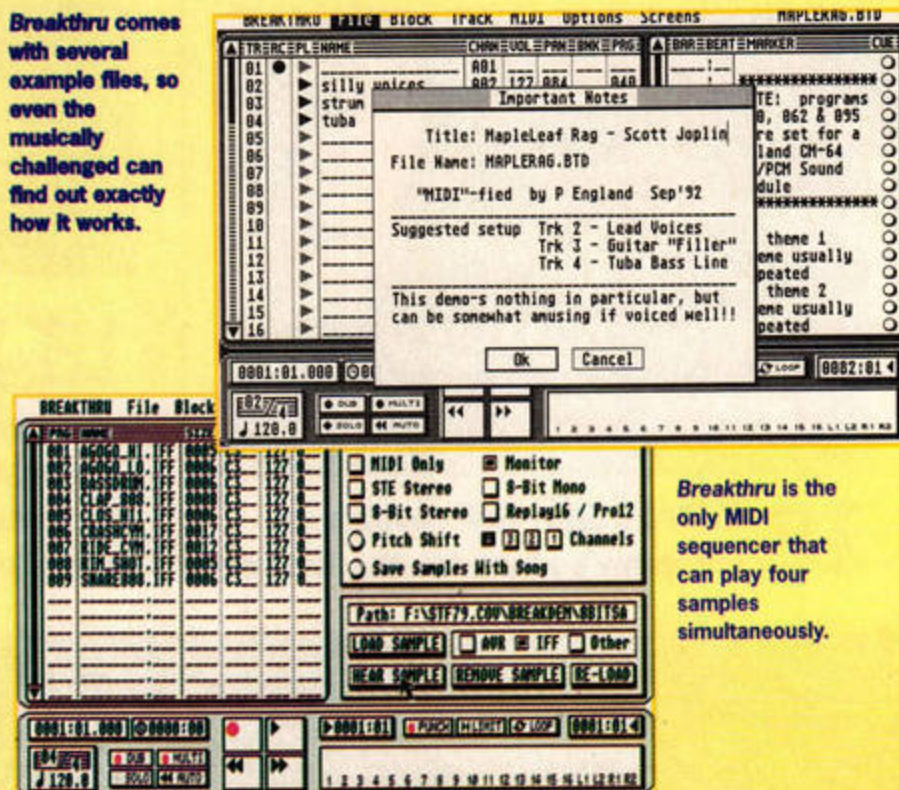
Postcode: Tel:

Total enclosed:

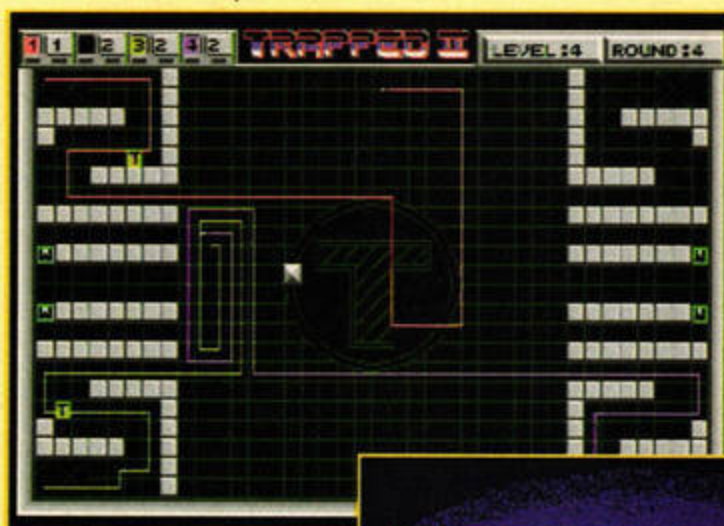
Alternatively, phone ☎ 0161 2362515 and quote reference number S1PSTF196 for your £25 discount.

Please tick if you do not want to receive direct mail from other companies ☐

Breakthru comes with several example files, so even the musically challenged can find out exactly how it works.

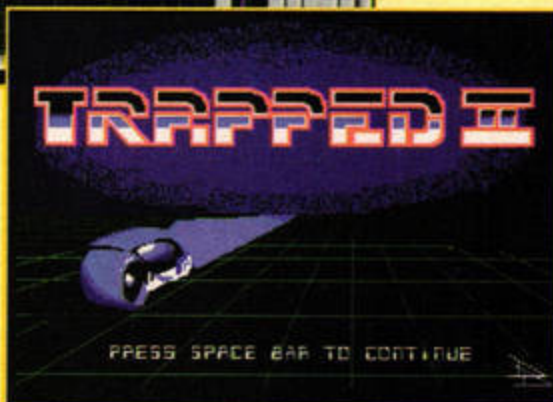


Breakthru is the only MIDI sequencer that can play four samples simultaneously.



If you like light cycles, you'll love *Trapped 2*. If you thought you hated light cycles (like me), you'll still love *Trapped 2*. Bizarre, huh?

TRAPPED II



double-click on it to dearchive the contents. You must then delete BRKTHRU1.TOS from the disk.

Second, copy BRKTHRU2.TOS to the other blank disk and double-click on it to dearchive BREAKTHR.PRG. Copy this file across to disk one, and hey presto, *Breakthru* is ready to rock and roll.

Trapped 2

By: DE Jones
Machines: All STs (not Falcon compatible)

Resolution: Low
Memory required: 512K
Uncompressed size: 281K

Welcome to Tron!
Trapped 2 is the ultimate ST *Light Cycles* clone, and it gives this old classic a welcome kick up the backside. You can battle it out with up to three other players – just remember to cut them up at every opportunity. (Karen

should be a natural at this; she failed her driving test six times – Mary)

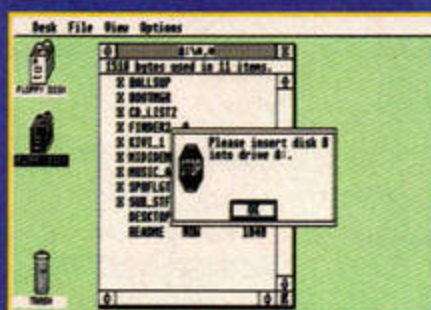
Griddled bikes

Conceptually very simple, *Trapped 2* puts you in control of a light cycle on a two-dimensional grid. As you travel across the screen, your cycle leaves behind a lethal beam of light which neither you nor your three opponents may cross. The aim of the game is to survive the longest, which is generally achieved by trapping the other cycles and keeping yourself out of trouble.

Up to four human or computer-controlled players can take part, and you can control your cycle by mouse,

joystick or keyboard. There are loads of options: you can set up tournaments, change graphics and even design your own levels. The game itself features various bonuses to speed you up, transport you to a different

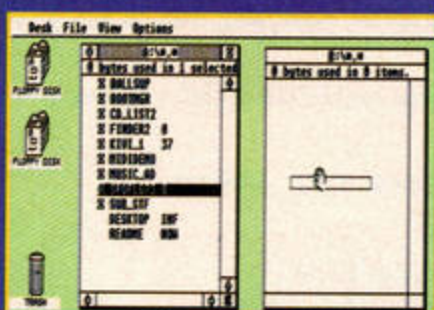
COVER DISK KNOW-HOW



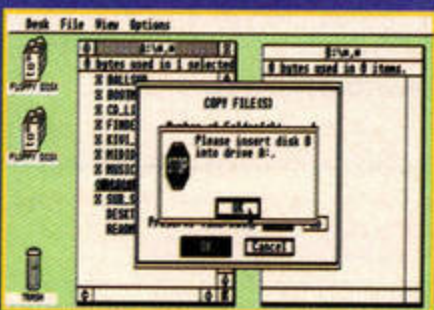
1 Assuming you have a single-drive system, insert your Cover Disk back-up into drive A. Double-click on the drive A icon to access it. Next, double-click on the drive B icon.



2 When prompted, remove the Cover Disk and insert your blank disk into drive A. Click on OK and a separate window should appear with the contents of the disk within it.



3 Next, click and hold down the left mouse button on the file or folder you wish to copy across to your blank disk. Drag the file over to the drive B window before releasing the button.



4 An alert box will tell you to insert disk A (your Cover Disk). Do so, click on OK and follow the on-screen instructions.



5 Just follow the instructions on the screen until the file or folder you wished to copy has been transferred. It'll be displayed in drive B's window. Now you're ready to dearchive your software.



6 Ensure your blank disk is in drive A and double-click on the drive A icon to open up its contents.



7 Double-click on the TOS file to begin decompressing it. A list of files will be displayed as they are decompressed. You'll then be asked to press any key.



8 The relevant folders and files should now appear in drive A's window. To free up more disk space, drag the TOS file over the trashcan icon to delete it.

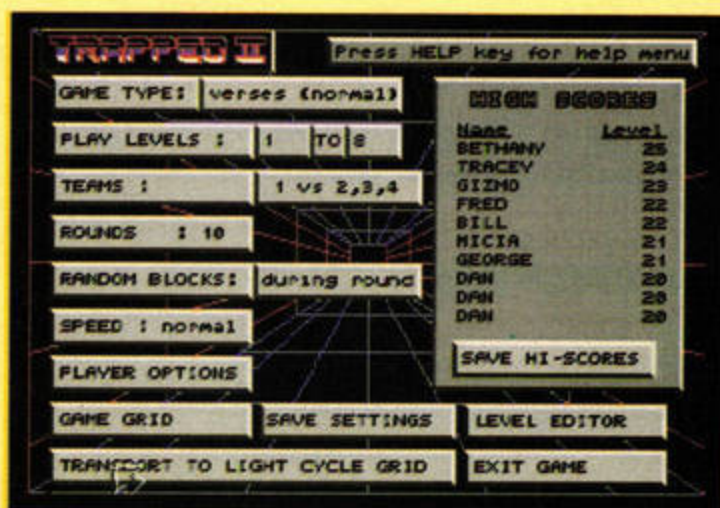
PROBLEMS?

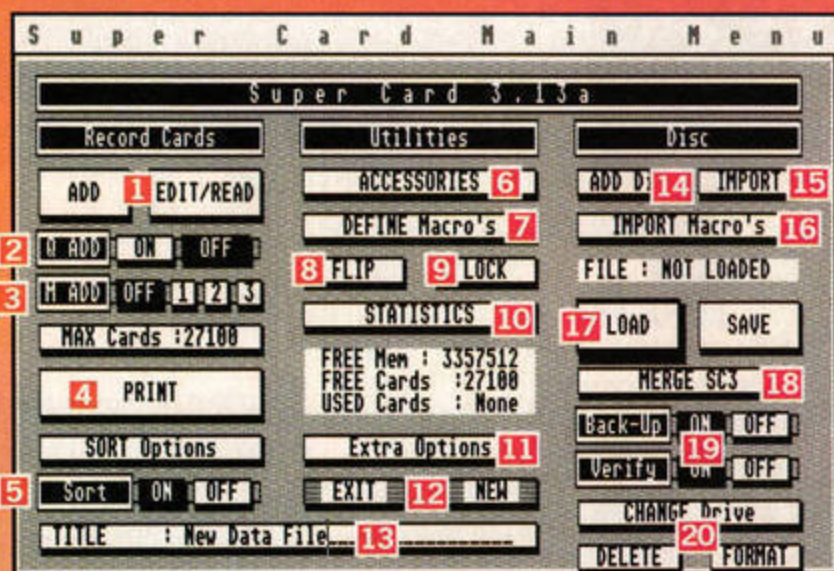
- Write-protect your Cover Disk. Slide the black tab so you can see through the hole.
- Make a backup using the *Back Up* program. Never run anything except *Back Up* directly from the Cover Disk.
- If you have an old STFM and can't read the Cover Disk, you need to upgrade to a double-sided drive.
- If you are having problems with a Cover Disk program, re-read the instructions and any DOC files. If you still have problems, call the Cover Disk Hotline on 01225 442244 on Wednesdays between 2pm and 6pm only.
- If you can't load, copy or back up your

Cover Disk, it may be faulty. Try calling our technical support line on 0891 715929 (weekdays 10am-12.30pm and 1.30pm-4.30pm). Calls cost 39p per minute cheap rate, 49p at all other times.

- Alternatively, send the disk, a padded self-addressed envelope and two stamps to: ST FORMAT Disk Returns, Tib Plc, Tib House, 11 Edwards Street, Bradford BD4 7BH (if the disk is faulty we will refund the postage). Please don't send faulty disks to our Bath or Somerton offices – we don't keep stocks of Cover Disks.
- If you have any other hardware or software queries, contact the publisher.

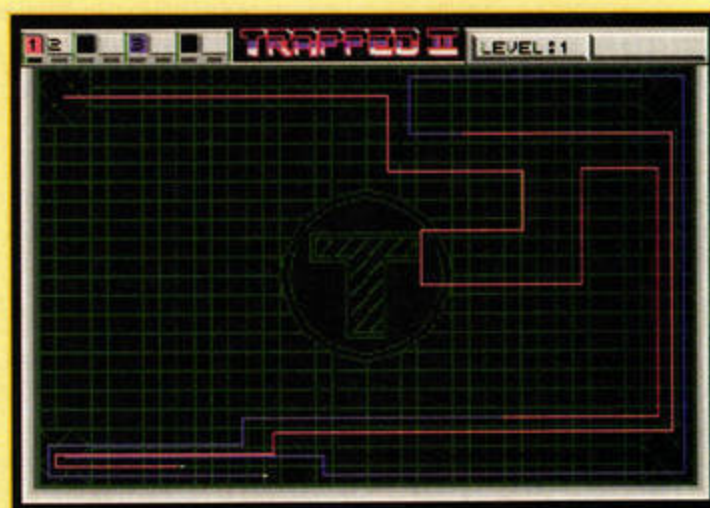
Trapped 2 is incredibly easy to set up, and the various permutations available ensure it'll last a lot longer than other light cycle games.





- 1 Add a new record, or read/edit an existing one.
- 2 When on, QAdd enables you to insert extra lines into your records.
- 3 Access one of three macro databanks.
- 4 Print out selected records.
- 5 When on, automatically sorts your records alphabetically, A-Z or Z-A.
- 6 Access any installed accessories.
- 7 Define one of 20 macros to be assigned to the function keys. Up to three different sets can be used at any one time.
- 8 Flip inverts the screen colours.
- 9 Lock enables you to enter a password and keep your data safe while you're away from the program.
- 10 Brings up the statistics menu, useful for generating data on any or all of your records.
- 11 Extra options menu, which contains various bits 'n' bobs, including the display colours.
- 12 Exit quits Supercard, and New creates a new database.
- 13 The title of the current database.
- 14 Creates a new folder on any available drive.
- 15 Import an ASCII text file
- 16 Import a macro set.
- 17 Load or save a database.
- 18 Merge a database into the current database.
- 19 Back-up (current file is renamed *.SCB for security purposes). You can also disable the alerts which ask you to verify selected options.
- 20 Change default drive, delete a file or format a disk.

Even in basic one-player mode, *Trapped 2* is addictive enough to keep you playing for weeks. Here, we see Nick rapidly running out of places to go. "He can run, but he can't hide", his computer enemy sneered.



part of the grid and even swap places with other cycles. Different levels contain different obstacles to avoid, and if you get stumped, there's also a comprehensive help index to explain it all in detail.

Trapped 2 is to light cycles what *Herman* (Cover Disk 63) is to *Boulderdash*. Both games successfully update classics for the 1990s, and *Trapped 2* is one game you'll find extremely hard to put down.

basics *Supercard* is straightforward to use. You create records on individual cards and, unlike other databases, there aren't a load of fields to set up. Each card can contain whatever data you want on it, and the ingenious filter system makes searching for specific records easy. You can even lock the program or scramble your saved data to protect it from prying eyes.

Every function has a keyboard shortcut – press [Help] for a complete rundown.

Supercard 3.13

UK support: Chris Beale
Machines: All
Ataris
Resolution: medium or higher
Memory required: 512K
Uncompressed size: 237K

Whatever your database needs, *Supercard* fulfills them easily

able to bring up 'CD', 'Cassette' or 'Vinyl' with a single key-stroke saves a lot of time. Alternatively, you can create

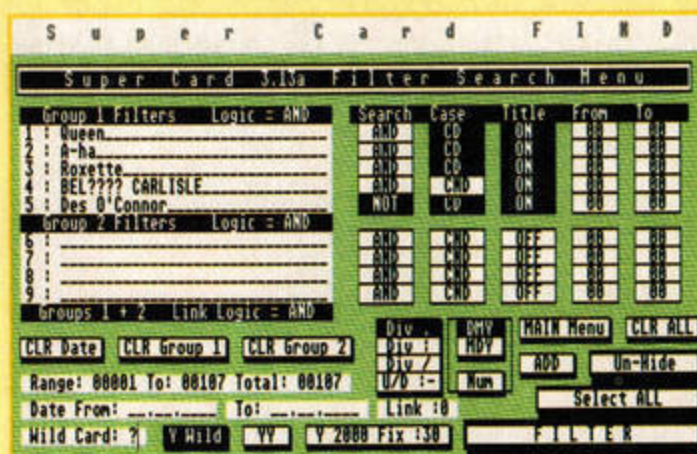
Supercard is the ultimate shareware database for your Atari. Whatever your database needs, it gives you the chance to fulfill them easily with its intuitive and powerful card-like interface.

On the cards

It's a good idea to read the MANUAL.TXT document before you run the program, but once you've grasped the

up to nine buffers, enabling you to cut and paste recurring data. These blocks are saved with your data and can be accessed time and again.

The shareware version only allows you to save databases with 50 or fewer records. *Supercard* also 'sulks' for a few seconds when performing certain functions. Registration costs £10 (registered users of *Supercard 2* can upgrade for just a fiver).



Supercard's filters enable you to find records quickly and easily.

WE WANT YOUR PROGRAMS

We pay for your software – so if you have anything that's good, original and preferably short that you think deserves to go on *ST FORMAT's* Cover Disk, send it with this form and full documentation to Nick Peers, Cover Disk, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Name _____

Address _____

Daytime phone _____ Program title _____

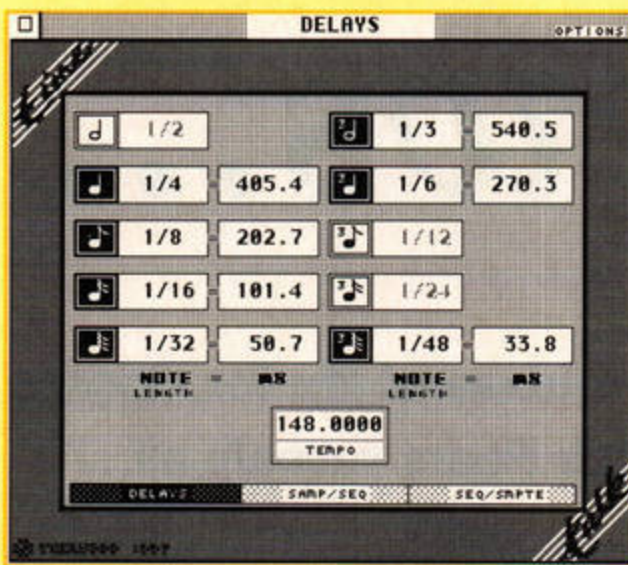
_____ Total size in K _____

On a separate sheet, explain what the program does and why it's so brilliant.

Remember to: ■ Include on-disk and paper documentation ■ Write your name and address on the disk ■ Use a virus-free disk ■ Keep a copy of your program, contributions are non-returnable ■ Enclose an attractive bribe. *Star Trek Voyager* tapes would be nice... ■ Not that it makes a difference.

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

Signed _____ Date _____



If you need a digital delay line, look no further than *Time Talk*.

Time Talk

By: Aleph

Machines: All Ataris

Resolution: ST high only

Memory required: 512K

Uncompressed size: 90K

Time Talk combines several useful calculations in an ingenious desktop accessory, and is a useful tool for budding musicians. This exclusive demo features a fully-working digital delay calculator.

Temporal shifts

Once installed to the root

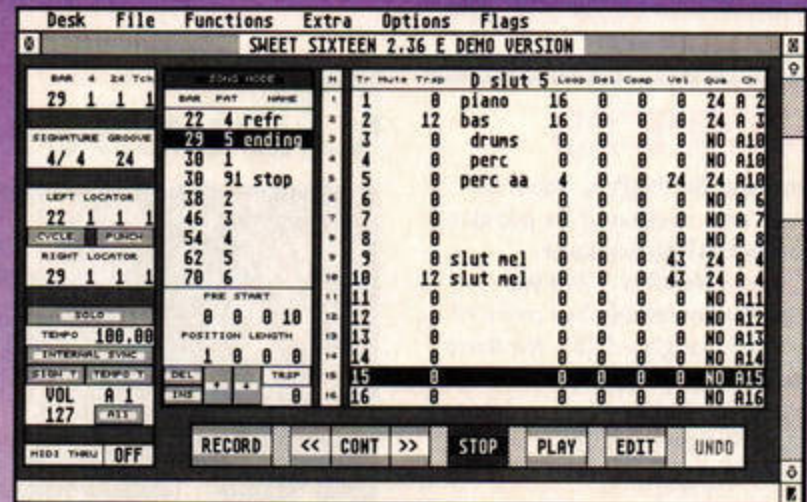
over the tempo field, and *Time Talk* will show you the correct calculation depending on the delay required.

The other two pages are disabled, although you can tour them with the aid of help balloons. The Samp/Seq page works out how to alter a sample's tempo without affecting its pitch, while the Seq/SMPTE page performs calculations required to synchronise video and audio recordings. You can obtain the full version of *Time Talk* for a discounted price by using the token below.

ANDY CURTIS

15 COMMERCIAL QUALITY MIDI FILES

Prepare to be shocked! *MIDI Magic*, one of the UK's biggest MIDI file producers, has generously donated no less than 15 commercial MIDI files for this month's Cover Disk. All you need is a MIDI instrument and a sequencer supporting MIDI files (try *Sweet Sixteen* from issue 73's Cover Disk, or the MIDI file player *FIMP* from issue 76). Once you've dearchived MIDFILES.TOS, turn to The Score (page 54) to find out more about the files.



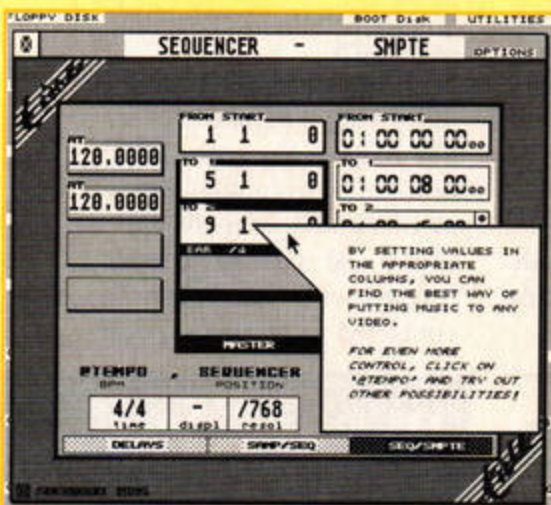
Sweet Sixteen Lite appeared on Cover Disk 73. If you missed it, turn to page 61 to order your copy now.

installed (either as an AUTO program or just by double-clicking on COLACALC.PRG) you can call it from within any GEM program by holding down [Control] and [Undo].

When you press these hotkeys, a command line appears at the bottom of the screen. You type in your calculations and the answer appears at the bottom of the screen. To switch between binary, octal,

decimal and hexadecimal calculations, hold down [Control] and [B], [O], [D] or [H]. You can also use the function keys to store up to ten different numbers. When you've finished using the program, simply press [Esc].

Cola Calc provides all the functions you'd expect from any good calculator – full details can be gleaned from COLACALC.TXT. *stf*



Although two pages are disabled in this *Time Talk* demo, you can still tour them to find out more.

Cola Calc

By: Dan Wilga

Machines: All Ataris

Resolution: any

Memory required: 512K

Size: 22K

Cola Calc is the ultimate programmers' calculator. It doesn't have the world's fanciest interface, but once it's

WHOOOPS!

It had to happen, didn't it? For 13 glorious issues we didn't make a single mistake on the Cover Disk pages, but last month we incorrectly stated that the game *Killing Time* would work on 512K machines. In actual fact, it requires 1MByte or more in order to run.

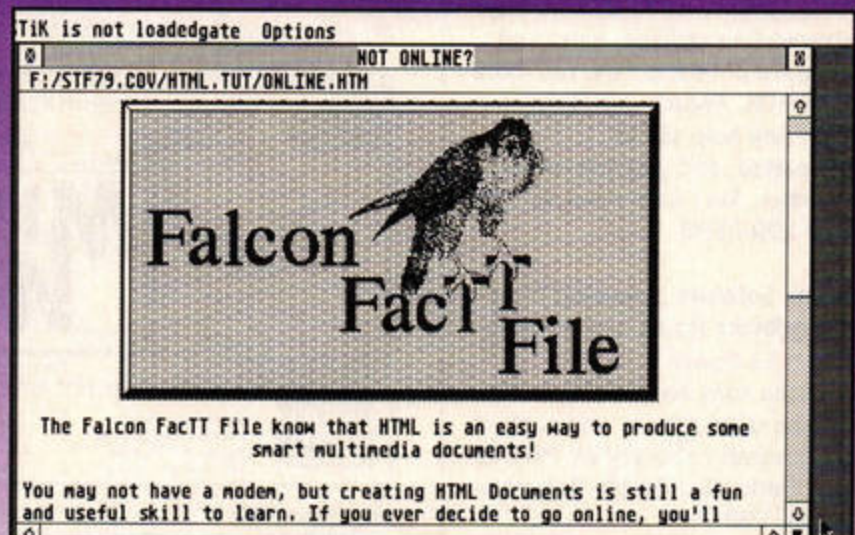
On the plus side, though, one adventurous reader discovered that, contrary to the documentation, *ST Tools* does run on 512K machines, which has to be good news for those with low memory.

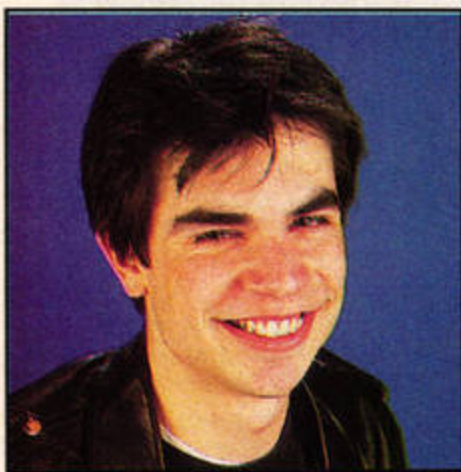
HTML FILES

Frank Charlton has provided several HTML pages and GIF images to accompany his informative HTML Coding tutorial (page 52).

If you missed last month's issue, with the complete *Internet Access Pack* on it, turn to page 61; otherwise everything you need is in the HTML.TUT folder.

You don't need access to a modem in order to use CAB, as this example clearly shows.





STF News...



New releases and a new lease of life for *Obsession*. Resident newscaster Nick Peers reveals all...

SNIPPETS

US company Softlogik is about to release a new version of its popular desktop publishing package *Pagestream*. Version 2.2se will retail for the incredibly low price of just \$39.95 (roughly £25). We don't yet know whether there will be a UK distributor, but you can order it from America through The Computer Dungeon.

Non-US customers ordering software from **The Computer Dungeon** should make sure that their payment is in travellers' cheques (VISA, American Express or Master Card will all do nicely). Doing this will save you \$15 in bank charges. Contact the Computer Dungeon at: 1440 Spencer Avenue, Berkeley, IL 60163, USA for a copy of its latest catalogue.

A new Atari user group is being established in the **West of Scotland**. Regular meetings and newsletters are planned, and the overall aim is to provide support and communication for Atari users in that area. Interested parties can contact organiser Alasdair Goold for more details at: West of Scotland Atari User Group, Roisbheinn, Overton Crescent, Johnstone, Renfrewshire, PA5 8JB (enclose an SAE). Alternatively, you can e-mail Alasdair at: agoold@cix.compulink.co.uk.

Keep an eye out for *Falcon Digital Disk*, a new disk magazine from the Italian PD company IM Systems. The diskzine's main aim is to keep the Falcon alive in Italy by translating articles, news and shareware products from the more buoyant UK, French and German scene. Any help will be appreciated, and you can contact the author, Alex Camanini on 00 39 30 209 0563.

Neotrek Software is looking for a UK distributor for its new strategy game, *The Power and the Glory*. The game runs on all 1MByte STs and interested parties can contact the Canadian company at: PO Box 1904, Parksville, British Columbia, Canada, V9P 2H6.

Obsession lives!



After UDS pulled out of the Atari market it looked like the Falcon version of *Obsession* was dead, but the project is now back on thanks to the intervention of Merlin.

Obsession on the Falcon is once again a reality, thanks to Merlin. Merlin has acquired the copyright to UDS's pinball game and will be continuing to develop it for Falcon owners.

Two versions of the game are being released. *Obsession*

Falcon 1 is a 256-colour version of the STE game and will cost £10. *Obsession Falcon 2* will be a completely reworked version of the game, and will include redesigned tables as well as new features, such as multiball and extra flippers. This version will cost £20. Both games are expected to be available in mid-March.



Look out for a review of this Dutch football management simulation in next month's *ST FORMAT*.

Merlin is also interested in releasing data disks for all versions of *Obsession*, but would like to hear from owners of the game first.

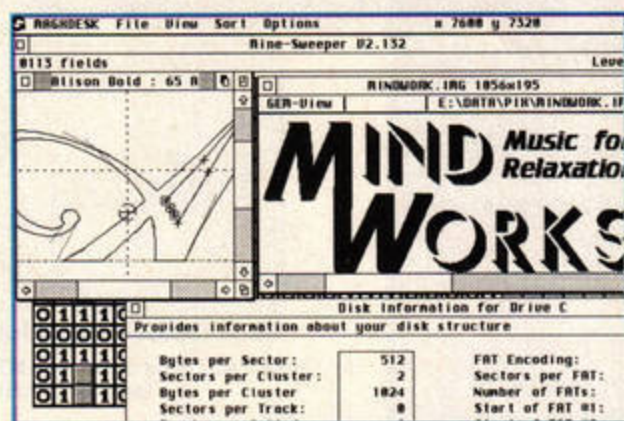
Merlin has also released *ESLA League Manager* for all STs and Falcons with 1MByte of RAM. This football management simulation retails at £19.95 and we'll be reviewing it next month. Merlin can be contacted on 01452 770133.

System upgrades

System Solutions has released new versions of both *MagiC* and *NVDI* to complement the upgraded *Ease* (reviewed on page 30). *MagiC 4* is now Falcon-compatible and boasts an enhanced desktop which

supports background disk operations. It costs £69.95 and there are various upgrade deals on offer.

NVDI 4, the ultimate software screen accelerator, now boasts improved printer



Hot on the heels of *Ease 4* come two major upgrades to System Solutions' superb *MagiC* and *NVDI* software. Expect reviews in the very near future.

routines along with extra printer drivers. *NVDI 4* retails at £59.95 (various upgrade deals are available). Call System Solutions on 0181 6933355 for more information about either of these two products.

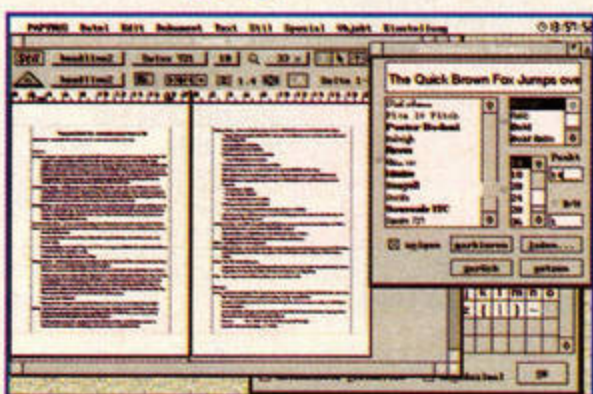
PD AND SHAREWARE NEWS

Graeme Sykes of *Locutus PDL* is now handling registrations for Paradise Software's hit shoot-'em-up *Genocide*. So, if you fancy a quick blast, make out a cheque for £15 payable to G Sykes and send it to: 49 Summerfield Road, Woodhouse Park, Wythenshawe, M22 1AE.

If you're interested in contributing to the new disk magazine *ST+*, you should write to Dave Hollis at: 43 Spenfield Court, Lings, Northampton, NN3 8LZ. Copies of the magazine can be obtained from the address given in last month's News.

We are sad to say that we received news this month that the London-based PD company *Who's PDL* has ceased trading.

Papyrus 5



After Papyrus 4, it's difficult to work out just what extras could be incorporated in version 5.

HiSoft has revealed that development work will continue on its top-rated document processor following the launch of *Papyrus 4*. A further upgrade – *Papyrus 5* – is also planned, although we don't yet know when it will appear.

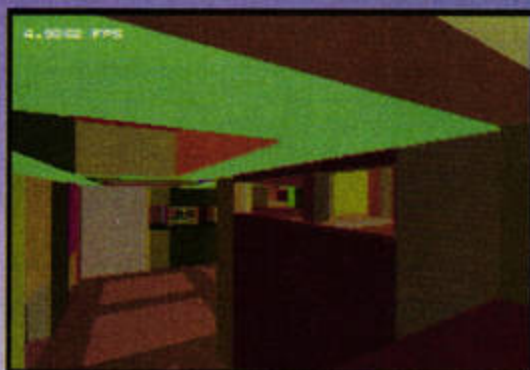
Papyrus 4 has been re-

coded in C. As reported in earlier issues, the new version will run even more quickly than the original. The re-coding also makes cross-platform compatibility a reality: a PC version is expected later this year.

The major new features include colour graphics support, a spell-checker and thesaurus function, plus cross-platform file compatibility. The new version is already available in Germany – see the ProTOS Showcase feature on page 13 for more details. HiSoft can be contacted on ☎ 01525 718181.

PETER CRUSH

FALCON DOOM?



Bad Mood proves that the Falcon is easily capable of running *Doom*.

Doom on the Atari is becoming more likely by the minute. A new game engine, *Bad Mood*, enables Falcon owners to roam around *Doom*, *Doom 2* or

Heretic levels. At the moment none of the walls are shaded and there are no objects or monsters to interact with, but *Bad Mood* is proof that *Doom* may yet become a reality on the Falcon.

The engine can be downloaded directly from the Internet: accessing http://rand.thn.htu.se/~johan/bad_mood.html takes you to the project's home page, which contains all the information and software you'll need to get started.

Inkjet savings



The Onyx Filling Station enables you to refill your used inkjet cartridge, rather than spending around £20 on a replacement.

The Onyx Filling Station takes the hassle and mess out of refilling used inkjet printer cartridges. It enables you to refill each new ink cartridge at least eight times (Onyx claim you'll save up to 60 per cent on cartridges this way). Most

leading printers, including Epson, Hewlett Packard and Canon models, are already supported, and prices start from £90.90 for one Filling Station starter kit and one ink set. Call ☎ 0800 393132 for more information.

NET NEWS

Special Reserve, the ST, Lynx and Jaguar mail-order company, now has its own page on the Internet. The address you need is: <http://www.reserve.co.uk/>.

Big news for **STOS fans**: Tony Greenwood and the **STOSSER** team have their own pages on the Internet. **STOSSER Online** is packed with information and no self-respecting net-surfing STOS addict should pass it by. Access the pages on: <http://www.airtime.co.uk/users/stosser/>.

Those of you attempting to access FutureNet with the **Internet Access Pack** will have discovered that the version put on last month's Cover Disk doesn't support forms. However, version 1.16 has just been released, and supports forms on HTML documents. You can get

hold of the latest version at all times by accessing: <http://www.cybercomm.net/~drz/atariwww.html>.

DE Jones, author of this month's Cover Disk game *Trapped 2*, has his own Atari page which is geared towards **GFA users**. All of his software, including the STE version of *Trapped 2*, can be downloaded from this site. Just point your browser at: <http://newton.ex.ac.uk/general/ug/jones>.

Village Software, publisher of the modern *Joust* update, **Outrider**, has its own Internet page. Surf over to: <http://ourworld.compuserve.com/homepages/RDAVEY/homepage.html> for all the latest information on *Outrider* and the eagerly awaited follow-up title, *War Cry*.

16/32 release

1996 has started brightly for 16/32 Systems: the company has announced no less than nine new major releases. These will include three new Falcon games and two image processors, one for budget users and the other aimed at the

higher end of the market. Details weren't available at the time we went to press, but we'll keep you posted. In the meantime, you can get more information from 16/32 Systems on ☎ 01634 710788.

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ProTOS showcase

Sensational new computers, mouth-watering updates and a host of tasty programs – John Allen reveals the secrets unveiled at the recent ProTOS show in Hennef, Germany...

Germany has always hosted the largest Atari shows, and this year was no exception with ProTOS '95 boasting an impressive list of exhibitors from around the globe. This

shouldn't come as a surprise though, as the Germans must be the most enthusiastic bunch of Atarians in the whole world, with new products allegedly being released every other week.

With around 50 exhibitors,



Don't let that unassuming facade fool you – this was the venue for ProTOS, the year's biggest Atari show.

Hotter than hell

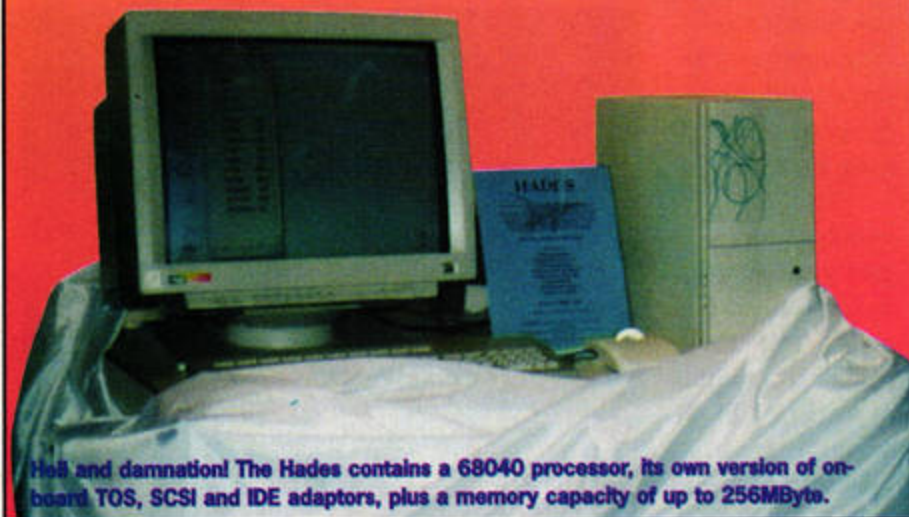
The hottest news of the show came from Medusa Computer Systems in Switzerland. Its Medusa T40 is already the fastest TOS computer available, but the company is about to set new speed records with its latest babies the T60 and Hades.

The T60 is a Motorola 68060-based computer, and the demonstration model was running programs at speeds mere mortals wouldn't believe. The real show stopper, however, was the Hades, a TOS-compatible computer designed to compete directly with Pentium PCs and PowerMacs.

It has only been in development for six weeks, but its public christening was a truly fiery affair, with a drop-away curtain

and full smoking special effects. The Hades features a MC68040 CPU, its own version of on-board TOS, SCSI and IDE adaptors, plus a memory capacity of up to 256MByte.

What makes it stand out from other TOS-based machines is the inclusion of three industry standard PCI buses. This means you'll be able to upgrade it with any PC graphics or sound cards, or any other peripheral. What's more, the basic model will cost around 3400DM (approx £1,700), which is half the price of the T40. The Hades is due to ship in April. Naturally, we'll keep you up to date on all the latest developments, but in the meantime, contact 16/32 Systems for further details.



Heil and damnation! The Hades contains a 68040 processor, its own version of on-board TOS, SCSI and IDE adaptors, plus a memory capacity of up to 256MByte.

and over 5,000 visitors during the two days of the show, no-one who attended could possibly have been disappointed. ProTOS remains the most respected Atari fair around, despite the fact that this year the organisers also allowed PC and Mac exhibitors to attend. Even Apple Germany was there, displaying Macs running Atari programs under *MagiCMac*. It's strange to think that in Germany, Apple feels the need to advertise *MagiCMac* in Atari magazines. Nothing, it seems, overshadows the ST and Falcon in Deutschland.

It was Atari-only kit for around two thirds of the exhibitors, though, and while the rest concentrated on either



The Brits never miss a good show. Nick Harlow of 16/32 Systems was working flat out throughout the weekend.

Atari and Mac or Atari and PC gear, the onus was still very much on TOS-based products.

The German Atari market is very different to the UK one. A typical Atari owner in Germany uses a TT or Falcon. In fact, the only STs you see



The Swedes were there too. Roger Jansson was showing off *Jam8*, a Falcon audio expander that aims to topple Soundpool's *FA-8*.



The German mag, *Atari Inside*, had some good offers on software.

are attached to gargantuan hard drives and a 21-inch monitors, and are being driven by graphics cards at very high resolutions in 256 colours. It's the sort of set up that most of us can only dream of.

On with the show

As much as the Germans love TOS-based computers, they are also into multitasking alternatives. The Behne Brothers and Application Systems

Heidelberg presented *MagiC 4*, a complete replacement for TOS that offers all Ataris pre-eminent multitasking capabilities. As well as offering speedy disk filing, and fast MIDI and

printing routines, *MagiC 4* also enables you to run your programs faster than you could under TOS itself.

MagiC 2 has been available for a couple of years now, but unfortunately Falcon owners haven't been able to make use of it. Now, however, they can discover just what this alternative operating system has to offer. Falcon compatibility brings with it IDE and DSP support, and additional file systems and device drivers can also be loaded. Even the supplied desktop, *MagiCDesk*, has been overhauled.

New NVDI

While we'd expected to see *MagiC 4* at the show, The Behne Brothers surprised everyone by releasing *NVDI 4*, which was finished the night before the show. Screen acceleration is now ten to fifteen per cent faster than with *NVDI 3*, with zippy printing rou-

tines, a powerful font manager and support for SpeedoGDOS, True Type, Postscript and Windows 95 fonts all adding

to *NVDI's* appeal.

There was so much interest in *MagiC 4* and the new version of *NVDI*, in fact, that The Behne Brothers were flat out copying disks for eager

The T60 was running at speeds mere mortals wouldn't believe

Falcon X

C-Lab chose the ProTOS show to unveil its plans for the next Falcon model, the Falcon Mk X. Whether this will incorporate TOS 5 is uncertain, but its case is radically different to the current one.

It looks like a table-top CD player or video recorder, with a separate keyboard. The Mk X is due to ship with an internal SCSI hard disk and an aluminium front panel that can be modified to accommodate various peripherals, such as floppy drives and removable hard drives.

The new case contains enough room to house memory cards, digital interfaces and other add-ons. The mini phono jacks found on the Falcon have been replaced with four standard 0.25-inch ones, and the motherboard has undergone all possible sound fixes and tweaks.

Rumour has it that the Mk X will cost slightly more than the



This artist's impression of the Falcon Mk X shows the new styling of C-Lab's latest baby.

similarly equipped Mk 1 (£799), and is due to arrive some time in the next few of months. We'll bring you more news when we get it, but in the meantime, contact Digital Awareness for more details.



As with every Atari show throughout Europe, there were plenty of MIDI fans cluttering up the aisles and mumbling about step-entry recording.

Atarians throughout the show.

Not to be out-done, however, Overscan entered the fray with its new operating system, *NAES*, which replaces the AES part of TOS. As well as including all the features found in *AES 4.1*, the new version goes further by providing speed, stability and support for long file names. It also offers on-line help in the form of a built-in version of *ST Guide*. *NAES* is supplied with a customised version of the *Thing* desktop (*NThing*) and the latest version of *MinT* (the multitasking version of TOS).

Perhaps the biggest news in the world of the operating system, though, is C-Lab's recent decision to develop TOS 5. Details are sketchy at the moment, but skilled programmers from the shareware and commercial world have already been contacted, and we'll bring you more news when we get it.

Application Systems Heidelberg was also selling *Texel*, a fully featured spreadsheet, which is compatible with the PC spreadsheet, *Excel*. *Texel* makes full use of GEM, keyboard shortcuts and vector fonts. All windows are non-modal (so you can have more than one open at once), and the program supports long filenames.

Texel also enables you to plot your results in various graphs or use them to calculate all kinds of statistics. In addition, it can import and export files in

various different formats, and on-line help is available in the form of *ST Guide* hypertext files. Contact System Solutions for further details.

Hard core

BlowUp was busy demonstrating the Falcon FX, a 3-in-1 expansion board. Also known as a Falcon Extender, the FX is a 30-pin SIMM expansion board that enables you to upgrade to 32MByte of RAM.



Housed in this runaway robot, WBW-Service's new game *Confusion*, prowled the arena causing mayhem and madness.



Forget the January sales. If you want an Atari bargain, you need to attend an Atari show.



It's strategy a-go-go in this cross between *SimCity* and *Civilisation*.

Once it's fitted, you can also use it to speed up your CPU's processing speed to 40MHz, as well as accelerating the DSP and system bus. The final expansion on the Falcon FX board, BlowUp Hard 1, enables you to enhance your screen resolution. The only downside is that you need to do a lot of soldering to fit it. BlowUp's Falcon FX is available now from System Solutions for around £180.

Not wanting to be left behind, OverScan chose ProTOS '95 to showcase the long-awaited Afterburner 040 accelerator. The new card, which has been advertised for the past two years, plugs into the expansion port of your Falcon, giving you a speed increase of either 32MHz or 64MHz depending on which chip you use: 68LC040 or 68040.

The Afterburner also includes built-in PS/2 memory sockets that enable you to increase your memory to 128MByte

Fast-RAM, as well as giving you a thru port to add all sorts of other expansion cards, such as the ScreenEye or

The new Hades is designed to compete directly with Pentium PCs

serious packages, such as *Papyrus*, stealing the limelight. That may change, though, as more and more programmers step in to

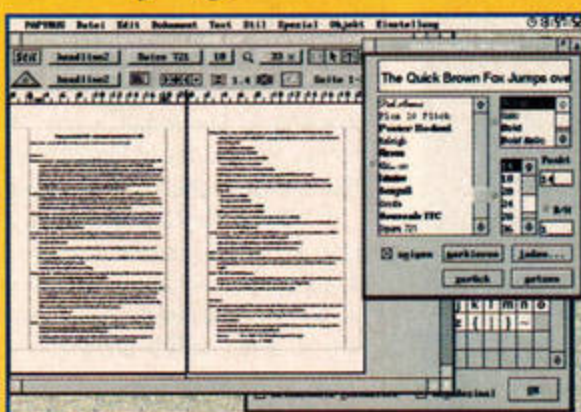
fill the gap left behind by the large companies.

Olaf Guethe is one such coder, whose upcoming Falcon



Planet of the Red Eagles looks very similar to *Dune 2*, the hugely popular PC and Amiga strategy game. Whether it plays like it remains to be seen.

Papyrus Gold 4



Colour printer owners will be glad to discover that *Papyrus 4* supports colour graphics and text.

ROM Logicware was demonstrating the latest pre-release version of the long-awaited *Papyrus 4*, which is now brimming over with even more features. The latest version of the popular document processor uses Unicode (16-bit characters) internally, enabling you to use more characters within a single font – if you have *NVDI 4*, that is. You can also display multiple pages beside each other.

Another interesting feature

enables you to set text style tags, independently from paragraph tags – although you can still link a paragraph tag to a text style tag. The interface has also been revamped; the dialog boxes have been redesigned to use 3D effects (providing your version of TOS

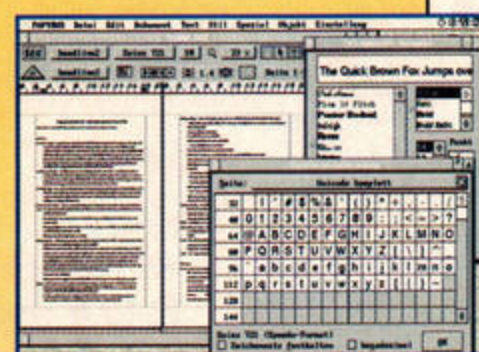
supports them) and the alerts are now largely displayed in modal dialogs. Listboxes have real-time sliders, and the pop-up menus benefit from a cyclical button. *Papyrus 4* can also handle more than 240 fonts and supports up to 32 different tab positions per line, instead of the previous 20.

The list of changes continues: the menu has been rearranged. Zoom is now located in a pop-up menu in the

extended ruler, and there is only one entry for switching to the next window. Some shortcuts have also been changed to bring them in line with the GEM List standard. Many of the bugs which affected the previous version have been fixed, but let's just hope ROM Logicware adds the word count function, too.

Papyrus 4 is due to be released in English by HiSoft in the next couple of months.

● Turn to page 10 to find out the latest news on *Papyrus 5*.



Papyrus 4 has been coded in C, making it much faster than the original release.

game, *Planet of the Red Eagles*, generated quite a lot of interest at the show. The game is best described as a cross between *SimCity* and *Civilisation*. You are stranded on a desert planet, and it's up to you to find the fuel, steel and food your crew needs to survive. Ultimately, you have to build up your technology levels to create more sophisticated vehicles and factories.

Olaf has spent the last 18 months preparing this game and it sure looks like a stunner, with plenty of depth and levels of strategy. Due to be released in February, *Planet of the Red Eagles* will come on seven high density disks, with a CD version planned soon after. UK distribution will be handled by CyberStrider.

WBW-Service from Bremen is an enthusiastic supporter of games on the Atari. It showed a pre-release version of *Confusion*, a Falcon platform game in which you are trapped in a pyramid and have to collect certain things to progress to the next level. The



Olaf Guethe's *Planet of the Red Eagles* also feature some superbly rendered sequences.

game is similar to the old Spectrum classics and is extremely playable, but unlike the old 8-bit games, *Confusion* contains some great graphics too. More information from 16/32 Systems.

A fair share

Like the games market, the German shareware scene is also changing, with some programmers porting their software on to other platforms. The coders are also learning the benefits of creating English versions of their software. This not only enables many more people around the globe to use the software, but it also encourages PD libraries and shareware support schemes to take them on, which increases



Team Computer were busy showing off the graphical prowess of *Neon 3D*, the impressive object design, rendering and animation system for the Falcon

the number of registrations.

ProTOS had one shareware stand, which was manned by three programmers: John McCloud, David Reitter and Reiner Rosin.

As well as demonstrating version 3 of *Egale*, David was also showing off his latest programs *ClickRun* (a program launcher) and *TimeWatch*. Reiner was

demonstrating *A La Card*, a GFA basic utility, the event planner *ToDo*, and *Zeig's Mir*, his multifunction file viewer. John, on the other hand, was showing off a new boot manager called *McBoot*, a screen snapshot program called *JML-*

Snap, and *McFLI*, a FLI/FLC viewer. These programs should be available via Joe Connor's InterActive shareware support scheme in the not too distant future.

Staying with InterActive,

Freedom 2 is due soon. Programmers Christer Kruger and Kolja Koischwitz's latest addition

is a facility to

start CPXs and eCPXs directly from within *Freedom*. Another shareware program in InterActive's stable to look out for is a DTP program called *Cypress*.

Harald Becker reported that version 1.73 of his file selector *BoxKite* will be available in English soon. It uses only 70K of memory, has support for long filenames and an easier and a more direct approach to copying and mov-

MW ELECTRONIC

MW Electronic is the company behind the Panther Graphics card and the excellent Pak/68/3 ST accelerator. We grabbed a breathless five minutes with MW's owner to ask about ProTOS and the future of the Atari in general.

"We come to ProTOS because it is the most important event for Atari users and Atari companies. It is the biggest Atari show in the world. The ProTOS show has been very successful this year, and we are totally satisfied. This year has definitely been better than last year's show, and I am sure there

will be another next year.

"Most of our products at the moment are for the Atari, but we are looking into the Apple and PC markets, too. However, the Atari market is definitely not dying, just shrinking. There is still a lot of interest in Atari products, and we will continue to bring out new Atari products, such as the Panther graphics card. I also think that the Hades is a step in the right direction and will be very successful... the Medusa T40 has already sold in some numbers across the world."

ing than *Freedom*. *BoxKite* is also a lot easier to set up now because of its built-in configuration menu. The final program in Harald's shareware stable is the text editor/programmers tool *Just Another Editor*, or *JAnE*. Despite the name, this is not your average text editor. *JAnE* includes powerful macros that enable you to write small programs, such as a UUDecoder. Contact CyberSTrider for more details.

Also worth tracking down is the *Atari Info Pages (AIP)*. Compiled by programmer Manfred Ssykor, *AIP* is an *ST Guide* hypertext file detailing programs, authors and their addresses. *AIP* is constantly growing to incorporate commercial and shareware programmers from around the world. While it's currently in German, the English version should be available from CyberSTrider soon.

There's more

Elsewhere, Team Computer was busy demonstrating *NeoN 3D*, the professional graphics design program for the Falcon, which is set to retail at around £500. VHF Computer was putting Janus through its paces, while Compo was busy pushing *Gemulator 95*. MW Electronic raised many a pulse-rate with its Panther graphics card, which was running alongside the ST's Pak/68/3 accelerator.

Delirium Arts proudly presented *Twilight 2*. The screensaver now has some



Bernd Lohrum was busy showing off *CD-Recorder*. Watch for version 2 soon.

new modules, as well as the ability to use *Before Dawn's*. Contact JCA for more details.

Adequate Systems, that purveyor of plug-in modules for *Calamus*, was also there demonstrating a new text editor module called *Eddie*.

Programmers were not forgotten either, with Columbus Soft demonstrating *Ergo Pro* and *Face Value*, GFA programming tools that enable you to design programs with a RSC editor before generating the required code.

Success

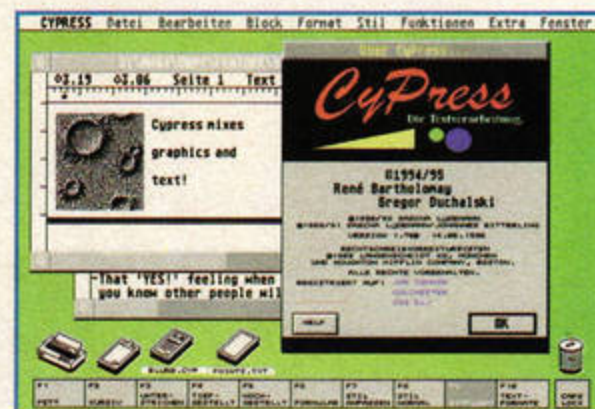
The general consensus from the exhibitors was that ProTOS '95 was much better than the previous year. This is promising news for Atarians everywhere, as the products shown in Germany will ultimately wend their way through Europe and beyond. *stf*

CONTACTS

CyberSTrider	☎ 0161 7965864
Digital Awareness	☎ 0181 598 8984
InterActive Shareware	☎ 01206 851488
System Solutions	☎ 01753 832212
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THE WHO'S WHO OF PROTOS

Application Systems Heidelberg: *Texel, Kobold 3, MagiCMac*
Behne Brothers: *MagiC 4, NVDI 4*
BlowUp: *FX Card, PSI DAT recorder backup system, JAM 8*
CD Service Lohrum: *CD Recorder hardware and software*
Columbus Soft: *ErgoPro, Facevalue, CyPress*
Compo Software GmbH: *Gemulator 95*
C-Lab: *Falcon Mark X*
Delirium Arts: *Twilight 2*
Delta Labs: *Various CDs and Planet of the Red Eagles*
Heyer and Neumann: *hdpStack*
Lighthouse A+G Sexton GmbH: *Tower case, Desktopper, Falcon Rack case*
Medusa Computer: *Medusa T40, Medusa T60, Hades*
MW Electronic: *Panther, Pak/68/3*
Overscan: *NAES, Afterburner 040*
ROM Logicware: *Papyrus 4*
Soundpool: *SPDIF, MO4, Analog 8*
Team Computer GmbH: *NeoN*
VHF Computer GmbH: *Janus*
WBW-Service: *various games, including Confusion*



Dedicated DTPers will be keen to hear about *Cypress*, a shareware desktop publishing package.

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Inside Atari UK

So, why did Atari abandon the Falcon? And what's all this about developing PC CD-ROMs? Frank Charlton puts the hard questions to Darryl Still, MD of Atari UK.



Stomp on big dinos with *Primal Rage*, coming soon from Atari...



Fever Pitch Soccer is one of the new games produced by Atari Europe.

Atari isn't a company which could ever be accused of courting the press. Over the years it has suffered the slings and arrows shot by those of us lucky enough to work in this odd industry, and has rarely bitten back. Or had much to say on any subject, for that matter.

1995 didn't end on a promising note – the Jaguar CD slid casually into the shops with minimal advertising and the Internet was chock-full of rumour-merchants predicting Atari's imminent demise. We decided it was time to button-hole Atari and find out if there's any truth behind the gossip. Atari UK's MD Darryl Still was kind enough to give us his perspective on the current Atari situation.

Gossip column

The biggest piece of 'news' in the Internet's Jaguar news-groups at the end of last year was the sudden layoffs of key staff at Atari's US HQ in Sunnyvale, California. Some

major names were mentioned, including long-time Atari employee Bill Rehbock, and there were rumours that all of Atari's in-house programmers had been given notice. So, Darryl – what's the scoop?

Darryl: At the end of every year, any company worth its salt will examine its structure, highlight any faults and prospective opportunities and act positively. At the end of 1994, Atari highlighted a problem with software development and so greatly increased the resources in this area of the business. This has been successful to a large extent in increasing the quantity and quality of Jaguar software.

stf: So you're saying that the end-of-year layoffs weren't actually a bad sign, then – Atari is just removing dead wood and streamlining itself?

Darryl: Well, it was less of a problem and therefore required less company resources to solve. Also, we could identify which development departments had been

DARRYL STILL : WHO HE?

If you're a long-standing reader of *ST FORMAT*, you'll have seen Darryl Still's name crop up a lot over the past few years. He's a familiar face to us, and now it's time you got to find out a little more about the approachable face of Atari UK.

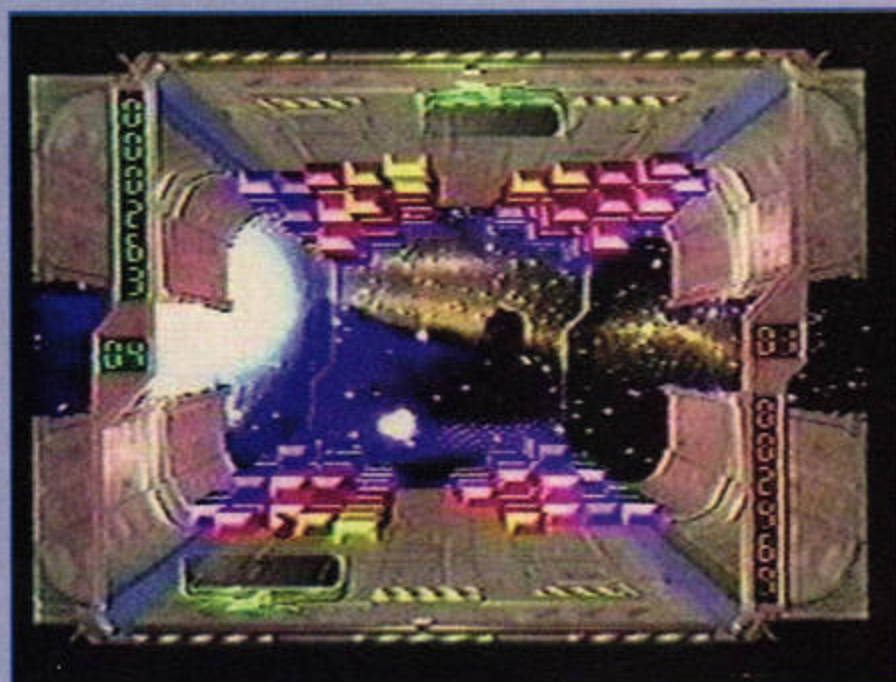
Darryl isn't afraid to mix it up on-line and frequently pops up on CIX to answer questions about Atari and the Jaguar system. He's been with Atari for eight years now, and he knows his onions when it comes to Atari's products. During his long stint he's seen the UK launch of machines like the Falcon and Jaguar, as well as more ill-fated projects like the ST Book and the STylus.

By the time you read this, Darryl will have a more important job – being a new father! As he

says, the baby is a little young to play *Doom* just yet, but he's confident that the new compact Still model will love the Jaguar as much as we do.

Darryl likes his video games, and lists his all-time faves as *Kick Off 2*, *Rocketball* and *Summer Games* on ye olde Commodore 64, and (big surprise here) *Doom* and *Tempest 2000* on the Jaguar. As far as machines go, he's the proud owner of an ST, PC, Lynx handheld, Atari 7800 (the successor to the original 2600 VCS console) and a Jag.

Being an important person, he also has room for *Klax*, *Galaxians* and *Rampart* coin-op machines! Oh, and a number of rival machines "for evaluation only". We believe him, no, honest we do.



Breakout 2000? Oh, purleeeeeeease!



The Jaguar CD unit – fine, but have you seen it in your local shop?

successful at achieving their aims and timescales and which had not. Those successful departments have been allocated increased funds to enlarge their development portfolio; those unsuccessful ones have decreased. Likewise, this year, we have spotted an opportunity in PC CD-ROM software and a division, Atari Interactive, has been set up to develop into that area.

stf: Fine, so Atari wasn't saving cash to stave off bankruptcy. Surely the problem was that these rumours leaked out on to the Internet, where Atari fans starved of real news pounced on these tit-bits and ripped them to shreds. Within hours, the Net crowd was baying for Atari's blood, predicting the company's death.

Darryl: I feel this is indicative of how damaging the Internet can be. I've dubbed it the 'Misinformation Super-highway', because of how quickly these rumours spread. As I said, this type of rationalisation has gone on every year at Atari and other well-managed companies, but it is only because of the intimacy of the Net, and the profile that some of the Atari people have on-line, that this time the rumour factory has got totally out of hand.

Our statement that we were starting PC development was not attached to any message that this would be to the detriment of Jaguar and this is categorically not the case. The new division will run alongside all current Jaguar devel-

opments, but in the burning nest of Chinese whispers that the newsgroups are, it soon became stated as 'fact' and the way some of the facts became warped was laughable.

stf: Surely it would have been sensible for Atari to come forward with an official press release, then?

Darryl: At every company, in a normal working week, people leave and people are employed. We don't release statements each time this happens. Really, what difference would it have made to these gossips if we'd professed innocence of the charges? We were already hung, drawn and quartered in most of their minds, more denials just take more time and we did issue a statement that things had not changed in relation to the Jaguar, and that everything was business as usual. I've worked here for eight years, and I've lost count of the number of 'experts' who have predicted Atari's demise in that time. They have all been wrong and all of these rumour-mongers are wrong.

They just join a long line of Mystic Megs, and are just as credible!

stf: And the criticism about Atari's complete lack of advertising... how do you respond to that?

Darryl: At the end of 1995 an eight-page Jaguar supplement was inserted in over one million magazines aimed at 10- to 15-year-old boys, followed by a four-page sales brochure in the same magazines. This was backed up by a major radio campaign on Kiss FM and Atlantic 252 and a poster campaign in all Britain's major cities. This is more activity than any other company has embarked upon for the Christmas season, save Sony's major TV launch of PlayStation. Next question?

CD or not CD?

stf: Many Jag enthusiasts complain that they are finding it very difficult to get hold of software and hardware, such as the CD-ROM drive. Why not get the Jag CD out there in big numbers, and why isn't there an aggressive UK marketing campaign to promote it to prospective PlayStation and Sega Saturn buyers?

Darryl: As I said, there is a

major ad campaign running now, but it is not aimed at prospective PSX/Saturn owners. It's important to realise that that is a different market to ours and while they're fighting multimedia PCs, we're trying to upgrade SNES and MegaDrive owners and bring a new younger audience into the new generation of console gaming. Yes, the Jag CD is in short supply...

But does this not also indicate it's in high demand?

Also, we recently just announced a big deal with both Telstar and Leisuresoft to supply retail. Further to this, Future Zone and Virgin stores stock the entire Jaguar range and have a store in almost every major town.

stf: And the ST – what's your

opinion on that after all this time?

Darryl: The best thing was its ease of entry and its solid longevity. The worst thing?

It's no longer on top.

stf: Why did you decide to pull out of the ST/Falcon side of your business? And how would you answer accusations that you betrayed your customers' trust by abandoning the market so shortly after the launch of the Falcon?

Darryl: The simple truth is that a £350 consumer product is no longer viable... Anyone listening? We never abandoned our customers, we simply admitted that others could support them better than us, so we approached and licensed those companies and ensured Atari survived and thrived. Did Commodore serve its customers better?

stf: Er, probably, yes. The Amiga is still being actively produced and supported by Escom, at least. The head of a major UK Atari



See, Atari is developing new hardware add-ons for the Jag...

supplier recently told us he thought the time was right for Atari to re-enter the computer market with a powerful, low-cost TOS computer, based around more advanced technology than that of the 68030. You presumably feel differently – why? Every machine Atari has produced since the 8-bit 400 and 800 has been a technological innovation, so why aren't you a world leader in computer technology?

Darryl: Simple, because the PC dominates the market and the market works not on technical superiority but on wallet size and established user bases. How would you suggest any company compete against IBM in its marketplace?

Enough said?

So there you have it: Atari isn't abandoning the Jaguar, and development of new games, including *Fight For Life*, continues. The next few months will certainly confirm or refute Darryl's predictions, and you can guarantee *ST FORMAT* will be staying on top of current developments at Atari. **stf**



JV Enterprises has converted and enhanced its superb Falcon game, *Towers 2*.

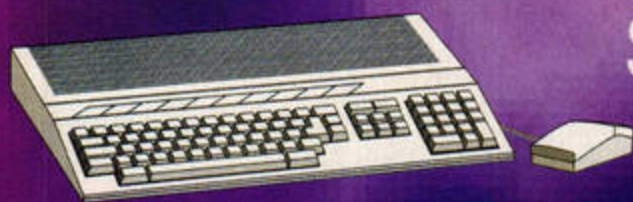


Attack of the Mutant Penguins, one of the new games to come from Atari.

SAM TRAMIEL?

It's been a hectic Christmas for Atari US. As a result, head honcho Sam Trameil was too busy playing Santa to answer our questions,

but we should be able to bring you his side of the story as things calm down over the next couple of months.



ATARI ST Software

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BREAKTHRU

Breakthru £99.95 Breakthru Plus £129.95

BREAKTHRU is an award winning professional quality 64 track MIDI and sample (8/16 BIT via ST or Replay 8/16) sequencer, works in either mono or colour resolution and has a host of highly graphical and user friendly editing screens.

"Breakthru is fun and easy to use, powerful and very good value. This is serious software in anyone's book" - Sound On Sound

"Breakthru's handling of samples sets it apart from other sequencers ... the results are excellent" - STF Gold Award 90%

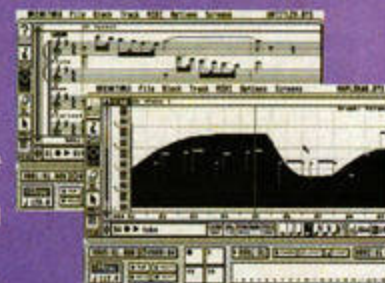
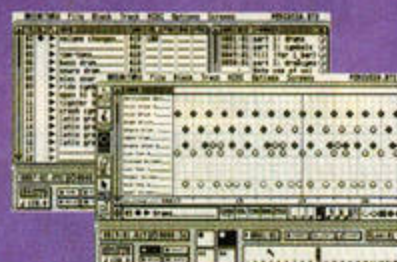
"a Winner!" - Future Music Platinum Award 90%

BREAKTHRU 2

Breakthru 2 £129.95 Breakthru 2 Plus £149.95

Version 2 includes many new facilities including a multi-track score display, detailed control of score layout, faster screen refreshes, advanced humanize options, improved song arrangement, graphical controller editing, an on screen real time data entry slider, and a disk utilities page (format, delete etc.).

"An easy-to-use professional sequencer and sample player, now in a class of its own" - Future Music Platinum Award (again!) 91%



* Plus versions include a hardware interface to give an extra MIDI out.

BREAKTHRU

Score Printing Kit

£49.95

Score Printing Kit allows you to printout your music as score. This can be either a single part or full score/system, with full control over margin widths, bar and page numbering and stave spacing.



Replay 16 is a sampler unit which simply plugs into the cartridge port of your ST. It comes with all the software you need to record and edit high quality 48kHz 16-BIT samples. It can be used to play 4 samples at once by an external MIDI device or from any version of Breakthru on the same computer!

... £99.95



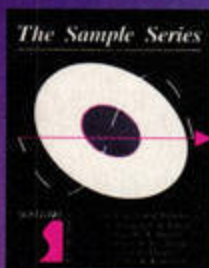
Sequencer One Plus is a 32 track MIDI music recording and playback program supporting four channel 8-BIT sample replay. With real and step time recording, Diamond Drag step editing, song arranging, tempo map, quantizing, transposing, juke box facility and much more...

... £49.95



The Hit Kit is a music composition system and ideas generator to use with Sequencer One, Sequencer One Plus and Breakthru1/2/Plus. Over 80 drum patterns, bass lines, chords, fillings etc help you create music in a wide variety of styles including Ballad, Blues, Disco, House, Latin, Reggae and Techno.

... £24.95



Over 200, 8-BIT digital sound samples for use with Sequencer One, Sequencer One Plus, Breakthru(1/2/Plus) including: Percussion & Effects, Guitars & Strings, Brass & Woodwind, Synth & Vocals and Piano & Keyboards.

... £39.95

Seven volumes of 16-BIT 48kHz samples for Breakthru(1/2/Plus), Replay16 including: Drums & Percussion, Bass & Guitars, Brass & Strings, Wind & Vocals, Synths, Piano & Organ & Keyboards, Ambient & Industrial.

... £19.95 each



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DIGITAL DREAMS

Don't just lie there counting sheep, get up and record that song! Andy Curtis' MIDI masterclass will help you add variety and sparkle to your compositions.

Atari's decision to put MIDI ports on the ST, TT and Falcon range of computers is still one of the major reasons for the success of these machines. You don't have to go out and buy an expensive MIDI interface; you can just plug in your synthesiser and play.

It is possible to record great music even on a tight budget. All you need is your ST, a MIDI keyboard, the working demo of *Breakthru* from this month's Cover Disk (see page 6), and a little expertise.

If you have the hardware, we're only too happy to help you transform your sequences into lively, show-stopping music. Follow the advice on the next few pages and you'll soon find your compositions sounding more professional.

Making music with *Breakthru* is straightforward, but you may find your sequences sound a little lifeless, or far more mechanical than you

Make your sequences sound more like the tunes in your head

intended. There is nothing more frustrating than trying to get the fantastic idea in your head on to the sequencer and failing in some departments.

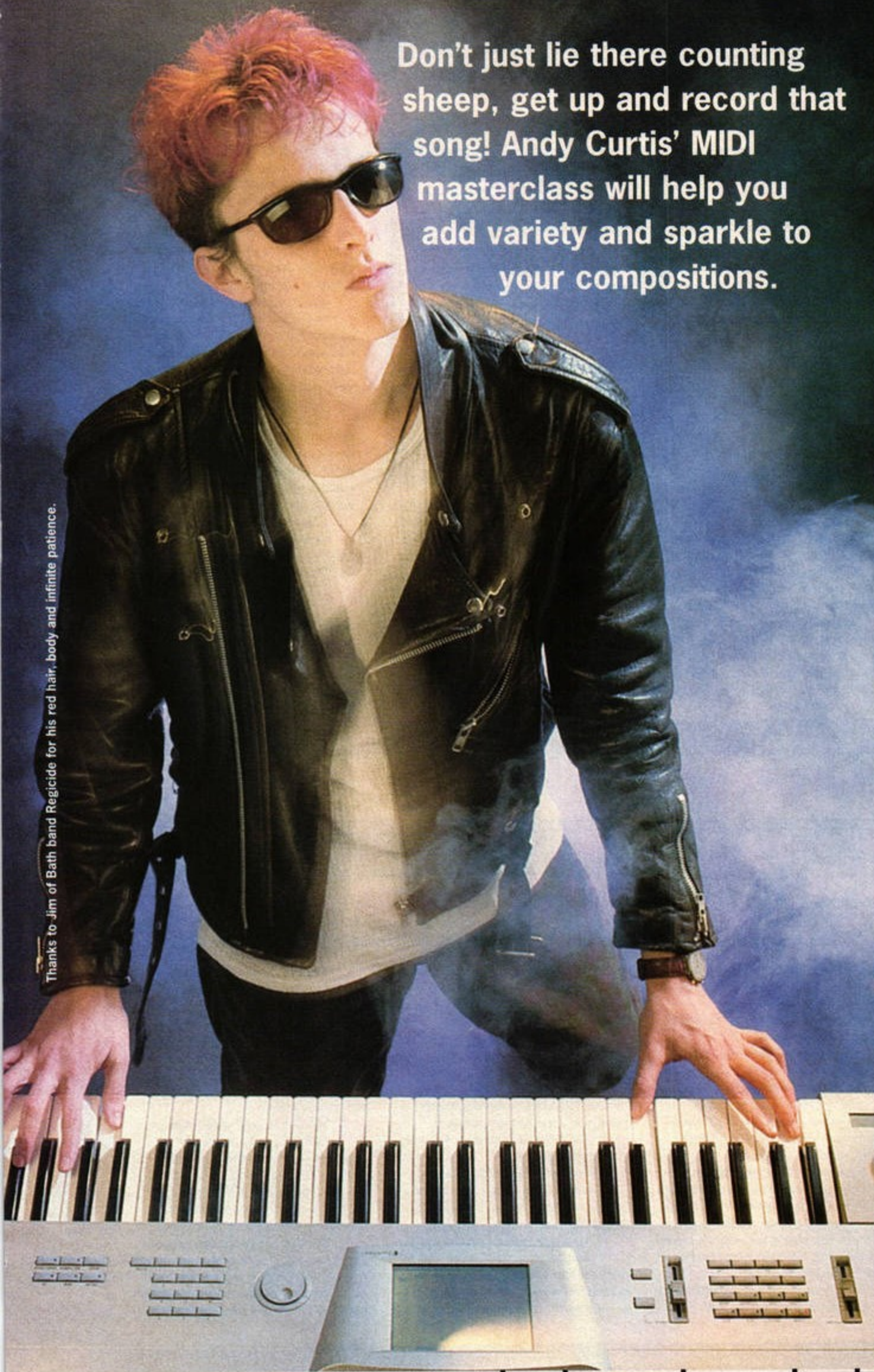
Live and kicking

This feature is going to show you exactly how to use *Breakthru's* many features to add life and excitement to your sequenced music. As well as helping you create basic patterns and riffs, we'll show you how to add variety and sparkle so your sequenced music is more like the tune in your head.

Once you get going, you'll probably want to upgrade to the full version of *Breakthru*. The coupon on page 6 enables you to acquire a copy for £25 less than the usual price.

When your song is complete, you'll need to add a vocal and record the whole thing on to tape so you have something to play to your friends and, who knows, maybe an interested record producer. At the end of the feature we'll show you how to mix your music on to cassette with a vocal. You don't need to spend a packet to produce a great-sounding tape.

Thanks to Jim of Bath band Regicide for his red hair, body and infinite patience.



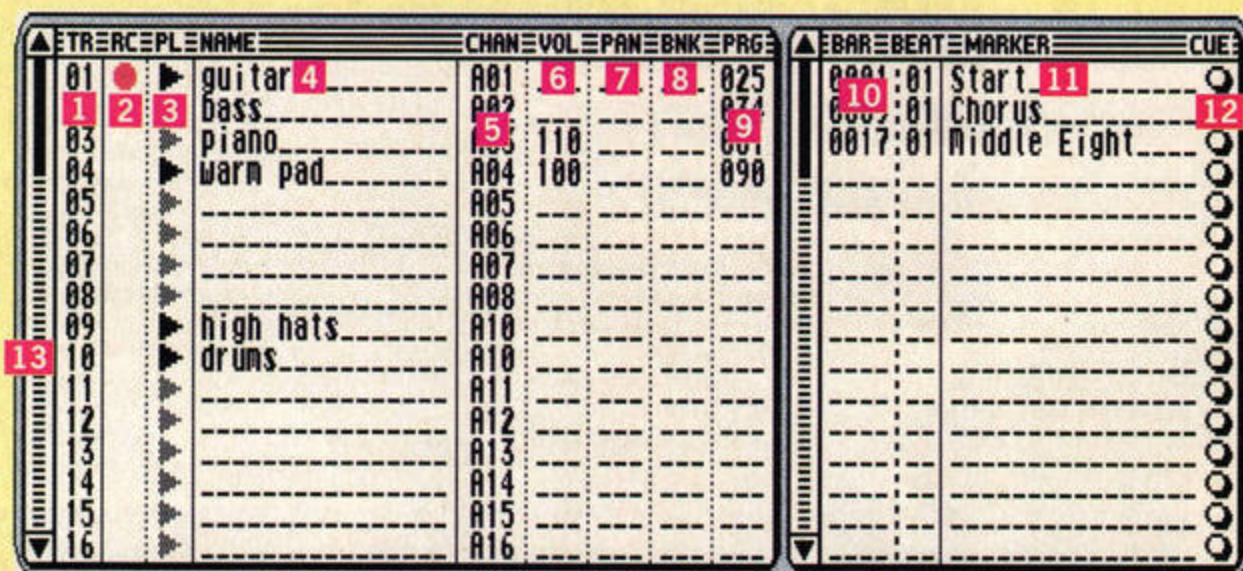
Break into composing

Breakthru makes MIDI composition easier than falling out of bed. Here's how to make the most of it.

Breakthru is very easy to use, but it boasts many powerful features and makes MIDI composition quick and straightforward. A series of useful editing screens, combined with an easy-to-use

tape-deck-style controller, make *Breakthru* an obvious choice for beginners and intermediate users alike. In this section we take a look at the main functions and editing screens of the program.

TRACK LIST PAGE



Most of your recording is done on the Track List page – the screen that is displayed when you launch the program.

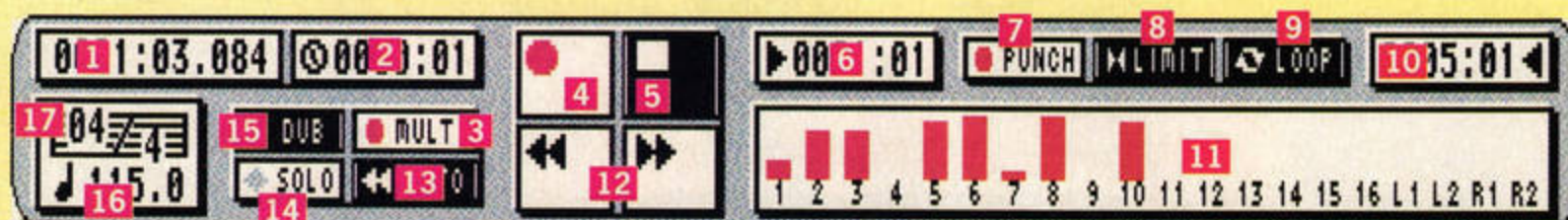
- 1** This is the track number; there are 64 tracks available. Other edit pages refer to tracks by both number and assigned name.
- 2** This button shows you which track is active. Recording or editing always takes place on the active track.

- 3** These little triangles show which tracks are muted. If you are developing a bass line, for example, you can mute out the original one and try another one. Selective muting enables you to audition both versions before deciding which one to use.
- 4** This text field enables you to name your tracks. Failure to give a name to a track won't affect the music, but sooner or later you'll forget what each track is, so it's worth making the effort to name everything.

- 5** The MIDI channel number assigns a MIDI channel to the sequencer track. In this example, both tracks 9 and 10 address MIDI channel 10, the drum track.
- 6** Click in the volume area for any track to increase or decrease its overall MIDI volume level. The right mouse button decreases the value and the left button increases it. This works on all the numeric fields in *Breakthru*.
- 7** If your sound module responds to the MIDI pan controller, this

- numeric field will change the pan setting. You can use this controller to enhance the stereo image of your music by having the different instruments in your 'orchestra' biased towards the left- or right-hand speaker.
- 8** General MIDI (GM) sound modules organise their sounds in banks. This control enables you to access the different banks in conjunction with the program change control.
- 9** Assign a program change number to a track by entering the relevant number here. The numbers range between 0 and 127 and each number corresponds to one of the sounds on your synthesiser.
- 10** The marker list, on the left-hand side of the screen, is a list of cue points in your sequence. It makes it easy to move to key points in your piece – simply double-click on a counter field like this one and the current 'tape' position will be entered.
- 11** The name field in the marker list enables you to describe each cue point you have set. Typical names might be: 'Start', 'Chorus' and 'Middle 8'.
- 12** These cue point buttons enable you to switch quickly to any of your defined cue points.
- 13** Your computer screen is not big enough to display all 64 tracks at once. Unless your piece is very simple, you'll need to use this scroll bar to move up and down the track list.

TAPE DECK CONTROLLER



The Tape Deck controller appears in all the edit screens and controls the playing and recording of your music. The controls are similar to the buttons on a cassette recorder, so it's very easy to use.

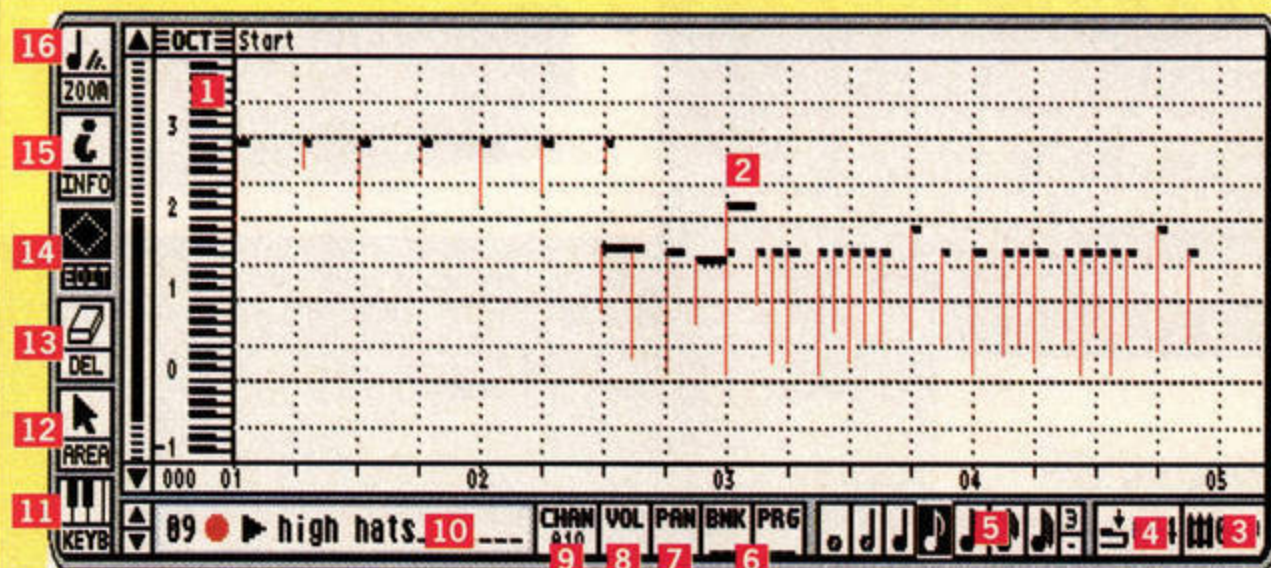
- 1** The song position is displayed here as bars and beats. When you play your sequence the display increments in real time, so you always know whereabouts in the song you are.
- 2** The time display is similar to song position, but it refers to the elapsed time in minutes and seconds, rather than bars.
- 3** The Multi button enables *Breakthru* to record on multiple

- MIDI channels simultaneously. It requires an advanced setup capable of merging multiple MIDI inputs.
- 4** Hit this button to initiate recording on the active track.
- 5** As you might expect, the stop button halts recording or playback.
- 6** This is the left locator box. It is used, together with the right locator box, to mark a block of music. The marked block can be quantised, looped, punched and so on.
- 7** If you select the punch button, recording only takes place between the left and right locators. For example, if the range is set between bar 3 and bar 6 you can play along with the music from the start, but recording punches in at bar 3 and out at bar 6.
- 8** Limit mode is used to work on just one part of your music. For

- example, if the range is set between bars 3 and 6, block and quantise operations will only affect the set block rather than the whole sequence.
- 9** The loop function makes your marked block play repeatedly from start to finish. When the end of the block is reached the sequencer loops immediately back to the beginning, giving you a continuous playback.
- 10** This is the right locator. See item 6 (left locator).
- 11** When your music plays, MIDI activity is indicated in this box. Sample playback is also indicated in the last four columns on the right.
- 12** These two buttons enable you to scroll through your music rapidly. They operate in exactly the same way as the fast-forward and rewind buttons on a conventional tape deck.

- 13** The auto rewind button returns the sequencer to the start of the music when the stop button is pressed.
- 14** The solo function enables you to listen to the current active track on its own. If you can hear a wrong note and you're not sure where it is, solo each track in turn until you discover the trouble-maker.
- 15** The dub or over-dub button enables you to mix newly recorded notes with those already on the track. If this button isn't selected, any new recordings will overwrite the existing notes on the active track, effectively giving you a 'clean slate'.
- 16** Use this box to set the tempo (speed) of your song.
- 17** If you want to use a time signature other than the widely used 4/4, enter the details here.

STEP EDITOR



The Step Editor screen is a page of unique power. It enables you to edit your music in minute detail and enter notes in step time, rather than real time. This editor page also enables you to add MIDI controller events and on-the-fly program changes.

1 The vertical keyboard, with octave markings to the left, enables you to keep an eye on the pitch of your notes.

2 In the Step Editor notes appear as thick horizontal lines on thin stalks. The horizontal line shows the length of the note and the thin stalk shows its velocity (how hard the note is pressed).

3 The default gate value for new notes is set here. You need to set a high value for legato notes, and a low one for staccato notes.

4 This is the default velocity level for new notes. When you add a new note in step time, it will be assigned the velocity set here.

5 The default note length for new notes is set here. Triplet or dotted notes can also be added using the two small boxes to the right.

6 The bank and program change boxes from the Track List screen are duplicated here and can be edited.

7 The current pan setting can be changed here.

8 The current track volume can be changed here.

9 The current MIDI channel is displayed here.

10 The track name is displayed here and can be changed, if desired.

11 Click on this icon to enter keyboard step-entry mode. Make sure you're at the right place in the song, then click on the icon. Any note clicked on the on-screen keyboard or played on your MIDI keyboard will be entered into your music.

12 Area mode enables you to define a block of music which is displayed in the left and right locator boxes. Simply select the area box, then click the left mouse button and drag your mouse to define a block. If you reach the edge of the screen, it will scroll forward until you release the mouse button. Your new block is now defined.

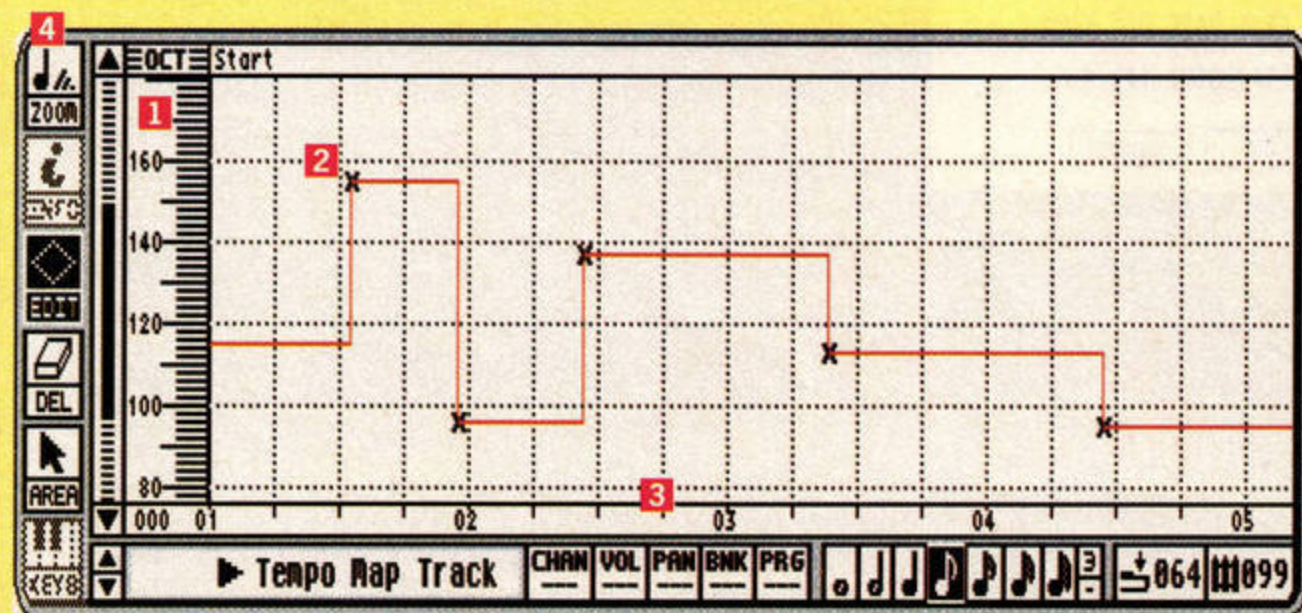
13 Delete mode enables you to delete one or more notes very quickly. Hold the left mouse button down to wipe away large numbers of notes.

14 The Step Editor defaults to edit mode, which enables full use of the diamond drag editing system (see the Diamond Drag panel on page 25).

15 Switch to info mode to edit notes numerically, then hold down your mouse button and drag it over the note to be edited. The note number, velocity, start time and length are displayed in a dialog box for precise editing.

16 Breakthru has four levels of zoom. If you have entered a large number of small notes (a trill or a solo run, for example), you'll need to zoom right in for accurate editing. Conversely, zooming out gives you an overview of your music.

TEMPO EDITOR



The Tempo Editor enables you to make changes to the tempo (speed) of your music. This feature is great for creating a slow-down at the end of a piece.

1 This scale is calibrated in beats per minute (bpm), enabling you to judge the speed of each tempo node you insert.

2 Tempo nodes define when a tempo change takes place and what speed

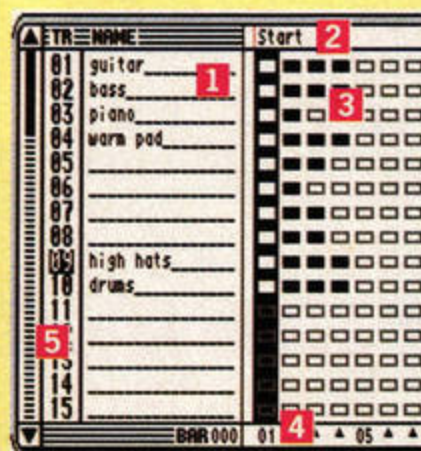
the music changes to. To add a new node, simply click on the tempo line and drag to the speed you want.

3 This bar indicator line shows you exactly where you are in the music, enabling you to place the

tempo nodes accurately.

4 The Zoom, Delete and Area modes operate just as they do in the Step Editor (see items 12, 13 and 16 in the Step Editor panel).

ARRANGE PAGE



The Arrange Page enables you to copy blocks of data or move them around to where you want them. You can even copy data between tracks, enabling you to create dual solo lines.

1 This is the name assigned in the Track List page.

2 Any markers inserted in the marker list on the Track List page appear on this line.

3 Each rectangle on the page represents a bar. If the rectangle is black it indicates that there are notes recorded in that bar.

4 The actual bar numbers are indicated along this line at the bottom of the window.

5 These are the track numbers as they appear in the Track List page.



The Score Editor is not active in our demo version of Breakthru. If you're into score editing, it's worth upgrading to Breakthru 2, which has an improved Score Edit page.

MIDI makeover

Composing your first song needn't be an anguished nightmare. Here's how to create and polish an original tune.



The GM-compatible Korg 05R/W (STF 71) has an impressive range of sounds. Expect to pay around £400 for this module.



The Roland PC200 Mk2 MIDI controller keyboard (STF 72, 86%) is a great basic mother keyboard. You should be able to buy one for less than £200.

Before you can make any music at all, you will need a viable MIDI setup. In addition to your ST, you'll need two pieces of specialised equipment: a MIDI keyboard and a sound module. You can combine the two by purchasing a good quality GM keyboard which has a full range of sounds. It is, however, sometimes cheaper to buy a simple MIDI keyboard and an inexpensive GM sound module separately.

With care, you should be able to buy a good-quality keyboard and sound module for around £600, and there are many bargains to be had on the secondhand market. It is worth seeking out a sound module with the GM badge on it, to ensure

that your music will be compatible with other people's setups.

Choosing a GM-compatible module also means you will have a full range of sounds available to you as you create your music. The GM range includes one or more drum kits and many orchestral instruments as well as more traditional synthesiser sounds and effects.

The simple combination of an Atari computer, sound



Breakthru offers a selection of versatile quantise options, including a strength percentage to facilitate more 'human' quantising.

module and keyboard offers you a cost-effective and powerful setup capable of creating music that's fit for a record producer's ears.

Drum basics

Strangely enough, the secret of a really good drum track is to start with a really boring one.

Set the left and right locaters at bar 1 and bar 5 respectively to create a four-bar block. Before you record, select a track to record

on, name it and set it to MIDI channel 10.

When you click on the record button you will hear a count-in, after which you must be ready to play. Record a simple rhythm within these four bars and quantise it strongly to make it as stable as possible. You'll find the quantise

function on the Track drop-down menu.

For a strong quantise, use the quaver option (second from the left on the first line) and set the strength to 100 per cent. The quaver quantise divides each bar of 4/4 time into eight sections and moves the notes you played within that framework.

Use the Arrange page to select your four-bar block and copy it several times. Think of the result as a sophisticated click track which will help you record the other tracks in your sequence.

Chord basics

It is absolutely vital that you know what you are going to record before you hit the button, so use your drum track and play some chords with it till you have a working 8-, 12- or 16-bar sequence.

Start by selecting a basic pad sound to play your chords with. GM Patch 90 (Warm Pad) works very well for this. Make the chords sustained so that it

is easy to weave other sounds around them.

When selecting the chords that form the harmonic structure of your music, bear in mind the need for variety. If you use the same chord for eight bars in a row, your listeners will get bored. Try using relative minor chords instead of standard major ones in some places. If, for example,

you use the chord of G major extensively, investigate the possibility of using its relative minor chord, E minor, some of the time. (The

relative minor of any chord is worked out by finding the note a minor third below the root note of the major chord. The chart below will help you.) Once you have established the harmonic shape of your piece, and the basic rhythm, you are in a position to start entering the parts that will remain in the song when it is completed.

Bass power

The bass line is crucial to the overall sound, so you should establish it very early on in the creative process. You need to decide what sort of bass line will be appropriate to the music you have in mind. It is an important part of your sequence, not just a background accompaniment.

Many sounds can be used to form a bass line, even if your synthesiser does not call them bass sounds. The string sounds (GM patches 50 and 51) have an eerie and sustained effect, while the Voice Lead (GM patch 86) creates a punchier but nonetheless ethereal sound. Please note that while GM voice names do vary slightly between manufacturers, the sounds they describe are the same – if you use the suggested patch

The bass line is crucial to the overall sound, so establish it early

Relative Minor Chords	
Major	Rel. Minor
G major	E minor
A major	F# minor
C major	A minor
D major	B minor
E major	C# minor
F major	D minor
Eb major	C minor

Using the relative minor chord in place of its relative major can dramatically change the feel of your music.

number you will get the correct sound on your GM synth. As well as these more creative options there are the conventional bass sounds in patch numbers 33-40.

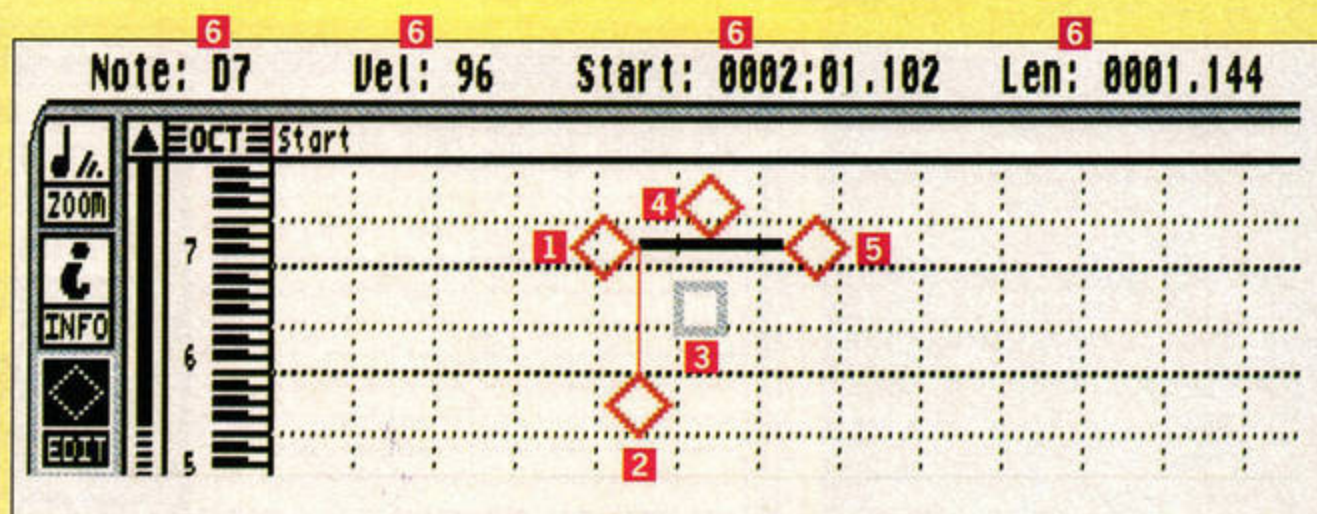
It is very tempting to simply play the root note of every chord used and leave it at that. There are a number of ways to avoid this rather boring approach. Look at the chord on your pad track and make a note of the notes you played. Experiment by inserting bass notes other than the root note of the chord.

Bass lines work very well when they flow along rather than just jumping from note to note, so look for opportunities to add in passing notes that join bass notes together. If your chords, for example, move from G major to E minor, you should be able to insert an F# as a passing note between the two.

You can also explore the possibility of a bass riff. A bass riff is simply a kind of tune played by the bass which happens to fit in with the chords you use. A good bass riff sounds good on its own, but also fits in well when other instruments are playing.

You can combine all these techniques to enhance your bass lines. When you have found a good bass line, hit the record button, once again, and

DIAMOND DRAG EDITING



The Diamond Drag editing page is pure joy to use. It's easy to understand and fast in operation.

Here's a break down of the basic controls. When you click the left mouse button and move your mouse over a note, the diamonds appear. Each diamond has a special function.

1 This diamond changes the start time of the note without changing

the finish time. Simply click and drag forwards or backwards to change the place that the note starts.

2 This diamond controls the velocity of the note. The longer the tail you drag out, the higher the note's velocity.

3 This square, as you will have observed, is not a diamond, but clicking on it presents you with some powerful options in a little pop-up menu.

Resize - Enables you to re-set a default size for the note.

Copy - Makes a copy of the note.

Snap - Moves the note to the nearest quantise value.

Control - Converts the note into a MIDI controller such as volume, pan or program change.

Delete - Deletes the note.

4 This diamond enables free movement of the note to any part of the track at any pitch.

5 This diamond controls the length of the note.

6 Any changes you make to the note are reflected numerically in this bar.

listen to the results. Only quantise the track if you really need to, and use the weakest form of quantise you can get away with. If semi-quaver quantise isn't enough, you may need to re-record.

Drum funky!

Now that you have recorded a good bass line and established

the harmonic shape of your sequence, it is time to add some life to your drum click track. Mute out your original drum track, by clicking on the small triangle to the left of the track name, and set up a new one, making sure to assign MIDI channel 10.

Make sure the Tape Deck controller's Overdub button

isn't highlighted and set the left and right locators to encompass your whole sequence. Highlight the Loop button and hit record. Play in a simple hi-hat line, allowing it to follow any syncopated rhythms that you have used in your bass line. If your hi-hat line is basically quavers, slip in some semi-quavers to spice

CONTROLLER CHANGES

MIDI controller changes can be used to add sparkle to your music. Well thought-out changes add to the overall variety of your work, and variety is crucial if you want to keep the attention of your listeners.

Without knowing it, you already use several MIDI controllers. The sustain pedal with

your keyboard, pitch wheel, modulation wheel, program changes, bank select and volume select are all MIDI controllers.

These controllers are easily available from your MIDI hardware, and from the Track List section of *Breakthru*. If, however, you want to insert a program change on a track part-way through your sequence, you can use the Step Editor page to do so. This same procedure also applies to any other MIDI controller supported by your sound module or synth.

You can use program change to vary the

patch that an instrument plays. For example, you might want to vary the bass sound from a Pick Bass patch to a Slap Bass in order to add interest to your chorus section. When you use an accompaniment instrument for a solo, you can insert a sudden Volume increase and extra Reverb to highlight the part when it is playing its solo line. Remember to re-set all the controllers to their original values when the solo is over.

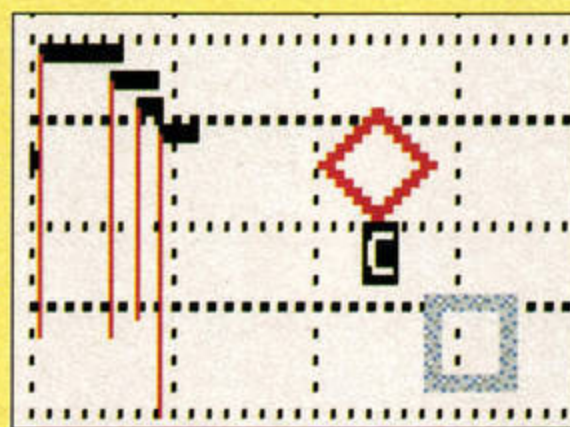
Chorus dramatically alters the way a patch sounds, so experiment with it on various patches - you may be surprised by the results.

Controller Numbers	
Program Change	25
Main Volume	7
Reverb Depth	91
Chorus Depth	93
Stereo Pan	10

1 Here are some common controllers that you can address on a GM synth. Reverb and Chorus depth can't normally be addressed directly from a sequencer, so a special controller message is needed for them.



2 Add a note at the desired point and click in the square Diamond Drag box. Select Control and this box appears. Here, controller 91 is used to add a value of 60 to the Reverb Depth.



3 Once installed as a controller event, the note looks like this. You can copy it, re-edit it or move it wherever you wish in the track. Controller changes add variety to your work, so do make use of them.

things up a bit and experiment by slipping in the odd open hi-hat note. Your track doesn't have to be uniform all the way through – variety will enhance the sound immensely.

When you have finished you may need to quantise the track. Use a semi-quaver value and listen to your work. It should, by now, be sounding a little less mechanical.

Open up another new track and record the kick and snare tracks in the same way, allowing yourself a flourish on the toms when appropriate. If you need to, you can record each individual drum on a different track, but keep working at it until you get it right. You can play continuously as you record – you will overwrite the previous run each time the sequencer loops. When you have completed a satisfactory run, stop the sequencer.

When you use the tom drums, remember it would be impossible for a real drummer to keep the hi-hat line going as normal, so switch to the Step Editor and highlight the Delete box. Click the left mouse button over any hi-hat notes that sound at the same time as the toms and the notes will be removed. Your work will sound much more realistic than the simple click track.

Time spent learning the skill of keyboard drumming will pay dividends: a skilled MIDI composer can create a drum track that sounds completely convincing. You may never get quite as good as professionals like Tim Wrench (Cochon D'Inde Studios), but most people can learn enough to elevate their drum tracks beyond click-track territory.

Classy Chords

The pad track that you played in near the start of this tutorial is all very well as a guide to



ADDING SAMPLES

[illegible]

Breakthru can play up to four samples simultaneously. Speech and sound effects work better than synth sounds.

Breakthru enables you to work with samples as well as MIDI events. Our demo version only loads the samples that are provided, but the full version enables you to load all kinds of samples. You can even work with CD-quality 16-bit samples via Replay 16 (£99.95 from Software Technology, ☎ 0161 2362515).

If one of the sample modes is active, there are some restrictions

placed upon mouse use when the sequencer is running, so only enable sample mode if you absolutely need to use samples.

To use a sample, first select a playback mode from the box in the top right-hand corner. If you have an STE, use the STE Stereo setting. Next, load a sample and click in the list on the left-hand side of the screen to assign it a program change number. You can

now audition the sample and use it in your music.

Back on the track list screen, use one of the sample channels marked L1, L2, R1 or R2 rather than assigning a MIDI channel to the sample. Finally, assign a program number which equates to the sample's number in the sample list. You can now use the sample in your music, just as you would a MIDI instrument.

the harmonic structure of your piece, but it does little to enhance it from a musical point of view. Our aim is to remove it entirely, but first we must play in an alternative harmony track.

Using only your right hand and a simple piano or electric piano patch, record a harmony part that fits with your rhythm and bass lines. If there are syncopated rhythms in the bass and drum lines, follow them. You might even

include snatches of the tune you have in mind. Try to avoid jumping around the keyboard too much, and use different chord inversions to add variety.

The diamond drag system is great for altering and deleting notes

playing the same notes, but in a different configuration – maybe with B at the bottom, then D and G. This is known as first inversion. For second inversion you use D at the bottom, and then G and B. Use this principal to make your chords more interesting.

The greater the number of different notes in a chord, the greater the possible number of inversions. If you select chord inversions carefully, you can totally dispel the blockiness of different root position chords played sequentially. Combining variety in rhythm and variety in chord inversion makes your music sound alive and exciting.

When you have finished recording your chord section, experiment by assigning different patches to the track. You should be able to hit upon a sound that enhances your music still further.

Now your harmony track is complete, you must delete the original pad track. Have a listen to your music – with any luck it should sound better than your previous attempts. If

not, then you obviously need a little more practice. Learn to let the sequencer program help you as much as possible, and don't be dismayed when you play a wrong note. If your performance is essentially a good one you can correct the notes by using the Step Editor. The diamond drag system is great for altering and deleting notes, or even adding new ones.

Over to you

With one section of music complete, you must now look to the other sections of your song. You may want to record a chorus section and an instrumental solo. You can copy your original verse and use the work you have already done again, but try to make the second verse slightly different – change one of the patches or add new instruments. Remember, variety is always the watch word.

Remember to save your work regularly. Even though you can only load four bars of your work into our demo version of *Breakthru*, all your work is saved, so when you acquire the full version you can load it straight back in. If you are keen to practice and succeed, you will soon be making great music with *Breakthru*.

The final cut

Mixing your sequence on to tape turns your digital dream into go-anywhere reality. You're on your way to stardom...

When you have completed your sequence, you need to transfer it to tape so that everyone else can listen to it. Professional studios often use Digital Audio Tape (DAT), but the usual way to master demo mixes in the home is to use a standard cassette recorder.

Cassettes have a number of limitations which need to be catered for, including restricted frequency range, poor stability and a tendency to lose recorded information.

This loss is referred to as 'drop out'. To minimise these problems, use a good quality chrome tape in the best tape recorder you have available.

Make sure that your solo sections really stand out from the music

Instrumentals

The sequence you record needs to be mixed on the sequencer before you can drop it down to tape. Listen to your music carefully and assess the balance. Make sure that your solo sections really stand out from the music – you may have to decrease the volume setting on one or more tracks to make your solo shine.

The hi-hat part is a potential problem. These high-pitched sounds tend to distort on cassette, so decrease the volume of your hi-hat track

until it is audible, but not intrusive. You can work with the volumes further by reducing the track volumes for the verse of your song and using the Step Editor to increase them for the chorus section. Once again, this adds variety and will impress the listener.

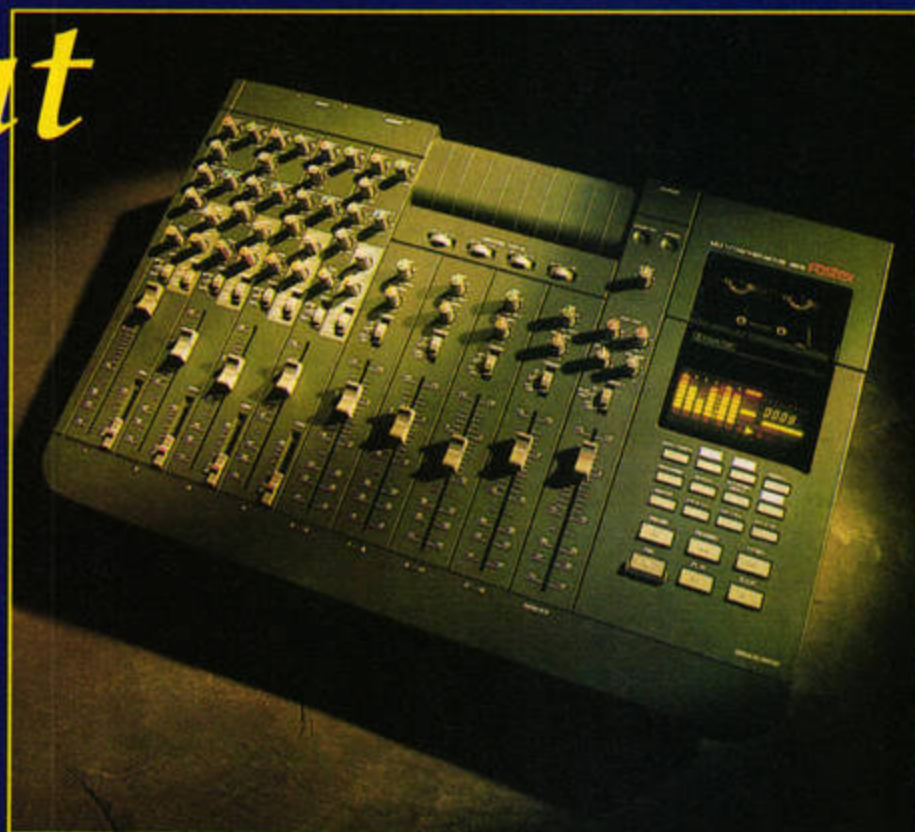
This is also a time to judge whether you have got the Reverb and Chorus effect levels correct. If your music sounds very mushy and indistinct, it may be that you have the Reverb on one or more

channels too high. In this case, go back and re-edit the controller events you inserted to reduce the reverb value.

Cassettes are also pretty intolerant of high bass levels, so trim the bass volume down as low as you can without losing it in the mix. If you think a track is inaudible, try muting it out using the triangle to the left of the track name in the Track List. If this makes a difference, you were actually hearing the part, because otherwise you wouldn't be aware of its absence.

On to tape

When you're satisfied that your music sounds just right, record it on to cassette by taking the stereo output from



You'll need a microphone and a four-track portastudio to add vocals to your song.

your keyboard into your cassette deck. Check your VU meters to make sure there is a good level of sound reaching the tape. As a general rule, it is advisable to make them flick into the red area regularly.

Adding a vocal

If you are producing a complete song, you'll need to use a basic four-track cassette-based portastudio. These machines are now very affordable, costing as little as £150.

The procedure is simple. Mix your instrumental performance down on to two of the tracks by recording the playback from your sequencer and sound module. It is now possible to add a vocal line using one of the other tracks. You need a reasonable quality microphone for this, such as a DB Zone (see Special Offer panel).

Your vocal recording will be greatly enhanced if you have access to any kind of echo or reverb effects unit. Simply plug the microphone into the effects box and the output from the effects box into your four-track recorder. Even a guitar delay pedal will make some improvements to the vocals – budget recording is all about using the tools that you have, or can borrow, and making the best of them.

When you record a vocal, give the singer a pair of headphones to listen to the backing

track with. Don't use your main speakers, because this ruins the recording.

Once the vocal is recorded you can play the whole thing back and take the stereo output from the portastudio into your conventional cassette deck. You can balance out the level of the singing with your backing track on mix-down so that the backing doesn't drown out the vocal.

Ready to roll

Once the transfer to cassette is complete, you can impress your friends with the finished demo. You might even be able to tempt a record company... The feeling of achievement

and satisfaction is one to relish and, hopefully, it will spur you on to create even better compositions and recordings. Some expense

is inevitable, but beg, borrow or buy secondhand and you should be able to achieve excellent results even on the most limited budget. So, don't just dream about writing songs, get on and do it. *stf*

You can achieve excellent results even on the most limited budget

SPECIAL OFFER

Component	Model	Offer price
Portastudio:	Tascam Porta 03	£185
Microphone:	DB Zone SR205	£35
Effects Unit:	Zoom Studio 1202 Multi FX	£159
GM module:	Boss Dr Synth DS330	£249
Keyboard:	Roland PC200 Mk2	£159

The total package normally costs £826, but Sound Control Hi-Tech is offering it to ST FORMAT readers for just £787. You can also buy the individual items at the prices given above. Call Sound Control on 0191 2324175 and be sure to tell the salesperson you saw the offer in this feature!



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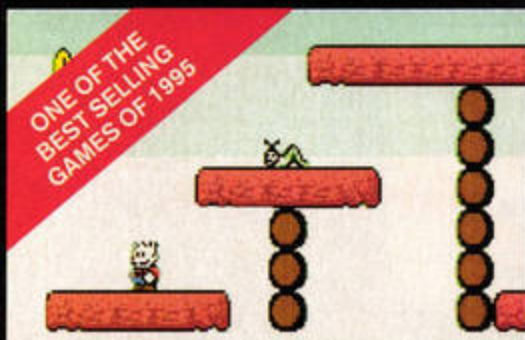
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Ease 4

The desktop wars continue as System Solutions releases its latest weapon in the fight for supremacy over NeoDesk 4 and TOS 2.



Although GEM is quite a capable desktop, and certainly easier to get to grips with than the Amiga's Workbench, it's sadly lacking in all but the most basic functions. It's hardly surprising, then, that those who have tried a replacement desktop would never go back to GEM.

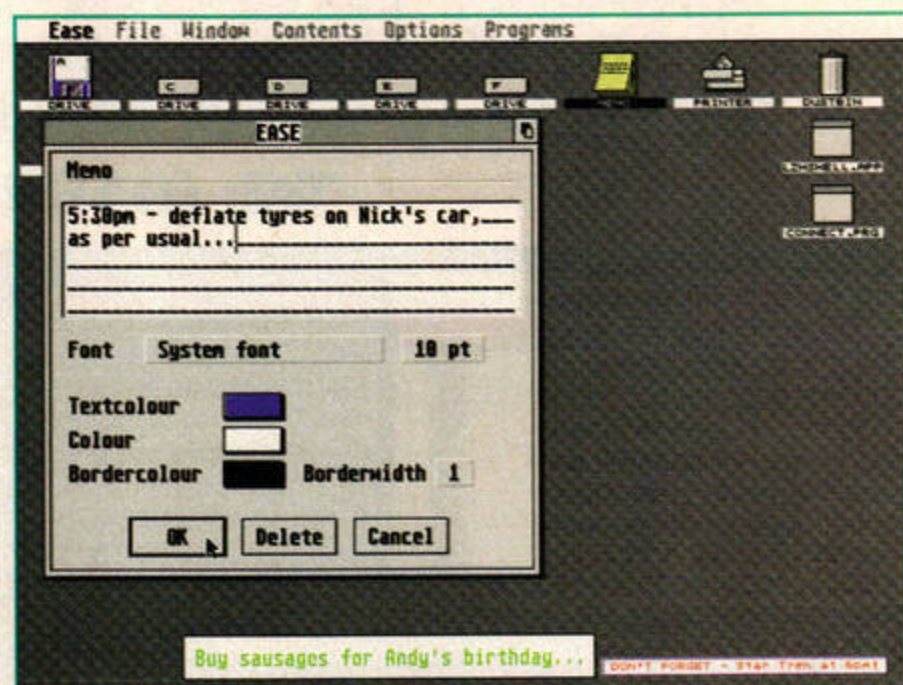
Ease was originally designed for use with the wonderful *MagiC* multitasking operating system. But whether you're a *MagiC*ian or not, *Ease* will nestle quite happily within the confines of your ST. It runs perfectly as the default desktop for all flavours of TOS, and works well as the shell for *MultiTOS* too.

Once *Ease* is installed, you'll be presented with a

desktop that appears very similar to the GEM standard, but with a sleeker look. You spend a lot of time at the desktop, and no matter how sophisticated your applications are, a dull and slow desktop will hamper your work. *Ease* takes the basic desktop concept and refines it, but without having unnecessary bells and whistles hanging off all over the place.

Easy does it

Ease can be as simple or as complex as you like. You can use it like the ST's own built-in desktop, but you won't be scratching the surface of its capabilities. Absolutely everything, from the appearance of windows to the style and point size used for



Never miss an episode of *Star Trek*, or forget an important task – *Ease*'s on-screen stickies beat slapping bits of yellow paper everywhere.

the files' text display, can be configured to suit.

One of GEM's biggest let-downs is the crude text file viewer, which doesn't run in a window and completely masks the desktop. By default, *Ease* shows all files in a GEM window, which you can scroll in both directions with the mouse. Installing viewer programs for other file formats, such as pictures or animations, is more advanced, too. With GEM, you're limited to one file extension per

program (well, unless you like fiddling with your DESKTOP.INF in a text editor, that is). *Ease* offers up to six file extensions for each application, making it much easier to work out what's going on.

Start me up

Ease supports the advanced features offered by TOS 2, such as desktop icons and 'drag and drop'. It also supports the ARGV and VA_START protocols for launching programs, overcoming the 124 character limitation when passing parameters to TTP programs. The best extra here, however, is being able to click on the parameter box to call a file

selector – you no longer have rack your brains trying to remember the full cryptic path to that file you want to access.

There's nothing worse than watching reams of text scroll up the screen, only to be dumped back to the desktop before you jot down some necessary notes. Thankfully, *Ease* enables you to hold the screen

after a TOS or TTP program has been executed, a feature which is sorely lacking in GEM.

It's the little touches that make *Ease* such a comfortable

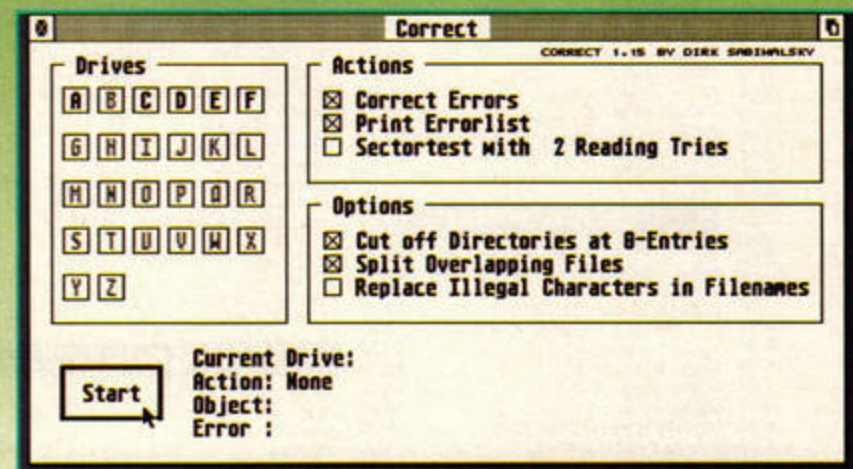
environment to work in. Look at the clever use of the right mouse button, for instance. Instead of double-clicking every time you want to open a folder, just click the right button. It may not sound much, but once you get used to it, you'll wonder how you ever coped without it.

If you find your desktop cluttered with icons, *Ease* provides a number of alternative methods for viewing your applications. You can create a drop-down menu on the normal menu bar which offers swift access to your favourite programs, and you can give them meaningful names, too. There's also a Desktop PopUp

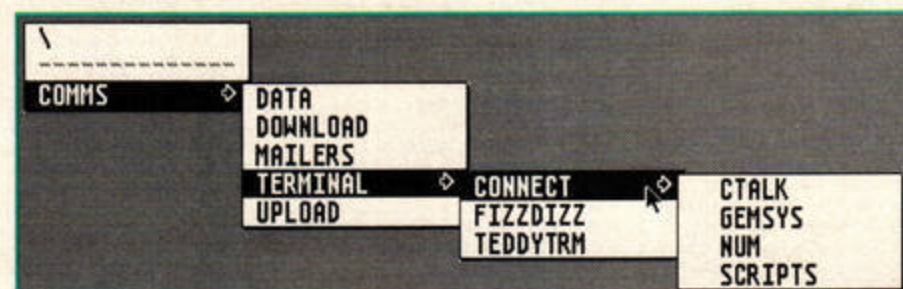
CORRECT

Correct, a marvellous utility for diagnosing and repairing common disk problems, is another part of the *Ease* package. It works with floppies, but comes into its own when used regularly with a hard drive. *Correct* scans a drive's partitions and reports back on any errors it finds. It catches common problems – such as overlapping files, lost clusters and illegal directory entries – with

ease and will happily repair any damage it comes across. You can also run it purely as a tester, without carrying out repairs, and dump a list of faults to a printer. For disk repairs, *Correct* is almost as powerful as the dedicated suite *Diamond Edge* from HiSoft. It doesn't perform optimisation, but it's a first-rate utility for hard drive users, and makes an excellent companion to *Ease*.



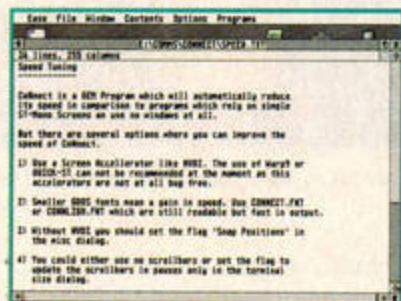
Correct is brilliant, and could well save your drive from accidents.



The File Tree PopUp is a new feature, and makes *Ease* very Macintosh-like.



With up to six file extensions, installing applications is easier than ever.



Ease uses a full GEM window so you're not stuck with the ugly TOS text viewer.

option which you can access by holding down the mouse button. This provides a text display of all the programs which you've assigned icons to or placed in the drop-down menu. All the features are optional and easily disabled if you don't want to use them.

Stickies

The most obvious addition to *Ease 4* is the yellow notepad icon, which offers the digital equivalent of those sticky little Post-It notes. Double-clicking the icon opens a dialog box, where you can quickly post short notes. The notes are pasted to the desktop, and can be moved or deleted at will. You can even alter the font and colour of the text to help prioritise important notes.

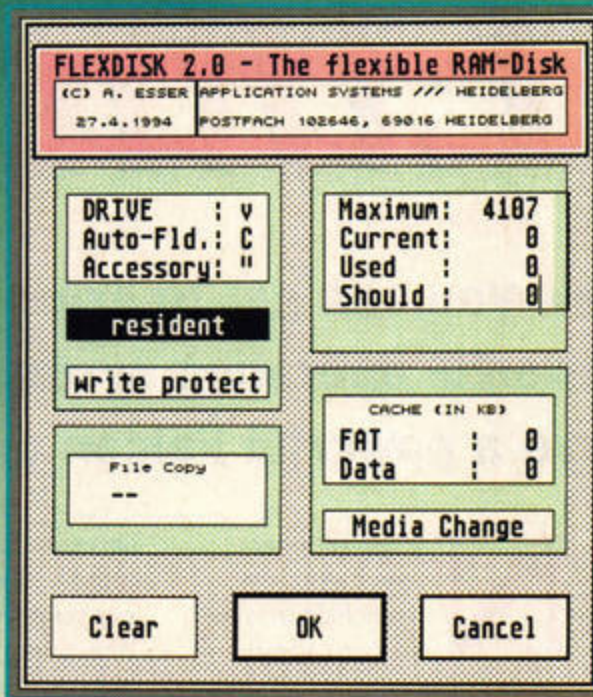
Another welcome addition is the File Tree PopUp. Hold the mouse button down over a drive icon and *Ease* opens a hierarchical menu, so you can

FLEXDISK

Ease provides you with a nice little bonus in the shape of *Flexdisk*, a superb, configurable RAM disk. The big bonus is that it's fully compatible with the *MagiC* multitasking operating system – probably the only RAM disk which is trustworthy enough in such an environment. With *MagiC* and *Ease* installed, *Flexdisk* can automatically re-size itself as you use it, only occupying the memory it needs.

With an AHD-compliant hard disk driver, it can be made fully resident, enabling it to survive a warm re-boot with all your data intact. At least, it can if you have an ST or STE; sadly, the resolution change involved when booting a Falcon clears the RAM disk. *Flexdisk* is an excellent example of how a RAM disk should work, and provides more configuration options than you can throw a proverbial stick at, including copying regularly used files into itself at boot-up. Superb.

Flexdisk, a configurable RAM disk, is a welcome addition to *Ease*.



navigate through an entire drive's contents to a specific file, all without opening a window. This is a very Mac-like feature, and an excellent time-saving device. Again, it can be switched off, and you can decide how long you have to hold the button down to activate the PopUp function.

Ease's main competitor is Gribnif's *NeoDesk 4* (available from Compo). *Ease* lacks some of *NeoDesk 4's* more sophisticated features, but it has the edge on the speed front.

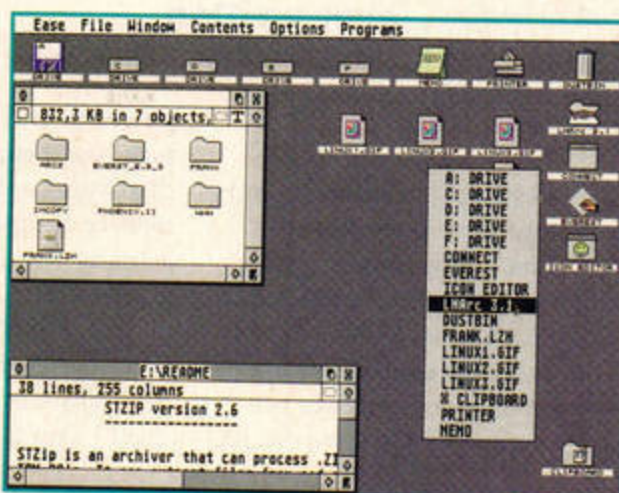
One of *NeoDesk's* most innovative features is the grouping facility. This enables you to search for files which match specific criteria, and place aliases of them in a new 'virtual folder', irrespective of the location of the real files. It's a useful feature for keeping track of files of a particular type – sound samples, for instance – and it's something we'd dearly love to see in *Ease*. Of course, *Ease* can do things *NeoDesk* can't, such as hooking directly into *Kobold*, the high-speed file copier.

There's no doubt in our

minds that *Ease* is a very professional piece of software. A 'feel-good factor' isn't something you normally associate with something as mundane as a replacement desktop, but *Ease* has it. It's a joy to use, and improves your working conditions no end.

As with all replacement desktops, floppy users might struggle to find sufficient disk space, but it's certainly a winner if you have a hard drive. *Ease* is a stunning piece of software, and we wouldn't want to be without it. *stf*

FRANK CHARLTON

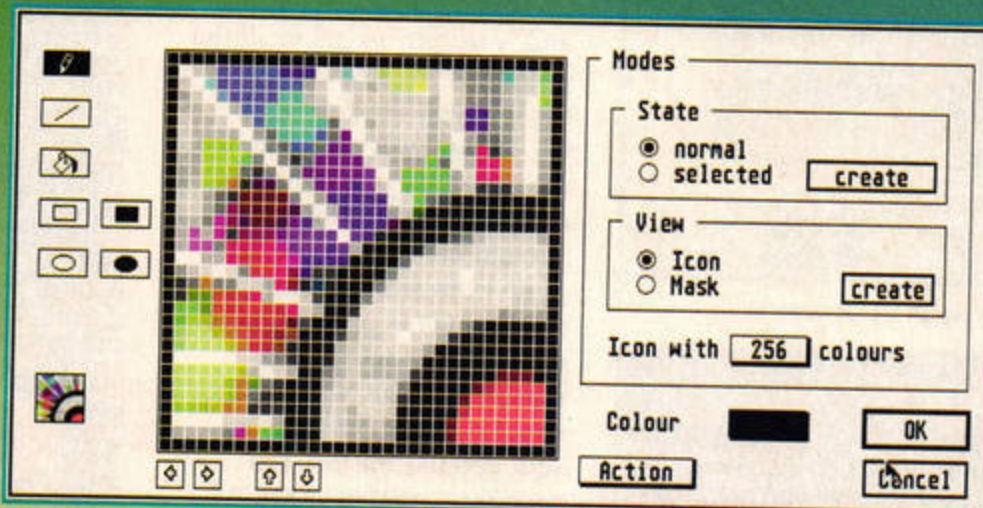


This nifty PopUp gives you easy access to your applications.

ICONOCLAST

Adding custom icons to TOS 2 is a tortuous process and involves mucking about with a Resource File editor. *Ease*, on the other hand, comes with a dedicated icon editor, which is triggered from the menu bar. *Ease* uses its own format rather than GEM's RSC files, but the editor can import these and extract the icons.

You're still limited to the 32-pixel square icons, but each icon can have an individual design for varying colour depths, so full 256-colour icons are possible on a Falcon or TT. There's no support for the *NeoDesk* icon format



Ease comes with a smart icon editor as well as a selection of colourful icons to get you started.

though, so you'll need a PD utility, such as *Codehead Icon Juggler*, to convert them. Still, it's very easy to use, and does its job well.

Product: *Ease 4*
Price: £49.95 (upgrades £19.95)
Contact: System Solutions
Tel: 0181 6933355
Min System: All Ataris with 1MByte or above

Ease 4

HIGHS

- Can be adapted to suit your needs
- Superb working environment
- Excellent extras
- Fast, smooth and gorgeous to look at

LOWS

- No *NeoDesk* icon support
- Lacks *NeoDesk 4's* groups feature

In short...

Ease 4 is a total stunner and certainly the best desktop we've used yet.

94%

Linux CD

Now you can get to grips with one of the most powerful operating systems in the world – if you have a powerful Falcon or TT to run it, that is.



Linux takes advantage of the enhanced graphics capabilities of the Falcon and TT.

No matter how much you love your Falcon, you have to admit that TOS has its shortcomings. It can only run one program at a time, and although third-party TOS replacements – such as *MagiC* and *MultiTOS* – improve the situation, they don't help overcome its other weakness: TOS just isn't an 'industry standard'.

UNIX, on the other hand, is one of the most powerful operating systems ever written. Devised by Bell Laboratories back in the 1960s, it's a complete multitasking environment capable of providing



The TT is the ideal machine for Linux. You won't get screens of this size on a Falcon, but you can use scrolling 'virtual screens'.

access to more than one user at a time. However, *UNIX* is a copyrighted commercial system, and although it was available during Atari's abortive TT *UNIX* Workstation project, it certainly never reached the mass Atari market. Enter *Linux*, which is essentially a freeware *UNIX* clone.

Cheaper on disc

Although you can download all the files you need from various Internet sites, the cost of the phone calls would be the same as, if not more than, the cost of System Solutions' CD — there's a lot of software to collect.

More importantly, there's the question of installation and configuration. If you download *Linux*, you have to configure it yourself. Preparing hard drive partitions, booting *Linux* and installing everything from the downloaded archives is a nightmare – trust us, we did it!

System Solutions' CD makes the whole affair a breeze – a GEM program prompts you for all the information it needs to configure the system.

DOS-U-Like?

UNIX is essentially a command-line operating system, running within a 'shell' interface. If you're groaning at the thought of MS-DOS-style complexity,

there's both good and bad news: *Linux* is much more complex than *DOS* for the raw beginner, but it's considerably more

powerful and flexible. Most task-based commands, such as displaying a directory's contents or formatting a disk, are actually small, individual programs, which means you can expand *Linux's* environment at will. Armed with a good book on *UNIX* – or indeed, *Linux* itself – you'll soon pick it up.

Programs galore

Linux won't run normal Atari software, but the CD contains truckloads of *Linux* software – everything from text editors and word processors to all the programs you need to access the Internet. The full *GNU C++* compiler is also included, so competent programmers can port existing *UNIX* software to the Falcon with little or no extra work. With thousands of *Linux* programmers making their source code available on the Net, you'll never run short of software. And because the disc is a special recordable CD-ROM, System Solutions can add updated versions of *Linux* at a later date without you having to buy a new disc.

The graphical interface (or



There's certainly some powerful software available, as this shot of *XMorph* shows.

HEFTY HARDWARE

The Atari version of Linux has some extremely specific operating requirements. First, it needs a 68030 processor to run, which restricts it to Falcon and TT owners. Second, it needs an FPU maths co-processor. Most Falcons

don't have one of these, but they're inexpensive and only take a couple of minutes to fit. For more information about adding an FPU, contact Compo (☎ 01487 773582) or System Solutions (☎ 0181 6933355).

shell), *XWindows*, is more colourful and flexible than GEM, and there's a lot of software written for it, including image viewers, games, graphics software and even a colour graphical Web browser called *Chimera*. Running *XWindows* in the Falcon's highest colour resolutions can slow your computer down drastically, though, unless you have a very fast machine.

Look and learn

So, how good is *Linux*? It's fast, expandable, and in use every day by thousands of people. It's also a superb way to learn the complexities of *UNIX* from home. If you're using *UNIX* at university, you'll find *Linux* a doddle. Its specialised nature means it's not to everyone's taste, but fans of *UNIX* will love it. *stf*

FRANK CHARLTON

Product: Linux CD

Price: £44.99

Contact: System Solutions

Tel: 0181 6933355

Min System: Falcon or TT with
FPU, CD-ROM and hard drive

Linux CD

HIGHS

- Very powerful
- Tons of software
- Easy to install

LOWS

- You need a book to learn it properly
- XWindows can be slow on a Falcon

In short...

Linux CD provides an ideal introduction to a massively popular operating system. **79%**

79%

GAS

Hey, do you need a ten-part monophonic groove synthesiser? For that matter, what is a ten-part monophonic groove synthesiser?

A MIDI sequencer is the standard tool of a MIDI musician. It enables you to record MIDI events in real time, or enter them stepwise. An auto-accompaniment generator, on the other hand, takes a set of pre-defined chords and builds a backing track to fit with them. If you understand the reasoning behind these two kinds of MIDI products, you will find it much easier to understand GAS, which is totally unlike either of them.

GAS is a helper program for you to use alongside your sequencer, not a replacement for it. By using randomising routines to generate notes, it can help you create music that you simply would not have played on your keyboard.

The program provides ten monophonic tracks, and every groove is sixteen beats (or four bars) long. GAS is completely MIDI keyboard independent, so you create your grooves using your ST's keyboard and mouse. Notes are described with numbers, so you will need a chart that shows you



You don't need to enter all your chords manually – this handy chord page will bang them in for you.

which notes relate to which numbers. For example, C2 (the C below Middle C) is note 42.

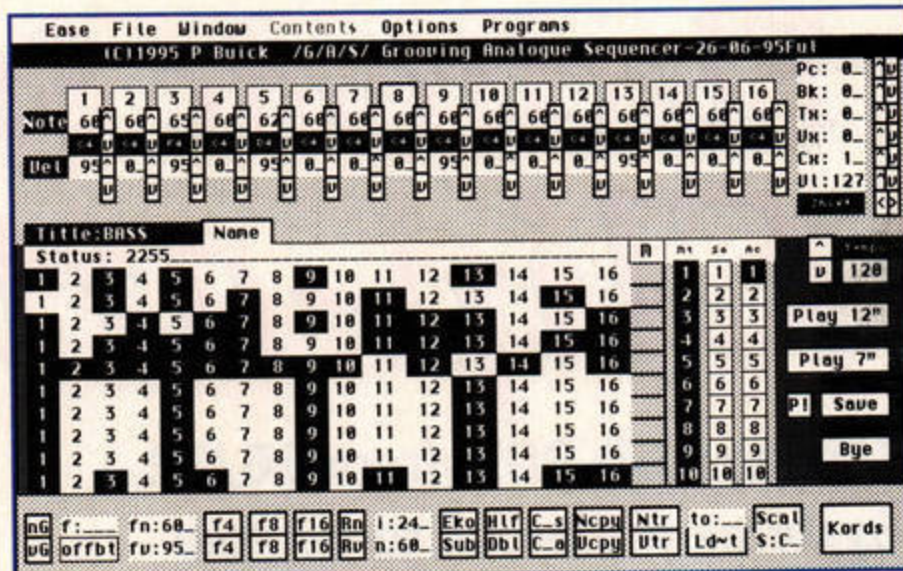
Because there is so much to cram on to the screen, the action buttons all have cryptic names like Fn or Cx. These names and numbers are important, and you will need to learn them carefully if you want to use this software fluently.

GAS makes the creation of weird and wonderful grooves very easy

Random, like

Since you cannot use your MIDI keyboard to input notes, they have to be created in some other way. You can, if you wish, write notes directly into the note fields for a track. This is done by editing the number fields for each beat. Velocity is dealt with separately within GAS, so no note will sound unless a valid velocity is assigned to it.

Once you have satisfactory note and velocity patterns, you can save them as a groove for use in future pieces. The other way to get notes on the page quickly is to use a fill of four, eight or 16 beats. These fills can repeat a single note, or you can randomise the notes within a defined octave range. For example, for a steady bass drum guide track, create an even fill of four or eight beats all



Don't be freaked out by this screen – all will become clear when you study the manual.

on the same note. This can then be used as a metronome.

Once notes have been created, they can be copied to other tracks, made to echo, transposed, moved off the beat and further randomised in many ways. Because of the random nature of the process, it may be that results sound a little weird. You can make the groove more normal using the scale correction feature, which moves all the notes on a track until they fall within the limits of the selected scale type. For

example, if you choose a standard major scale, the scale correction will move any note that does not fit within a major scale to the nearest note that does.

Each track can only play one note at once, so chords have to be created by using multiple tracks. Fortunately, the Kords page makes this easy. You can accompany your groove with preset chords or define your own.

Weird, oh yes

There is no doubt that, with practice, GAS makes the creation of weird and wonderful grooves very quick and easy. The real joy of the program is its randomising features, which enable you to create all sorts of complex and interesting textures.

There seems to be a timing problem in the playback routine – the music often slows down and speeds up of its own accord. However, this is not reflected in the MIDI files produced by the accessory. Once you've exported your groove, you can load it into your main sequencer and modify it as per usual.

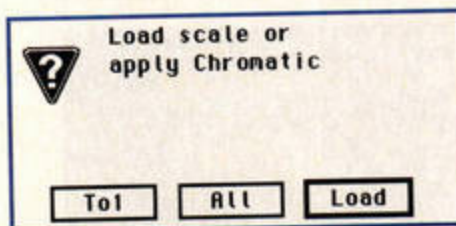


Go groove surfing with GAS and discover some of the weird and wonderful sounds your synth is capable of.

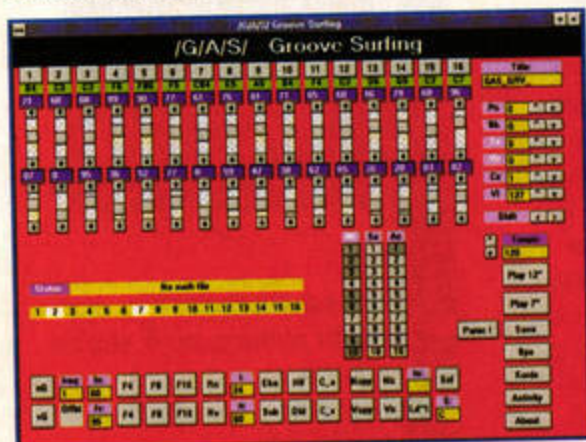
The manual is well written, with both a tutorial and a reference section, but much could be done to make the screen display less cluttered and easier to use. The lack of support for direct MIDI input is also a drawback. Nevertheless, if you are prepared to learn how to use GAS's interface, you could well find it an interesting and useful compositional aid. *stf*

ANDY CURTIS

Product: GAS
Price: £89
Contact: Intrinsic Technology
Tel: 0181 7610178
Hardware: All STs running in high or medium res



Arggh! I don't believe it! There are no Cancel options in any of the alert boxes.



The PC version of GAS boasts this much improved screen display. Surely the ST display could be more like this?

GAS

HIGHS

- Interesting effects
- Runs on most hardware
- Good manual

LOWS

- Poor interface
- No MIDI input
- Timing problems

In short...

A great idea, but it needs further development before it becomes a must buy.

79%

VERDICT • STIF VERDICT • STIF VERDICT

Electronic Spinster Clip-art CD



Some of the vector art starts to look a little strained at higher magnifications.

This new CD-ROM from 16/32 Systems professes to contain every clip-art image you'll ever need – so where are the portraits of the ST FORMAT team, then?

The wonderfully named Electronic Spinster Graphics company has been providing clip-art images for years in the US. Now it has compiled its entire collection on to a single CD, giving you instant access to a wealth of images for use in newsletters, posters and DTP documents.

Unlike multi-format CDs, or those manufactured especially for the PC, Spinster's offering is coded specifically for the ST – a brave move in this day and age. That's not to say that the CD, which is standard format, can't be read by either a Mac or PC, it's just that the images it contains are very definitely biased towards the Atari. The bitmapped IMG format is still the most common and well-supported image type in Atari DTP circles, and it's this format that provides the bulk of the artwork on offer here.

57 varieties

The Electronic Spinster collection scores well in one respect: it doesn't restrict itself to a handful of themes. Just about

every category of clip-art is covered here, including 'business-style' office artwork and more 'kiddie' cartoon fare. There are also whole sections devoted to more esoteric subjects, including well-drawn religious images, large letters suitable for 'drop caps' and even medical artwork.

Clean and tidy

The CD's 6,000 bitmapped images have all been scanned from existing paper artwork, and they're all monochrome. Spinster has taken the time to clean them up after scanning – they all look relatively clean and there doesn't seem to be any 'noise' or stray pixels.

While the packaging doesn't mention which scanners were used, the results look like the work of a hand scanner. This shouldn't concern you, though, as most of the pictures seem to have been scanned at either 300 or 400dpi (dots per inch), and they're all big enough to re-scale for your own use.

The Vector folder on the disc contains over 1,000 pieces of clip-art in both the Calamus



"We love our ST, yeah, yeah, yeah." You'll even find pictures of the Fab Four on the Electronic Spinster collection, but you'll have to provide your own music.

Vector Graphic (CVG) and GEM metafile formats. Electronic Spinster does mention that most of these started life as bitmapped scans, which were subsequently converted using the old *Avant Vektor* auto-trace program. Unfortunately, any post-conversion editing seems to have been scant, and as a result some of the images are extremely jagged when you scale them up. Decent vector clip-art is rather thin on the ground, so we can't help wishing that Spinster had put more effort into this department.

Duplication

Another niggle is the dated look and subject matter of a large proportion of the images. Most of the art in the Business and Office categories, for example, is in a style often seen in the early '80s, but little used since. Original 1980s computer equipment with huge floppy drives abounds, and it does spoil the overall effect. Most annoying of all, however, is the way in which some of the images are duplicated in different folders. A sizeable number of images appear more than once in the Office and Office Humour categories, for instance. It's a difficult task compiling a CD without duplicating something, but these pictures even have the same filenames!

Surely a simple check could have been carried out before the CD was mastered?

Overall, this collection won't set the DTP world on fire. It's a handy disc to have in your collection, but with more effort in the vector department and fewer duplicated files, it would have been a far better disc. *stf*

FRANK CHARLTON

Product: Electronic Spinster
Clip-art CD
Price: £16
Contact: 16/32 Systems
Tel: 01634 710788
Min System: All Ataris, CD-ROM drive required

SHAREWARE EXTRAS

Spinster also supplies 2MByte of software for viewing and cataloguing the images. Most of the freeware and shareware supplied is old stuff, but some of the classic programs, such as the excellent *GEMView*, are a welcome addition.

It's worth noting, however, that these are the unregistered versions, so you have to fork out again if you use them regularly.



The Electronic Spinster Clip-art CD also includes *GEMView*, the best shareware image viewer and convertor.

**Spinster
Clip-art
CD**
HIGHS
■ Wide range of themes covered
■ Well arranged
LOWS
■ Image duplication

In short...

Not an essential buy, but worth picking up if you're a keen hoarder of clip-art. **58%**

Epson Stylus Colour 2

The new compact Epson Stylus Colour 2 features a re-styled, upright paper feeder.

The Stylus Colour is back, toting a gravity-fed paper feeder. Welcome to the next generation of Epson's colour inkjets.



Hot on the heels of the original Epson Stylus Colour (STF 67, 90%) comes the Stylus Colour 2, a redesigned version which replaces the original in Epson's product line and features the same piezo head technology. This new model is slightly cheaper than its predecessor, and features a smaller, more compact casing and a gravity-fed paper feeder. This last feature is certainly an improvement – the original model had a horizontal feeder which was prone to the odd paper jam. However, the output 'tray' has no catch ridge, so pages coming out don't stack very well.

Drive it

The Stylus Colour 2 is supplied with capable drivers for both Windows and Mac environments, but no such software is supplied for use with

Atari systems. As most ST programs have their own printer drivers, this isn't a problem. *ImageCopy 4* and *Calamus SL*, for example, both have drivers for the original Epson Stylus Colour. These drivers work well with this new model when used in conjunction with the front panel controls.

ImageCopy 4 is especially useful because it provides a fully-functional driver plus pre-defined INF files for printing in 360 and 720dpi modes. These take a lot of the guesswork out of printing images, as they have optimised colour balance and print density settings designed to produce the best result. Although the existing drivers don't fully support the new printer, the Print Mode button on the front

panel can be used to set the paper type independently of software, a clever design feature which greatly improves the overall output quality.

If you want to print plain text from the desktop, the

Print Mode button also enables you to specify pure black printing via the black cartridge rather than the creation of a

composite black from the three-colour cartridge. This increases the speed of printing and enhances the quality of the text, allowing the Stylus Colour 2 to demonstrate its rated 4ppm (pages per minute) performance.

The Print Mode feature also works with word processors, such as *ST Write*, which

can output ASCII text to a generic printer. Unfortunately, the design of the paper output tray means that this printer isn't suited to bulk text output.

Spot the difference

When compared to the original Stylus Colour, this model performs in much the same way. In fact, we couldn't detect any difference in the printed results. However, the lower price of the Stylus Colour 2 and its improved design make it ideal for quality colour image printing on any ST or Falcon setup. *stf*

DUG ARMSTRONG

Product: Epson Stylus Colour 2
Price: £385
Contact: Epson (UK) Ltd
Tel: 01442 61144
Min system: All STs

MEDIA MATTERS

Understanding the different paper types available for Epson Stylus printers is crucial for effective output. Although the Stylus Colour 2 is quite happy printing on photocopier-grade paper, using special coated paper greatly improves the print quality.



At 360dpi on plain paper, definition is good but colour is weak.



At 360dpi on coated paper, the improvement in colour is massive.



720dpi on high-quality coated paper – definition and colour are superb.

There are two kinds of coated paper available, for 360 and 720dpi modes, as well as a high-gloss one for professional-quality output. These papers are more expensive than the plain variety, costing around nine, ten and 20 pence per sheet.

Stylus Colour 2

HIGHS

- Excellent high-quality colour output
- Compact design
- Good documentation

LOWS

- Poorly designed output tray

In short...

The Stylus Colour 2 offers exceptional print quality at a price we can all afford. **91%**

VERDICT • STF VERDICT • STF VERDICT • S

Platonix

There's more to life than blood, guts, guns and violence, so here's a harmonious Falcon-only puzzler from 16/32 Systems. Peace, man.

Here at *ST FORMAT*, we like a good puzzle game as much as the next person. Adrenaline-pumping shoot-'em-ups are all very well, but there's something compulsive about the instant nature of a good puzzler that we find hard to resist. So, how could we possibly ignore a new puzzler designed specifically to take advantage of the Falcon's enhanced graphics and sound engines?

How indeed?

The *Platonix Profi-Edition*, from German programmers Digital Vision Software, is the puzzler in question. Your goal is to collect the Stones of Wisdom from each level, while battling against a tight time-limit. The play area is a standard single-screen board affair, which is viewed from above.

Each screen is made up of stone pathways, with the

Stones of Wisdom dotted about here and there. Wagging the joystick sets you moving, jumping an entire square in one move. The snag is that the standard stones on the path dissolve as soon as you move off them, leaving only empty space.

This is where *Platonix's* gameplay lies. You must carefully plan your path so you can reach all the Stones of Wisdom – rush in and you'll end up stuck in a corner with no pathway left. Later levels introduce further hazards, such as broken stones that collapse if you stand on them for too long, and mines that explode if you take too long to cross them.

And that's it. Start a new level, suss out where the Stones are, and plot a path to reach them. The time limit is

fairly strict, but while it increases the challenge, it doesn't add anything new or exciting to the overall game.

Most addictive puzzle games are based around deviously simple concepts – *Tetris* is a prime example – but *Platonix* really does need more



The only time *Platonix* really beefs up its graphics is for these 256-colour static screens, which pop up between the various levels. Shame, really.

action. Even PD games are generally more involved than this and they often provide more intense gameplay. The brilliant *Switch*, which scored 92% in issue 76, is certainly more addictive.

The levels are sub-divided into four time zones: Ancient Time, The Middle Ages, Fantasy and Future. Each zone consists of 25 levels of the same thing. You really need to

be seriously devoted to the idea of finishing every game in your collection to want to wade through 100 levels of this monotony.

Thankfully, you're given a password to re-enter the later stages at will, but even this doesn't relieve the tedium.

Wake up!

The Falcon enhancements are a bit of a cop-out, too. There are some beautiful still images between levels, and the game has a thumping stereo soundtrack, but the in-game graphics are dull and lack any real lustre. There's nothing here to show off your machine, and the enhancements do nothing for the tiresome gameplay.

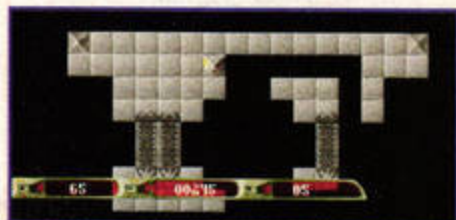
Platonix is little more than



At the start of every level, you're treated to a rotating 3D map of what's to come. Why such a boring game, then?

a very basic game dressed up with some fancy static screens and a good soundtrack. The Falcon doesn't even break into a sweat, let alone feel pushed to the limits, and the tired idea behind the game kills any hopes for longevity. *stf*

FRANK CHARLTON



The game itself isn't much to look at: every level is pretty much the same. *Platonix* hardly pushes the Falcon's capabilities.

SYSTEM ANALYSIS

Platonix runs on any Falcon with 4MByte of RAM and a hard drive. You need to install the floppies before you can play it, and the complete game takes up 5MByte of disk space. It also runs on any colour screen display – at least, that's the theory.

While *Platonix* professes to run with both RGB and VGA monitors, there's a catch. When it's run on a VGA monitor, it switches the screen refresh rate

to 50Hz. While this is normal for UK RGB monitors, VGA screens normally run at a higher rate.

If your VGA monitor is an older one – like ours – then *Platonix* won't run. The screen goes berserk, and the image is totally unstable. If you're one of the unlucky ones, you're left with no option but to run *Platonix* with your Falcon connected to a TV set or dedicated RGB monitor. True VGA compatibility this isn't.

Product: Platonix
Price: £29.95
Contact: 16/32 Systems
Tel: 01634 710788
Min System: Falcon, 4MByte of RAM, hard drive

Platonix

HIGHS

- Superb stereo sound and music
- Beautiful intro screens

LOWS

- Very basic gameplay
- Far too tedious

In short...

A simple puzzle game that's too repetitive to have any lasting appeal. Avoid.

48%

VERDICT • STIF VERDICT • STIF VERDICT

Team: New Season Edition

The best soccer sim is back, with a lower price and extra features.

Team: New Season Edition is more than just an update. It's a revelation. The game has been given a complete overhaul, and there are some sparkling new effects, creating even more atmosphere in this, the best ever football game on the Atari.

We originally gave *Team* 94% back in issue 72. Since then several options have been added and enhanced to make the game even better (especially at the lower price). Because the game continually evolves, many of you will already be aware of some of the changes.

The option to turn the music off was the first big update, because however impressive the music sounds, being able to turn it off after ten minutes is definitely a good thing.

Second, the game's tactics have been enhanced. Now 3-5-2 formations are a reality, so you can happily clog up the midfield while leaving great big gaps in your defence. And finally, several little extras have been added. The linesman flags for throw-ins, and the players bend down to pick up the ball. Your players even celebrate goals by shaking their fists in the air – thankful-



Middlesbrough is one of the Premiership's new teams, as reflected in *New Season Edition*. Come 1996-7, Birmingham City will up there too (Fat chance – Karen).

ly, though, there's no snogging or other unmanly activities to disrupt the professionalism of the game.

Other than that, *Team: New Season Edition* is essentially *Team* with up-to-date team kits and statistics (Collymore plays for Liverpool and Brazilian star Juninho is there for Middlesbrough). Although *Team's* learning curve is very steep, we would still recommend it wholeheartedly to all footie-loving STE and Falcon

owners. We've been playing it solid for six month's now, and we still have to have 'just one more go'. Go out and buy it. Now. *stf*

NICK PEERS

Product: Team: New Season Edition
Price: £19.95
Contact: Impact Software
Tel: 01280 850450
Min system: STE/Falcon, 1MByte required

STF RATING: 95%

Alien Thing: Expert Edition

If you found the game *Alien Thing* too easy first time around, try it again. It's no walkover...

Alien Thing fell down the first time it was reviewed because it was far too easy. Our reviewer walked through the 11 levels with little difficulty, proving that the

game held few challenges to seasoned game players.

Now the *Expert Edition*, with all 11 levels reworked to make them harder, has been released. All credit should go to 999 Software for taking on board the criticism and updating the game so quickly. If you've already completed the original game, get this and for just £3 you can have another go.

If only the Tasmanian Devil were here, then we could construct an amusing caption around the classic 'Taz hate water!' gag.



Nick got plenty of decent action shots of *Alien Thing Expert Edition*, but we much prefer this 'Nick dies horribly' scene. Funny, that.

You want the plot? Aliens are coming to Earth and it's your job to stop them. The game features an amusing intro with all the details, but that's really all you need to know. The *Expert Edition* makes each level that much harder by reducing the number of bonuses available and adding more aliens, along with some nasty booby traps here and there. It also adds support for those lucky STE and Falcon owners who have a Jag Powerpad. This new control option is a welcome addition

to the original release.

Alien Thing was always a top game, with superb graphics and sounds, and solid gameplay. Now the difficulty level has been tweaked, there's no excuse to give it a miss. *stf*

NICK PEERS

Product: Alien Thing: Expert Edition
Price: £19.99 (upgrades £3)
Contact: Top Byte Software
Tel: 01622 763056
Min system: All colour Ataris, 1MByte of RAM

STF RATING: 84%

Pitfall – The Mayan Adventure

Pitfall is back on the Atari, 15 years after its release on the VCS, but has time been kinder to the game than it was to the Incas?

Even in the world of the next-generation console, the platform game is still pretty big news. However, this being the next generation and everything, it's a different breed of

platformer that's attracting punters to the new machines.

On the Playstation there's the innovative and esoteric *Jumping Flash* as well as the insane mayhem of *Rapid Reload*; the Saturn's got the charismatic and novel 3D-style *Bug*; and the Ultra 64's *Mario* game is already wowing the faces off everyone, despite being only

about 30 per cent complete. So far, of course, the Jag has had to make do with the horrible *Bubsy* and the out-of-time *Zool 2*, but now there's... ah.

Old school

If you're looking for state-of-the-art 64-bit sophistication in *Pitfall*, you're going to be disappointed. This latest release is so 'old school' it actually has an exact rendition of the



Some days you have to give up everything that's comforting and familiar and take a leap into the unknown... and some days you just want to die. Ta-ra, then.

original Atari VCS version of *Pitfall* hidden within it as a bonus game. While *The Mayan Adventure* itself only borrows a few key themes and visual cues from its 15 year-old predecessor, the game design is as old as the Incan temples that form the backdrop. This is straightforward jumpin', shootin' and whippin' action.

If you've ever played a platform game, at any time in your life, there's very little we can tell you about this one.

The graphics and animation are lush, the music atmospheric, and the runaway mine cart sequence is present and correct. There are secret

rooms to find, little bonus games to play, and a funny joke at the end – no, I won't spoil it for you. But that's about it.

The five levels are a reasonable size, but rather loosely laid-out and samey. It's all too easy to run in circles, covering the same area several times without noticing. The baddies are refreshingly plausible and plentiful, though. Bats, rats, snakes and birds knock you around and get in your way, but at least they don't possess annoying magical powers or fire bullets and suchlike. There are enough of them to keep you on your toes all the way through, and the overall difficulty ensures you won't go straight through the game on



Tread softly, for you tread beneath the Alsatian of wrathful vengeance.

your first attempt, even if you use the handy save feature.

Pitfall's hardly going to sell loads of Jaguars – it's all but identical to the SNES and Mega Drive versions of the game – but if you're up for a bit of decent platforming action, then it's easily your best bet. And hey, what else are you going to spend your money on – *Ultra Vortek*? stf

STUART CAMPBELL



Wheweee! It's the obligatory runaway mine cart sequence. Hold on...



And here you are up a tree, holding on to something else. Life's like that.



It was so much better when the mine cart was running away. Still, it'll only take you three weeks to push these coals to Newcastle.



Hold on, HOLD ON! All right then, let go, we don't care.

Product: Pitfall – The Mayan Adventure
Price: £50
Contact: Activision/Atari
Tel: 01753 533344
Min system: Jaguar

VERDICT • STF VERDICT • STF VERDICT

Pitfall

HIGHS

- It's pretty
- It's hard
- It's got Pitfall in it

LOWS

- It's not very big
- It's a bit of a sprawl

In short...

Lush, atmospheric and the best Jag platformer yet.

But how hard can that be?

80%

White Men Can't Jump

Woody Harrelson and Wesley Snipes are nowhere to be seen, but hey, you do get a 'free' multi-tap.

Multi-player games are the way forward in the modern gaming world, or so it would seem. Everyone you meet seems to be banging on about 16-player PC network hook-ups and the four built-in joy-pad ports of the Ultra 64. Don't get me wrong, I love *Super Bomberman* as much as the next person, but isn't this multi-player mania missing the point? After all, game consoles were originally invented to provide entertainment when there wasn't anyone else around to play games with.

Still, you can't buck the trend. It's hardly surprising,

then, that Atari has now joined in by producing a four-way multi-tap adaptor for the Jaguar. Further, in a seemingly philanthropic gesture, Atari has decided to bundle it 'free' with this four-player, film-licence basketball game. This is a fine idea, but the game is so terrible it risks discrediting the adaptor itself, merely by association. Oh no, not again...

Bouncing balls

White Men Can't Jump is based on a two-on-two basketball game, a sport which, as far as I can see, has featured in every single American movie since *Citizen Kane*. You know the sort of thing: two teams of two



No pain, no gain, that's what my Granny always says.

players, each attacking the same basket. This is quite a confusing thing to be doing in the first place, but it's made all the more so in this case by the low viewpoint, jerky movement, inconsistent control and hard-to-distinguish players.

Passing, in particular, is so hard to pull off that it's better to simply use the player that has the ball and score solo, which rather defeats the object of making the thing a four-player game. In fact, generally the best strategy is to hammer on the 'punch' and 'jump' buttons at random when you're not in possession; when you get the ball, run around aimlessly until a gap appears and you can get off a shot.

Dribbling action

In one- or two-player mode (that is, when you're both controlling two players), any clever strategy is repeatedly scuppered because the Jaguar seems to switch which player you're controlling on a whim. The four-player mode eliminates this flaw, and significantly improves the game as a whole, but it doesn't help with the game's other faults.

The fast-moving, exciting atmosphere of two-on-two is also somewhat dissipated by the ponderous and incredibly quiet music. The over-reliance on five or six half-hearted speech samples doesn't help either. Any thrills that may conceivably have been generated by the movie tie-in aspect are lost, too, as none of



You're looking the wrong way, mate - the basket is behind you. It's behind you...



Methinks you cheated. Basketball is a non-contact sport. Mostly.

the film's stars appear at any point in the game.

The final blow is struck by the colour scheme, which paints a dull, gloomy and oppressive dark blue sky over every location - even the sun-kissed beachside court. *White Men Can't Jump* is a nice idea, but ultimately it's just another game that'll make non-Jag owners laugh at you in the street. *stf*

STUART CAMPBELL

Product: White Men Can't Jump
Price: £60 inc 'free' multi-tap
Contact: Atari
Tel: 01753 533344
Min system: Jaguar



Choose a nice, safe, suburban court in clean, green Middle America...



...or play the real game on an inner city court. The choice is yours...



Even at the sun-soaked beachside court, the sky is still navy-blue. And you still can't recognise your players. And it's still no good.

VERDICT • STF VERDICT • STF VERDICT • STF VERDICT • STF VERDICT

White Men Can't Jump

HIGHS

- You get a multi-tap
- And can play with three friends

LOWS

- But they'll all hate you
- Five sprites = jerky graphics. Why?
- Everyone else gets to play *NBA Jam*

In short...

This is exactly the kind of game that got the Jag into the state it's in now.

22%

PD & Shareware

Deadland



Your troops don't look too healthy. I'd recommend getting them some supplies as quickly as possible, otherwise they'll knock off early.

Merlin PD, Disk MPD2400
All Ataris, 1MByte required

It's been a long time coming, but the first passable *Cannon Fodder* clone has finally hit the ST. However, *Deadland* differs quite substantially from its commercial mentor – the violence is still there when you want it, but your mission involves more than just running around killing things.

You've crashed on a hostile planet and you need to rebuild your ship in order to escape. Both time and troops are limited, and you're up against unfriendly natives and the hostile environment of *Deadland* itself.

You can activate and deactivate various members of

your team for guard duty or construction work – the knack is knowing how fast you can push things without compromising your defences. At the same time you must keep an eye on each member's health, morale, oxygen and water. This is quite straightforward because each character's face alters according to his state. When their faces turn green, you're in trouble.

The graphics are a little small, but well animated and responsive to the mouse control. The icons of your troops are also brilliantly done – not only do they reflect each member's status, but you also get different characters (including cyborgs and one-eyed aliens) in different games.

It would be nice if the screen scrolled more smoothly, and more comprehensive instructions would make the game more accessible, but otherwise *Deadland* can't be faulted. Last year was relatively quiet gameswise, but 1996 has exploded into life with a real bang.

STF RATING: 91%



Building various installations is the key to survival. However, you'll need to defend your creations...

Tightening your belt after Yuletide excesses? Nick Peers thanks his lucky stars PD and shareware are so inexpensive.

Tank Blaster

The Computer Dungeon
Falcon only, 4MByte and
hard drive required

Tank Blaster is a passable twist on two-player battle games like *Light Cycles* and *Dynablasters*. Up to six players compete on a two-dimensional grid and your aim is to wipe out your opponents or survive until the rest are disposed of.

The originality is in the control mechanism. Moving your tanks around isn't a prob-

lem, but you must halt in order to aim your gun and fire.

While you're scrabbling around attempting to line up your shot, you're a sitting duck. Once your shield strength is reduced to zero, kaboom, you've lost the round.

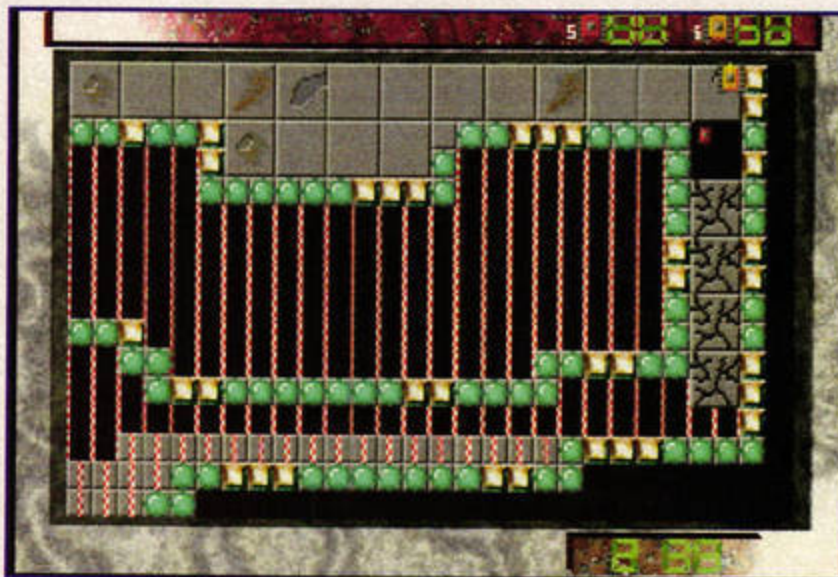
Each level has its own twists and turns. There are chasms for the unwary to fall into and floor panels which vanish, leaving you hanging in mid-air until gravity claims you. Some panels crack under your weight and must be crossed with care.

In two-player mode the game is a little limited – just you and a friend attempting to take pot-shots at each other – but once you have loads of friends gathered round your ST, *Tank Blaster* becomes a whole new shell game.

STF RATING: 76%



This, if you can believe it, is the opening screen for *Tank Blaster*. Oh yes it is.



There's a lot of depth to *Tank Blaster*, especially if you find yourself plummeting through a hole in the game arena (Groan – Karen).

Thing Backgrounds

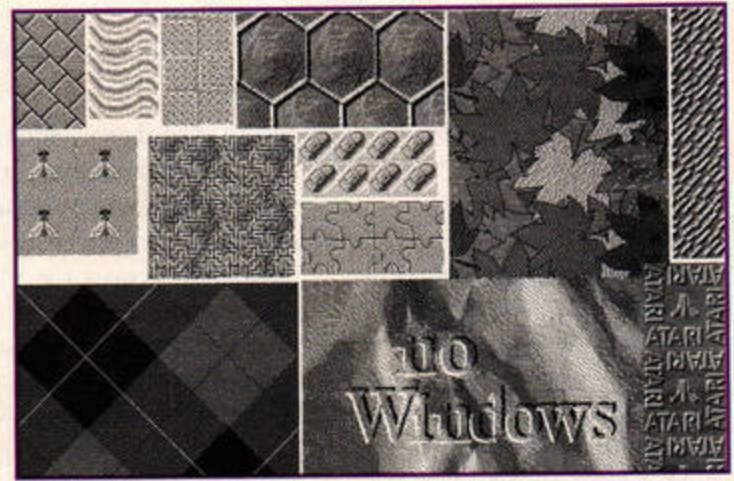
Ad.Lib PD
All Ataris running Thing

Properly known as *Thing Background Collection, Volume One*, this German collection of 46 IMG files is designed to spruce up the background to your Thing (STF 74, 86%) desktop, thanks to Thing's ability to tile small images across the desktop. There's a good

variety to choose from, and there should be something to suit most tastes. Falcon owners may be a little miffed, because they're all monochrome, but ST owners keen to spruce up their desktop need look no further than this collection.

STF RATING: 85%

The *Thing Background Collection* adds a touch of black and white to your ST.



Paula 2.4

Goodmans PDL, Disk GD1846, or Wonder Disk 79
All Ataris, med/high resolution

Paula is a GEM-based MOD file player for all Ataris. Unlike other players, it enables STFM owners to join in using *Petra* (included), a program that makes it possible for non-DMA machines to playback MODs.

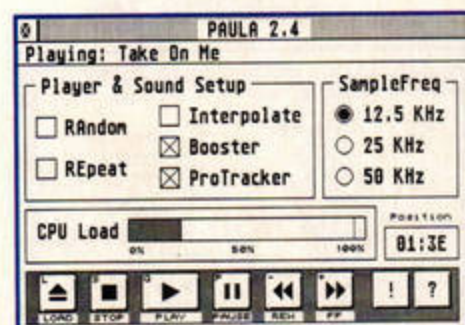
Paula can be installed as an accessory, enabling you to play

MOD files in the background while you get on with

something else. However, it's lacking in some respects: you can't alter the volume, bass and treble controls and it doesn't automatically pick the right frequency when playing songs.

Paula's main rival is *CD Player*, a program which provides a very slick interface and offers more control over the sound of the MOD file. However, *CD Player* only runs on STEs in colour and can't play MODs in the background. If you can do without tone controls and aren't bothered about pretty interfaces, Paula is the MOD player for you.

STF RATING: 82%



The main dialog for Paula. A-ha's *Take On Me* is blasting through the monitor's speakers and driving everyone in the office insane. Heh, heh, heh.

PicScan 2.7E

LAPD, or Wonder Disk 78
All Ataris, monochrome only

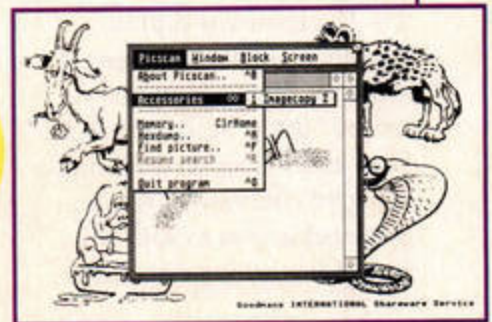
PicScan is a very useful high-resolution graphics utility. It enables you to import pictures in a variety of formats and cut and paste them as required.

In its simplest guise,

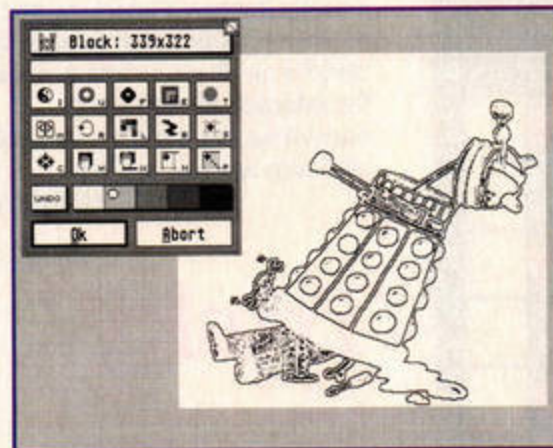
PicScan can be used to convert images from one format to another. You can also use it to scan files for graphics and cut them out, or import screens and cut blocks from them for use elsewhere, making it invaluable

for manipulating clip-art files. Alternatively, you can import several blocks and paste them together.

Version 2.6, which appeared on Cover Disk 74, wasn't completely Falcon compatible, but this version fixes that bug and offers extra features. The extra formats it supports don't add much,



PicScan is vital for high-res graphics work and a useful companion for your DTP package.



PicScan offers many powerful editing tools and can really make your images stand out.

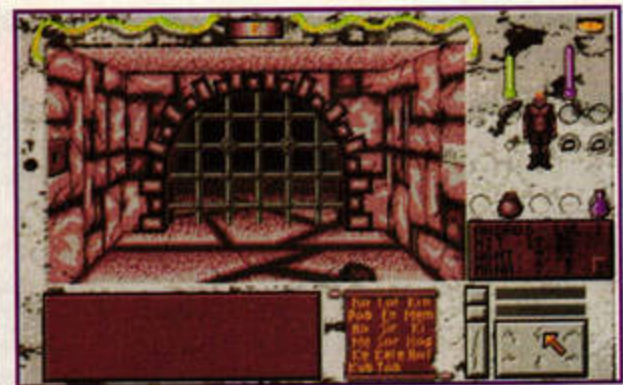
but being able to save graphics in RSC format makes it much easier to use them in your own program resource files. Other enhancements include being able to load images in any supported format without having to select the format type first.

There are still a few niggles - PicScan has problems with some PCX files, and refuses to manipulate images that are larger than the screen. All the same, it's a superb piece of programming and very useful.

STF RATING: 90%



Towers has an interesting background story which sadly seems to have very little to do with the actual game itself.



As if getting battle-hardened isn't challenge enough, now your man has to scabble around the floor looking for keys.

Towers 1.5

LAPD, two disks (£3)
All Ataris, 1MByte required

To promote the release of *Towers 2* on the Jaguar, JV Enterprises has re-released its ST-compatible hit, *Towers*. It was originally launched as tryware - you could explore the first few levels before purchasing the

manual for the remaining level codes - but the new version is fully enabled and just shareware.

As role-playing games go, *Towers* is yet another variant of *Dungeon Master*. The plodding nature of such games sometimes makes them tedious, but there's plenty to lift *Towers* above other such games. The dungeon you're trapped in is huge and will take a long time to get to grips with. There's also an interesting introductory sequence, so we won't spoil the frankly over-elaborate plot for you. Still, it wouldn't be role-

playing without an intricate background story, would it?

Unlike *Dungeon Master*, *Towers* only enables you to control one character, but if you have a friend with an ST you can connect your machines together via a null-modem cable to share the quest. Introducing the human element adds a lot of extra fun and atmosphere to an already appealing game, so why not buy a cheap ST, dig out a spare TV and invite a friend around for some co-operative excitement?

STF RATING: 84%

Manciola

The Computer Dungeon,
Disk Q-13004
All Ataris, ST low res only

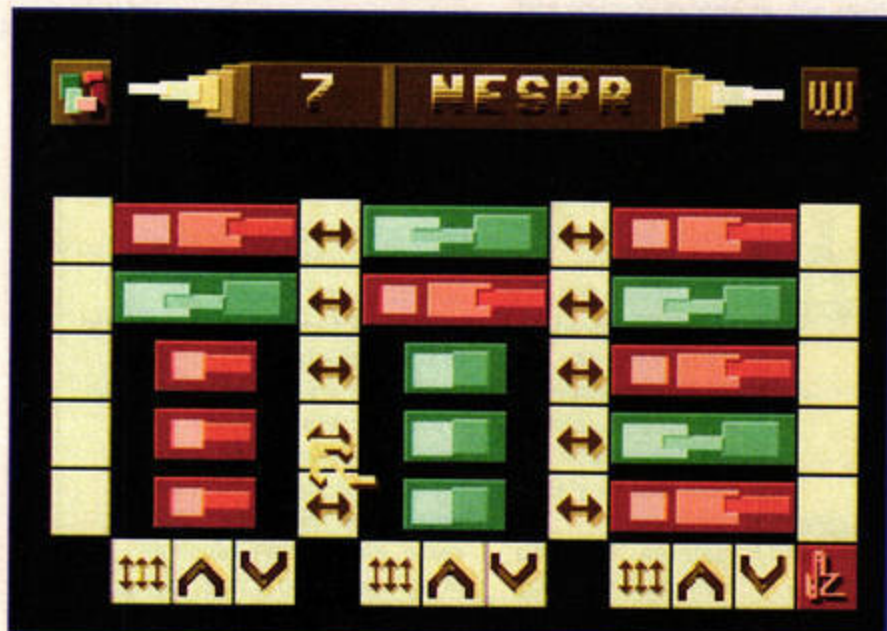
Manciola boasts enough originality to lift it above many other puzzle-based games. Once you've got around the French interface (fortunately, there's an English help file), you can be up and playing within minutes.

The basic concept is simple: bring two or more identical blocks together to remove them from the board. Each block is moved around a 3x5 grid courtesy of arrows that enable you to shift the blocks in various directions

and swap them with adjacent blocks. Movement is restricted by the arrows available in each column and row – use them with care or you'll have to re-start the level.

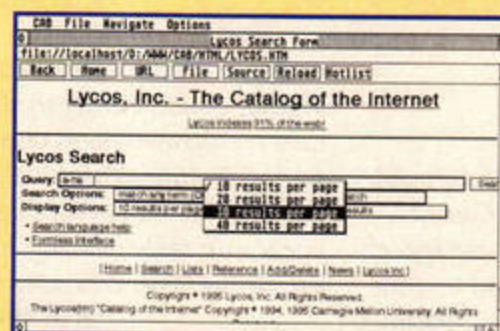
Early levels are easy to solve, enabling you to get to grips with the program. Once you've mastered the controls you'll spend a few happy hours playing *Manciola*... and then that's it. There are three different levels of play, but there's no ultimate goal and eventually you'll lose interest. If you like games that tax your brain it won't disappoint, but it could do with more variety.

STF RATING: 72%



Intriguing and occasionally infuriating, *Manciola* is a simple but original puzzle game.

UPDATES



New buttons and support for forms – the *Internet Access Pack* gets better with each new release.

Internet Access Pack 1.15

HENSA

All Ataris

Less than a month after it appeared on the Cover Disk, the *Internet Access Pack* has been updated. It's an important update though, because CAB now supports forms. Forms are quite common on the Net – you use them to register on certain pages (Futurenet for example), so this update will be particularly welcome.

On top of this, the program has a vastly improved interface and a number of bugs seem to have been cleared up. If you're into accessing the Internet, it's well worth registering the pack, because then all future updates are free.

STF RATING: 90%

Third Dimension 20
Floppyshop/Goodmans
PDL/LAPD
All Ataris

Time sure does fly. The Christmas edition of the *Third Dimension* disk magazine is now available, complete with data files and tutorials to help users of the *3D Construction Kit* get to grips with this popular game programming utility.

The Christmas theme is reflected in many of the data files, and once again it's a great tool for 3DCK users – who can now contact the group via the Net, at: <http://www.gre.ac.uk/~cj375/index.html>.

STF RATING: 83%



Tricky

AdLib PD

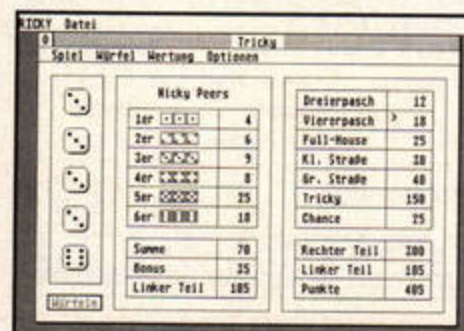
All Ataris, ST high resolution
or Falcon 600x400 required

Yahtzee is an addictive version of poker based around dice.

You roll five dice three times and attempt to score points through runs, full houses and the highly desirable five-of-a-kind. The winner is whoever scores most points in the 13 rounds each game takes. Up to four players can battle it out for supremacy – three of these can be computer controlled, but none exhibit much intelligence, so get some mates round if you want a challenge. Once the game is over you can record your scores.

The lack of challenge in one-player mode is somewhat annoying, but as a multi-player game *Tricky* is second to none. The German interface is confusing at first, but *Tricky* is a very competent version of Yahtzee, and the temptation for one more go is often overwhelming. Quick game, anyone? Oh, go on!

STF RATING: 74%



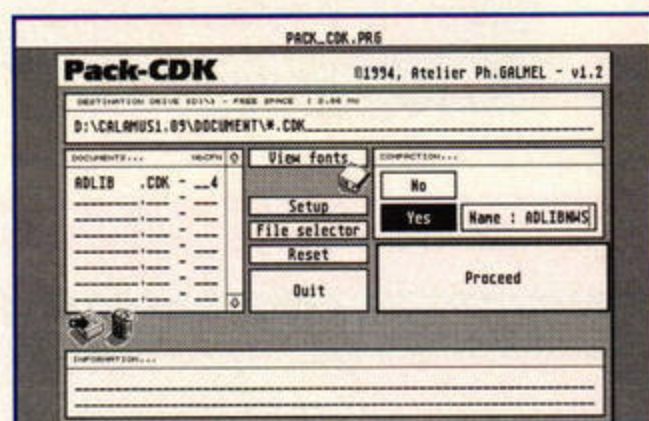
Two Yahtzees can really boost your score. Hurrah for *Tricky*!

PD & SHAREWARE ROUND-UP

The crème de la crème of PD releases from the past four months.

TITLE	PD LIBRARY	TYPE	ISSUE	RATING
Tautology 2	AdLib PD	Falcon game	76	93%
Skyduel	Floppyshop	Game	75	92%
Switch	Merlin PD	Falcon game	76	92%
Everest 3.5	Goodmans PDL	Text editor	77	91%
Take 500	Floppyshop	TG500 editor	78	91%
Egale 2.7	HENSA	Utility	76	90%
Wildlife slideshows	STellar PD	PCS pictures	77	90%
Da Capo 1.22	HENSA	Address manager	77	89%
Genocide	LAPD	STE/Falcon game	78	89%
Psygham	Floppyshop	Utility	78	89%
Backward 3	Merlin PD	ST emulator for Falcon	75	88%
The Lost Blubb	Floppyshop	Falcon demo	75	88%
HERO	Goodmans PDL	Game	77	88%
Falcon STOS Extensions	Floppyshop	Falcon STOS	78	88%
Xlator 2.0	Merlin PD	Translator	76	86%
Novadisk 8	James Bird	Diskmag	76	85%
National Lottery Simulator	Floppyshop	Utility	78	85%
Craghaven	LAPD	Game	78	84%
Emperor	LAPD	Game	78	84%
Anoraks of Doom	Goodmans PDL	Game	76	83%
Third Dimension 15	Floppyshop	Diskmag	76	83%
Pipetris	Cover Disk 77	Game	77	81%
Muzak Player 2	Floppyshop	Music player	78	81%
Counter Atak	Floppyshop	Game	75	80%
Pixikrome	Floppyshop	Image processor	76	80%
STOSSER Multimedia	Goodmans	Multimedia displayer	77	80%

Pack CDK



We anglicised the resource file on our version of Pack CDK to make it easier to get around the program.

Goodmans, Disk GD2690
All Ataris, monochrome only

Pack CDK is a French utility for grouping and archiving Calamus documents and associated fonts for easy storage and transfer. It's packed with options and can be configured to your individual needs. The attractive GEM interface makes it easy to get around,

although you'll probably need a good French dictionary to work out the program's finer points.

Grouping documents, and the fonts used in them, is made easy by Pack CDK's ability to search up to five different directories for fonts and

automatically copy them into a predetermined folder with your document. You even have the option of archiving them for easy and convenient storage or transfer.

A fully anglicised version of this program would be invaluable for Calamus users, but even as it stands, it's an excellent utility.

STF RATING: 81%

Nova 9

£2 plus SAE from James Bird, 91 Elm Tree Avenue, Kilburn, Belper, Derby DE56 0NN
All STs (except TOS 2.06), not Falcon compatible

Nova 9 is an X-Files special. There are three interviews with the two stars – all from American sources – and a splendid mix of other features, including a DIY guide to creating your own X-Files episode. Star Trek fans get a detailed tour of the holodeck, plus an Voyager episode guide,

and Babylon 5 also features.

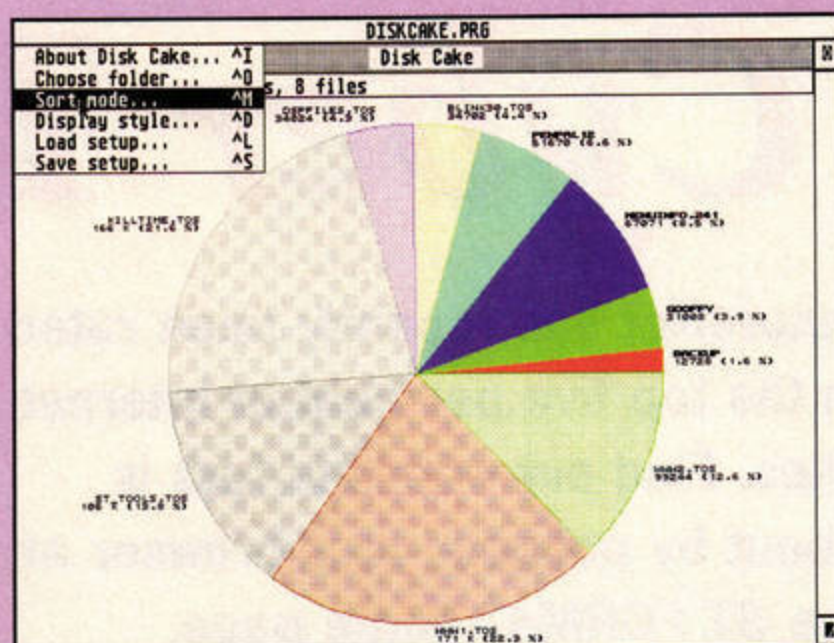
The 512-colour pictures are excellent as usual, although Agent Muldar fans may be miffed because there are six pictures featuring Scully (spelt Skully throughout) and just two of him. There are also pictures for Babylon 5, Deep Space Nine and Voyager fans.

Nova has come on leaps and bounds recently, especially in terms of its user interface, and deserves continued success. Roll on Nova 10!

STF RATING: 87%



Agent Dana SCULLY, not Skully. You'll never know whether this regrettable misspelling cost Nova 9 that elusive 90%.



Hmm, so that's how last month's Cover Disk looks in pie chart form.

Disk Cake 2.1

Goodmans PDL, Disk GD2689
All Ataris, medium resolution or greater

Disk Cake exists purely to give you a graphical representation of the contents of your disk drive or folder. The results are displayed as a pie chart on the screen, and each segment of the pie can be labelled if you so desire.

Disk Cake does its job well, but there doesn't seem to be

much need for it, unless you want to line your walls with pie charts showing how your disks and folders are structured. It's interesting and well programmed, but in no way an essential addition. It's what the public domain is all about – providing applications for specific purposes not covered elsewhere – but it's hard to see anyone finding Disk Cake impossible to live without.

STF RATING: 66%

ON SALE NOW!

Cyber Talk

FutureNet has recently been rated in the top five per cent of Internet sites. Find out what the fuss is about by pointing your browser at the **ST FORMAT** home page.

JAGUAR™

Win an Atari Jaguar!

You've seen the ads over the last couple of months, but you're still a little unsure what FutureNet is all about. Allow me to explain. FutureNet is Future Publishing's rapidly expanding World Wide Web site.

Last month we gave you all the software you need to access the World Wide Web, so, why not start your Internet travels with a trip to FutureNet?

What's on offer?

FutureNet includes features, news, essential contacts and links for all of Future's 30-plus

magazines, including *.net*, *The .net Directory* and, of course, *ST FORMAT*.

You can order back issues, enter our competitions and even take advantage of special reader offers, all from the comfort of your ST keyboard. You needn't worry about evil hackers getting hold of your credit card details either, as FutureNet's server utilises encryption software to prevent Internet fraud.

Then, having stocked up on bargains, you can sit back and fill your noodle with the day's Computing News. Or, if you prefer, you can check out FutureNet's World News, which is also updated daily.

You can also download ST software via our FTP site. What more could you want?

Karen Hewell.



NEW FTP SITE

Not content with being the most successful commercial World Wide Web site outside the USA, FutureNet is now dipping its toes into the realms of ftp (file transfer protocol) sites.

The new site will enable us to put all the software and files that we can't squeeze on to the Cover

Disk on to the Net, for you to download at your leisure.

To take a gander at what's available, point your Web browser at <ftp://ftp.futurenet.co.uk/incoming/futurenet/>. If you're using ftp software, type in: <ftp://ftp.futurenet.co.uk> and go to the directory `/incoming/futurenet/`.

ST FORMAT DIRECT

<http://www.futurenet.co.uk/computing/stformat.html>

ST FORMAT

The world's biggest-selling ST magazine



Welcome to the **ST FORMAT** home page, the Web centre for the world's biggest-selling ST magazine. Our mission is to bring you news and reviews about every piece of software and hardware produced for the ST, STE and Falcon, as well as practical, creative and technical advice to help you make the most of your Atari

Okay, so you know what FutureNet offers generally, but what's available for hard-core Atari buffs?

● Features

It's all here in our bite-sized features guide – everything from making music on your ST to the hardware and software behind the CD-ROM revolution.

● ST Answers

Frank Charlton and the gang crowd into the cyber ward for insane STs... and their owners. Whether you're troubled by viruses, assembly code, comms or badly-behaved STs, this is the place for you.

● Machines of the future

We take a closer look at the latest Atari clones, GeSoft's Eagle and C-Lab's Falcon Mk2, and ask whether they have what it takes to topple the TT and Falcon.

● Hands on

Discover exactly how to take your ST or STE apart – and put it back together again – with our practical guide to fitting a composite video port. Or how about designing your own 3D game? We show you how.

● E-mail the team

Now you can get in touch with the team that produces **ST FORMAT**. Whether you want to pose technical queries, suggest features or send us compliments, you're only a mouse-click away from our desktops.

● Bargains

Connect to FutureNet and order a back issue or take advantage of our reader offers, all without ever leaving the comfort of your ST.

SCAN IT!

Scanners enable you to enhance your artwork and jazz up your documents. Peter Crush explains who's who and what's what on the ST scanner scene.

[Q & A](#) • [Scanning Hardware](#) • [Scanning Software](#) • [Scanning](#) • [Copyright & Wrong](#)

...to install and dead simple to use, scanners enable even the most artistically challenged ST user to add graphics to letters, posters and reports. They make it easy to produce professional-looking illustrations... and they're great fun.



With over 100,000 hits every day, FutureNet is one of the most popular Web sites in the UK. Point your Web browser at <http://www.futurenet.co.uk> to find out why...

ST Answers

After a successful first inning, Frank Charlton, the man who's never stumped for an answer, returns to lead the ST Answers batting line-up.



VIRTUALITY

Q Please could you tell me where I can get hold of 3D

Construction Kit, Virtual Worlds and STOS 3D? Also, I heard that *Mortal Kombat 1* and 2 are out for the STFM. Is this true? And if it is, could you tell me where I can get them?

Phillip A Blackwood, Planet Earth

A The first three titles you mention are no longer published, I'm afraid. Your only hope is to scour the mail order ads in ST FORMAT. Alternatively, try placing a Wanted ad in our Reader Ads section (see page 58), you may find someone willing to sell their copies to you.

As for *Mortal Kombat 1* and 2, neither game was ever released for the ST, and it's unlikely that they ever will be.

LICENCEWARE

Q I've just programmed some software that I think is good enough to be released as licenceware. Please could you tell me how

to copyright my game so that I can release it.

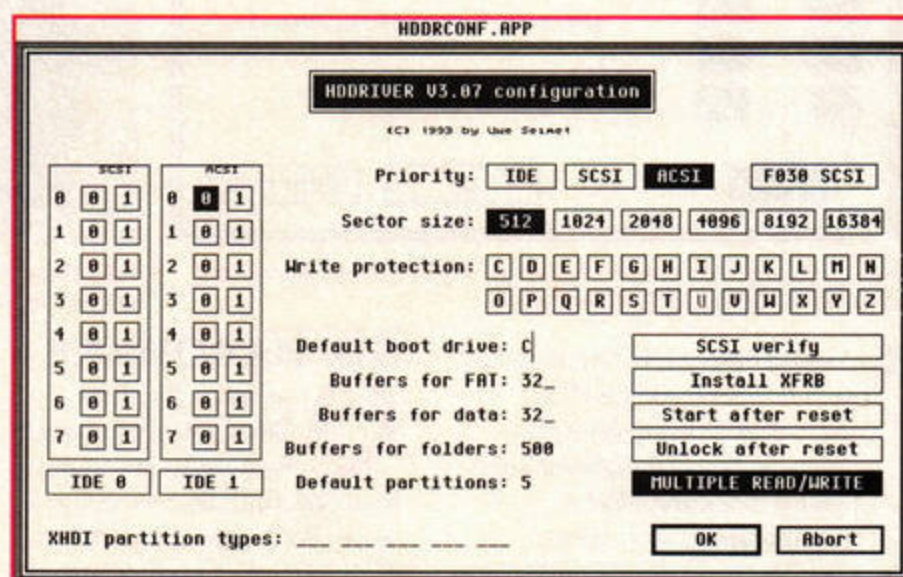
Stephen Hallsworth, Manchester

A If you created the software, you already own the copyright to it. Make sure there's a screen somewhere in your program that displays a message like "Copyright Stephen Hallsworth 1995", and say something to that effect in any documentation you want to include with your program.

If you're thinking of releasing your work as licenceware (a system where you receive a royalty for each copy sold), it's a good idea to contact someone with experience in the field. LAPD handles lots of licenceware stuff for the ST, and will no doubt be glad to advise you. And if you enter the competition featured in issue 78, you may even win a Jaguar for your efforts. Call LAPD on 01773 761944.

MEIN HOST

Q Thank you for the article about hard drives in issue 73, which brought up a number of



HD Driver from System Solutions offers much better performance than ye olde AHDI.

questions that I hope you can answer. What is the difference between the various host adaptors (ICD Link 2, TopLink and the Translator)? Is there any real difference, besides the price tag?

Also, can I just plug the adaptor into any external SCSI drive and get to work with software like AHDI? I read a review about the Translator and it said that the drive's parity needs to be disabled on an ST. Is this the case with all the adaptors?

Stefan Lindetun, Sweden

A According to our sources, the ICD Link has better support for the full SCSI command set than the TopLink, but we don't know enough about the Translator to comment on this aspect. In practical use, though, we've found all three work well, with no discernable difference in everyday use.

As for using one with an external SCSI drive, you simply plug and go. Atari's AHDI software works fine, but The Link comes with the superior ICD driver software. It's also worth looking at the FORMAT

AS EASY AS ABC?

Q I have a problem with my printer. I have a 520 STE (upgraded to 1MByte), a second disk drive, a Philips CM8833-2 monitor and a Citizen ABC printer. When I got the printer, it included printer managers for the Amiga and PC, but none for the Atari. I rang up Citizen and asked the folks there if any ST drivers were available, but they said no. I then rang Silica Distribution, whom I bought it from, and got the same answer.

Reading through ST Answers, I saw something about using Knife ST to alter disks so that the STE can read them. When I use UVK to check my disks occasionally, it tells me that I have MS-DOS disks. Isn't this what the PC and Amiga use?

When I put the Amiga disk in my STE a message appears saying 'Please put a disk in the drive' - if it totally ignores the disk, how do I go about converting it so that my STE can read it? I think I need these management disks, because otherwise I have to reprogram the printer with the buttons on the front to get at the

internal fonts and other facilities.
T Yendle, Pontypridd

A I think we need to clear up some confusion here. First, you can't convert Amiga disks so that they can be read by an ST with any ST software, let alone Knife ST. Knife ST is a disk editor, and is only intended for use in data recovery and disk management. It also only works with ST disks.

Each make of computer has its own disk format, and they can't usually be read by other computers. The only exception is the PC. The ST's disk format is very closely related to the PC's MS-DOS format, meaning you can read PC disks on any ST.

Of course, if the PC disk is high density, you'll need to get a high density drive to read it. Amiga disks are a totally alien format, and can't be read from or written to by an ST under any circumstances. Converting an Amiga disk in the way you describe is impossible, I'm afraid.

Second, even if you could convert or read the disk, you couldn't use the printer managers as they are executable programs, written specifically for the platform stated. You could conceivably run the PC versions with a PC emulator, but the Amiga manager is completely out of the question.

Finally, the need for a printer manager on the ST isn't as crucial as with other machines. Almost all ST word processors and DTP programs have their own built-in printer drivers, which access each type of printer individually. If your printer can emulate an Epson 9-pin printer - and it should be able to - then you'll be able to use it with any ST software.

If you want to use the printer's special features, however, you'll need to use software that includes a driver for the ABC series. The shareware word processor Marcel comes with a good printer driver for ABC printers. Contact your local PD library to order a copy.

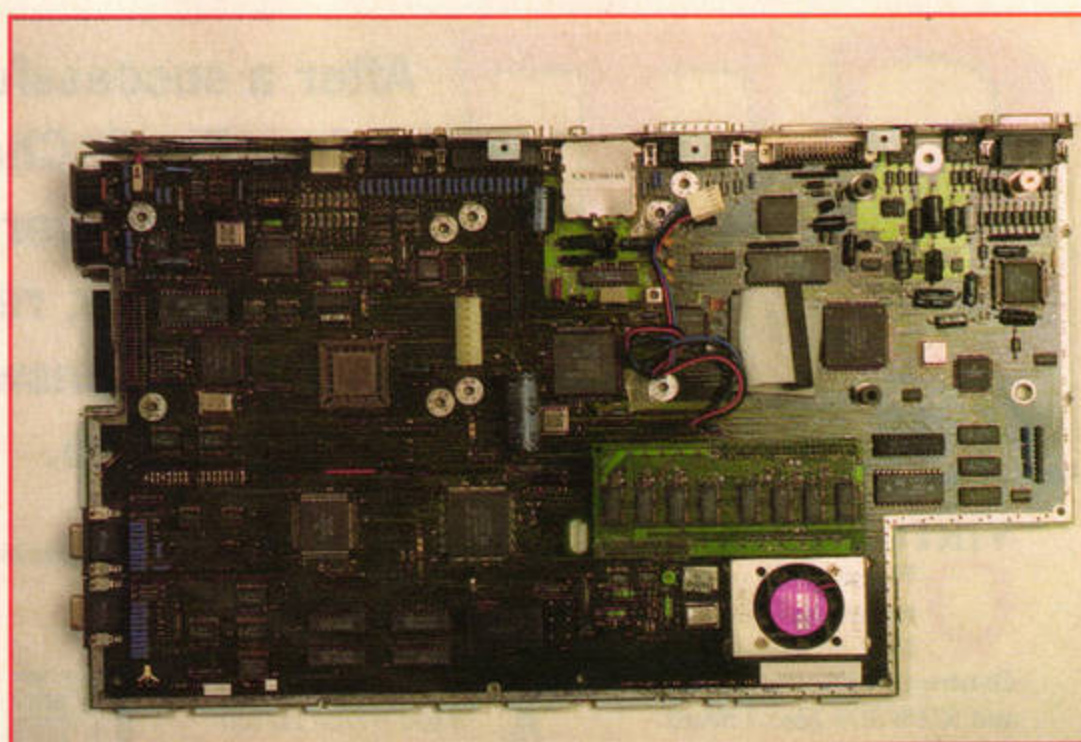
AHDI Konfiguration ab AHDI 5.00

Version 2.00 (C) 1993 by Uwe Seimet

SCSI	ACSI	Maximale Sektorgröße
0	0	512 1024 2048
1	1	4096 8192 16384
2	2	
3	3	
4	4	Zusätzliche Ordner: 128
5	5	Default-Partitionen: 1
6	6	
7	7	

IDE OK Abbruch

Atari's own hard drive software may be old, but the advantage is that it should work with any external SCSI drive.



The Falcon has processor-direct expansion slots, but you can't just plug in an Intel chip to make it PC-compatible. You need to use a PC emulator card, such as the FalconSpeed from Compo.

Gold-winning HD Driver, which is much faster than AHDI. Version 4 is due to be released soon, and early indications suggest it will feature lots of improvements. Call System Solutions on 01753 832212 for more details.

As far as parity goes, it's usually down to the type of drive you use. Every SCSI drive we've used has worked first time without any fiddling. If you do need to adjust it, you do it with a jumper on the motherboard of the drive itself. The manual should tell you which jumper to use – if you bought a new mechanism, that is.

STE HARDWARE

Q In issue 75, Steve Ward from Weymouth wanted to know how to access the STE's extra hardware. Well, pass my address on to him, and I will try to help him with whatever he needs to know. I have produced an 8-way hardware scroller using a single screen and it works in all resolutions. Mark Baker, Swindon

A Thanks for the generous offer, Mark. We'll keep your address on file, and if Steve Ward would like to write

in again, I'll put the two of you in touch. As for the assembler routines you go on to mention, drop a line to Andy Gisby, our assembly programmer – I'm sure he'd love to see them.

PC OR NOT PC?

Q Several months ago my STE retired to make way for my new Falcon. I think my new machine is wonderful, but while flicking through the manual the other day, I noticed the specifications state that the Falcon contains an internal direct processor slot for 386SX PC emulation. Does this mean I could plug a 386 or 486 processor into my Falcon and run PC applications? Anthony Leech, Cullompton

A Someone who found something useful in Atari's Falcon manual? You have my admiration, sir! Seriously, though, no, it's not as simple as that. The processor direct slot simply gives an expansion

card a direct route to the Falcon's 68030 processor for faster operations. You still need a PC emulator card to plug into that slot.

The only ones ever produced for the Falcon were sold in the UK by Compo. The FalconSpeed board, which costs £199, emulates a 286 PC, and comes complete with a colour display driver for Windoze – sorry, Windows. Of course, a 286 is fairly redundant with today's PC software. Call Compo on 01487 773582 for more details.

SWITCH GLITCH

Q I was interested to read the letter from William Ockenden in issue 72. Like me, he often swaps between his high res monitor and a TV and was concerned about wear and tear on the sockets. You solved the problem with a concise reply about a monitor switcher, even giving the phone number of the supplier (First Computer Centre, 0113 231 9444).

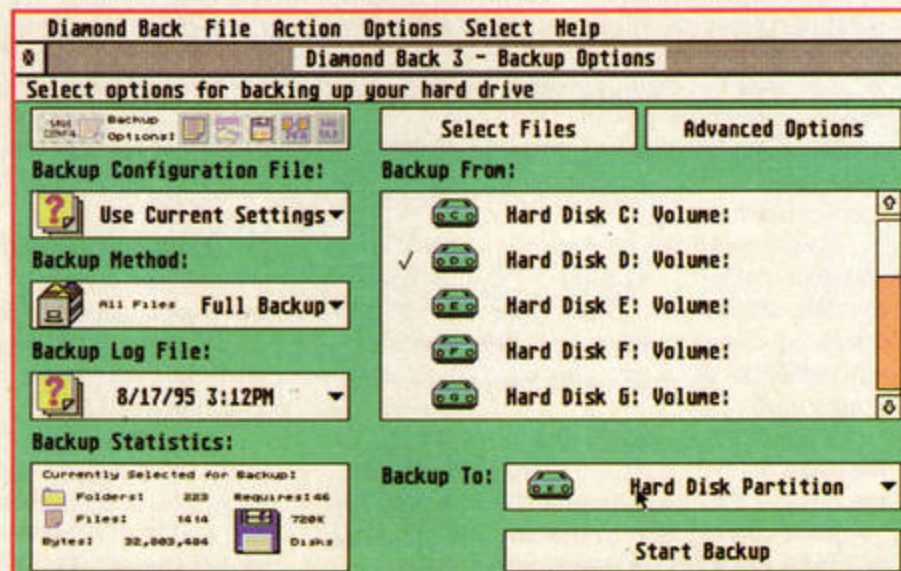
1101011001

Q I'm looking for an editor/compiler for Modula 2 that will run on a 520 ST with a single disk drive. It doesn't have to be the full version, a demo or test version may be enough. Heiko Mittelstaedt, Freiburg via e-mail.

A I've had a look around the usual ftp sites on the Internet, and turned up a couple of things which may be what you're looking for. Connect to the ftp site src.doc.ic.ac.uk and change the directory to: /computing/systems/atari/umich/Languages. There you'll find the ANA Modula2 compiler in four parts, which is probably a little big for a single drive setup. However, you can pick up modula2.zoo, a 330K archive containing a full Modula2 compiler, in the same directory.

Q I'm studying Computer Science, and was wondering whether there is a version of C++ and Lisp Scheme available for the ST? If so, where can I get them and how much will they cost? Brian Ahern, via e-mail

A There is a version of LISP available, but it's an old and fairly basic one. The good news, though, is that there's a very capable port of GNU C++ available for the Atari range, and best of all, it's free. If you're hoping for something GEM-based and easy to use, however, forget it. The program has been ported from the UNIX version, so it's heavily command-line based. It also produces fairly hefty compiled files compared to some commercial ST compilers. Still, it's a full interpretation of the C++ language, and if you're studying on UNIX machines then you'll feel at home fairly swiftly. Both the LISP interpreter and the full C++ compiler are available on the Internet via anonymous ftp (check the ftp address in the previous answer – it's the same address and same directory).



Diamond Back 3 is happy to talk to most SCSI tape streamers, so you can use it to help back-up that important data.

SEEDY ROM

Q I have a number of questions to ask about the Apple CD-300E unit you mentioned in issue 72. **1** Will the system run all the Apple Mac CDs? **2** Do you need any extra memory to run the system? **3** Will the system also run Photo CDs and Movies? **4** Will the system upgrade the STE's Workbench? **5** Do you need a monitor to run the Apple CD on?

Lee Goulden, Warrington

A I think you're a little confused as to the purpose and use of a CD-ROM drive, Lee. Put simply, a CD-ROM drive is a read-only drive, rather like a hard drive with a capacity of up to 650 MByte. Once you've connected it, you read data or run programs from the CD just like you would any other disk.

To answer your specific questions: **1** No, just because Apple make it, it doesn't mean adding a CD-300E will turn your ST into a Mac. You can't even read data from Mac CDs, let alone run programs on them.

2 That depends on what you already have. Obviously a CD-ROM driver like ExtenDOS Pro will require memory to run, and 1MByte or above is best.

3 Yes, you can access PhotoCD discs, but you'll need an image viewer like ImageCopy CD (FaST Club, 0115 9455250) to be able to actually look at them. When you say Movies, I take it you mean the Video CD standard, as used by machines like the Philips CD-i? Although the Apple CD-300E is Video CD compatible, there's no software available for the ST to play the movies.

4 Workbench? Ah, Amiga-speak. If you mean the desktop, then the answer's no. You need a TOS 2 upgrade or a replacement desktop, such as NeoDesk 4, for that. **5** You can't connect a monitor directly to the CD-300E, and why would you want to? All CD-ROM drives work with whatever monitor or TV set you already have.



It may be made by Apple, but this little CD-ROM won't turn your ST into a Mac overnight.

The trouble is when I phoned, the person who answered said there was no monitor switcher that enables you to connect both a monitor and TV. Is First Computer 'imperfectly acquainted with the facts', or did you just come back from your Californian counselling session too early?

Ralph Nelson-Tucker, Buckinghamshire

A The answer Clive gave was right – the company you rang just doesn't realise it. What you need is a standard RGB colour/high-res mono monitor switcher. When it's

switched to mono, there's a signal applied to pin 13 to tell your ST it needs to boot in high resolution. When it's switched to colour, though, it feeds a video signal to the ST's RF output. Just plug your telly in as normal, and the ST is none the wiser.

TAPE IT

Q My boss has just given me a SCSI tape streamer on 'permanent loan', and I'd like to attach it to my ST. I already have a hard drive and all the other hardware, so can I just plug this in and use it like a

normal hard drive? Will I be able to run programs from it?

Dave Edwards, Surbiton

A You can't use a tape streamer as if it were another hard drive. A streamer is solely used as a back-up device, to keep a copy of any important data on your hard drive. While a hard drive is a ran-

dom access device – so you can quickly retrieve data from anywhere on the disk – a streamer is a sequential device, just like a cassette deck on old 8-bit micros. You'll need some software to use it – the shareware package GEMAR is apparently very good, and Diamond Back 3 (HiSoft, ☎ 01525 718181) can access most SCSI tape streamers as well.

Problems with your ST? Falcon giving you grief? Send your tale of woe to Frank Charlton at: ST Answers, ST FORMAT, Future publishing, 30 Monmouth Street, Bath, BA1 2BW, or e-mail them to: de18@dial.pipex.com.

RAM IT HOME

Q I remember reading in a back issue of ST FORMAT something about joining two STE's together via the ports to double the memory. Is this possible? I have looked through a lot of back issues trying to find the article, but I haven't come across it so far.

At the moment, I'm using Cubase on a 1MByte STE and the memory is a bit tight. However, I have another STE that is sitting doing nothing, so if it is possible to share memory like this, it will make my life easier.

Ian Baxter, via e-mail

A I think you might be getting mixed up with networking software, like MidINET, which can link two STs together via the MIDI ports, enabling them to share hard drives and so on. Unfortunately, there's no way you can share memory in this manner – not on any computer, let alone the ST. Your best option is to sell your spare STE and put the cash towards a RAM upgrade. They're getting cheaper all the time. Contact The Upgrade Shop on ☎ 01625 503448 for a competitive price.

Q I have an STE with a hard drive and 2.5 MByte of RAM. Is there a program available that could give me virtual memory, too?

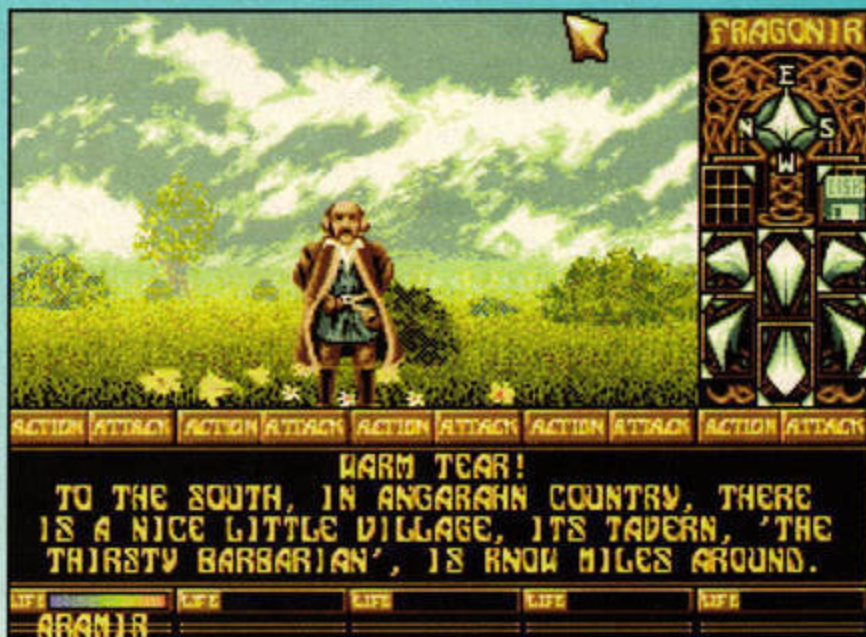
Petr Sumbera, Czechoslovakia, via e-mail

A I'm afraid not, Petr. To use virtual memory you need a computer with a CPU capable of using protected memory. The ST and STE don't have an MMU (Memory Management Unit) that can do this. To use virtual memory you need a Falcon or TT, or a processor expansion card, such as the PAK/68/3 from System Solutions (☎ 01753 832212), which would give your STE a 68030 processor like the Falcon's.

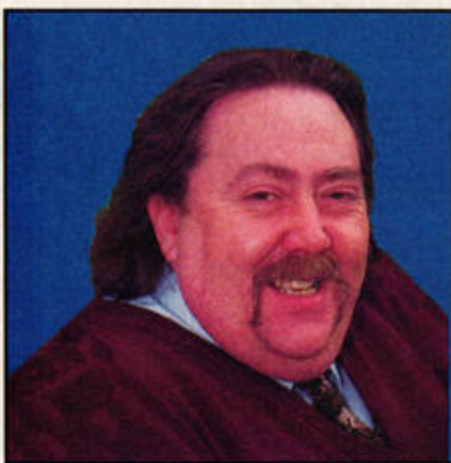
DOUBLE TROUBLE

In ST Answers, issue 71, Neil Mitchell was worried because his games weren't making use of his second disk drive. He will be pleased to know that the superb Ishaar series makes use of a second disk drive. Put disk A in drive A and disk B in the external drive, and follow the on-screen prompts. It makes loading these games much quicker.

William John Davies, Bolton



Not that many games are considerate enough to use your external drive – Ishaar is, though. For more details call 16/32 Systems on ☎ 01634 710788.



Forced away from work by illness, Mac 'The Rash' Marsden keeps himself sane and busy by answering your GFA Basic questions.

GFA Workshop

ASCII PRINTING

Q My friend says it is better to use ASCII character numbers for entering text in GFA, rather than just printing text. Is it better to use the ASCII numbers, and how do I do it?
David Pugh, Cardiff

A It is down to personal choice, because the result is exactly the same.

For example, if you wanted to display "ST FORMAT" on the screen using the normal print method you would enter:

```
PRINT "ST FORMAT"
```

To print the same message on the screen using ASCII character numbers you would use:

```
PRINT CHR$(83) ; CHR$(84)
; CHR$(32) ; CHR$(70)
; CHR$(79) ; CHR$(82)
; CHR$(77) ; CHR$(65)
; CHR$(84) (all one line)
```

The ASCII character method is a lot more time-consuming than using PRINT.

TELE-PRINTER

Q I am writing a game in GFA, and I want to print out text as if it is appearing on a tele-type machine. I could write the text with a delay between each character, but this is messy.

Is it possible to write a procedure and just bung all the text I need through this procedure? Would I need to read the text in as a string and then pass it to the procedure – which would then print it to the screen at a slow rate – or is there some way to just slow down the text output to the screen? Any help would be appreciated.

Miles Bates, Colchester

A Miles, I am afraid that the only way I have done this in the past is, as you say, 'the messy way'. See Panel One for an algorithm for this method of printing.

You could slow down the print function using a similar method, but this would print whatever is currently in the text string, so your text would appear word by word. If you were actually using a tele-printer you would use the method outlined in the algorithm, because it is a serial device and can only handle one character at a time.

The above algorithm could be translated into a listing similar to the one at the bottom of Panel One. I know this method is messy, but there isn't a lot to the code and it takes up very little space.

PASCAL vs GFA

Q I have tried programming in Pascal (from your Cover Disk), but it is way too hard for me, so I have switched to GFA Basic.

I want to draw a graph as part of a presentation package, then allow people to enter new values and re-draw the graph. I can display the graph, but how do I make it change when people enter the new numbers?
George Willard, Halifax

A George, I think the easy answer is to call the 'draw graph' procedure again with the data that has been entered by the user. You'll find a suitable algorithm in Panel Two.

Procedures enable you to re-use sections of code, making your programs smaller and neater. Your problem, for example, can be solved by re-using your original variables and procedures.

PANEL ONE PANEL ONE PANEL ONE

Algorithm for tele-type printing

```
Get text string
Initialise loop counter
Print carriage return to begin new line
Loop until end of text string is reached
  Print a text string character (loop counter)
  Pause
  Check that end of screen is not reached
  If end of screen
    Print carriage return
  Endif
  Increase counter so that a new character will be printed
End of loop
Rest of program
```

Tele-type program

```
A$="ST FORMAT - A MAGAZINE FOR THE ATARI USER."
COUNTER = 1
PRINT
FOR F = 1 TO LEN(A$)
  PRINT MID$(A$, F, 1)
  PAUSE 42
  COUNTER = COUNTER + 1
  IF COUNTER>=80
    COUNTER=1
    PRINT
  ENDIF
NEXT F
```

PANEL TWO

Graph re-drawing algorithm

```
Start program
Display original data using numerical array
Wait for user to input new set of data or quit program
  User overwrites data into original numerical array
  Expect end of data character
New data entered
  Call Graph Display Procedure
Go to "Wait for user to input new set of data"
Rest of program
```

If, as I suspect, you haven't incorporated the 'draw graph' code into a procedure, then you must do this, and you should get into the habit of doing so. Don't

be afraid to use procedures – they are programming's 'staff of life' because they enable you to recycle your code and streamline your programs.

If you have any questions or would like to see a particular subject covered, please write to Mac at: GFA Workshop, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW. Alternatively, e-mail him at: mac.marsden@dial.pipex.com.



Taming the mouse for use within assembler projects is relatively simple. Andy Gisby cracks the whip and explains how it's done.

Assembly Line

The ST has an excellent hardware implementation for the keyboard, mouse and joystick ports. A separate single-chip processor (the 6301) controls these devices. It has its own byte-driven command language and you can access it directly via addresses \$FFFC00 (control register) and \$FFFC02 (data register).

The ST operating system provides a system-legal hook into the chip to allow the issue of commands (XBIOS call 25). The 6301 also has an on-board real-time clock which counts in one-second increments.

The 6301 is normally set to report relative mouse movements. You can make sure by using the code in Panel One to switch it into this mode.

In this instance, the term 'relative' means the 6301 will report mouse X and Y movement relative to its last position. As the 6301 reports relative movements in byte sizes, the maximum amount of displacement in both the X and Y direction will be ± 127 .

When the 6301 communicates with your ST it sends

packets of information. The Mouse Packets diagram shows how the packet is constructed (assuming the chip is in mouse-relative-movement mode).

The first byte will be a value from \$F8 to \$FB, and the lowest two bits indicate left/right mouse button state. The next byte, 'relative X' gives you the relative X-axis movement amount (± 127). The final (third) byte gives the relative Y-axis movement.

The routine in Panel Two enables you to interpret and manipulate these packets. It operates under a GEM vectored execution, and subroutine execution occurs automatically when a mouse packet is available. Note that A0 is pointing to a keyboard buffer string on entry. It is important to preserve CPU register settings – thus the `movem.l` command. XBIOS call 34 returns a pointer to a table of GEM vectors. You need to replace the mouse vector with your custom one (Panel Three).

You must make sure you restore the old mouse vector when you terminate your program. You can make your

custom mouse routine simple or complicated: why not enhance your own mouse routine by including the maintenance of an X and Y co-ordinate using the relative X and Y values?

MOUSE PACKETS

Byte One

Packet Identity/
Button State

Byte Two

Relative X
Movement

Byte Three

Relative Y
Movement

Read Order

Send your assembly problems and queries to Andy Gisby at: Assembly Line, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW.

PANEL ONE

```
init_relative_mouse
    PEA    relative_mouse
    move.w #0,-(sp)    ; number of bytes to send -1
    move.w #25,-(sp)   ; XBIOS Call 25
    TRAP   #14         ; ...XBIOS
    LEA    8(sp),sp    ; tidy Stack
    RTS

relative_mouse    dc.b    $08    ; $08 = set relative
                                mouse reporting
                    EVEN
```

PANEL TWO PANEL TWO PANEL TWO

```
* GEM interrupt
* MOUSE handler

custom_mouse
    MOVEM.L D0-D1/A0-A1,-(A7)

    MOVE.B (A0)+,D0    ; first byte

; Remove possible mouse button states to see
; if this is a relative mouse packet.

    MOVE.B    D0,D1
    AND.B     #$FC,D1
    CMP.B     #$F8,D1    ; relative mouse pkg?
    BNE.S     custom_mouse_x    no

    LEA custom_mouse_data,A1
    AND.B     #$11,D0    ; button bits
    move.b    d0,(a1)+
    move.b    (a0)+,(a1)+
    move.b    (a0)+,(a1)+

custom_mouse_x
    MOVEM.L   (A7)+,D0-D1/A0-A1
    RTS

custom_mouse_data    dc.b 0    ; button state
                    dc.b 0    ; relative X
                    dc.b 0    ; relative Y
```

PANEL THREE PAN

```
custom_mouse_init
    MOVE     #34,-(A7)    ; XBIOS kbdrvbase
    TRAP     #14         ; get pointer
    ADDQ.L   #2,A7       ; correct stack

; Save the existing mouse vector...
    MOVEA.L  D0,A0       ; ptr to table of ptrs
    LEA      old_mouse,A1
    MOVE.L   16(A0),(A1) ; table slot four is the
                        mouse vector

; Patch in our mouse vector...
    LEA      custom_mouse,A1
    MOVE.L   A1,16(A0)   ; the mouse is mine!

    RTS

old_mouse    dc.l    0    ; old vector storage
```




HiSoft C expert Mac Marsden continues his bottom-up look at programing drop-down menus. This month: examining menu events.

HiSoft C Centre

Following on from last month's examination of the event function, this month we'll examine the four events (menu, window, keyboard and mouse) in detail.

MENU

If you decide to wait for a menu event, you call the event function. Using the mouse pointer, the user can pull down a set of menu options and select one. When the selection is made, or to be exact, when the mouse button is released, the menu event is finished and the event function returns to the main program code. If you don't require the first two options in the event function, &menu_title and &menu_item, make sure you insert zeros – leaving spaces results in an error.

When a menu item is chosen, a value is returned. This returned value is identical to the values returned by the title_menu and item_menu toolbox functions when you

create the menu. These unique numbers specify the menu item. The same values are then returned in the title_menu and item_menu, informing you which menu was selected and which item was chosen.

WINDOW

There are many different types of window events: the user can change the window size, close it, move a slider and so on. The vast range of options makes window events more difficult to handle than any of the other events.

When an event occurs, the event function needs to return information about the type of event, along with any relevant details. For example, if the window size is altered, the function has to return the fact that it has been altered as well as the window's new size and position.

An array of six short integers is used to store these details. The third parameter in the event function is the name of this array.

The first element (element 0) of the array indicates which event has occurred. The significance of the other elements depends on the event. All of the elements are used for all functions called, and only one window function can be called at a time. The Window Events panel details the effects of various events.

For example, if we were moving window number three from 100 pixels out and 100 pixels down to 50 pixels out and 50 pixels down, the returned variables would be: 28, 3, 50, 50, 100, 100

KEYBOARD

When you are waiting for a keyboard event to occur, you are waiting for a key to be pressed and released. If you are not interested in what the

user types in, setting the fourth parameter to zero makes the program ignore any keystrokes. The lower byte of the returned number holds the ASCII number (65=A); the higher byte is used by GEM to detect the [Help] and [Alternate] keys. If you just want to return the ASCII value, use the expression: `key_press % 256`

MOUSE

In our case, a mouse event is defined as a click on the mouse button, and it affects the fifth and sixth parameters (event x,x,x,x,&clickx,&clicky). If you do not require values for mouse actions, enter zeros in these positions; otherwise the x and y position of the mouse is returned at the moment of the mouse click.

If you have any questions, or would like to see a particular subject covered, please write to Mac at: HiSoft C Centre, ST FORMAT, Future Publishing, 30 Monmouth St, Bath, Avon BA1 2BW or e-mail him at: mac.marsden@dial.pipex.com.

WINDOW EVENTS

● Clicking in the close box:
element 0 = 23
element 1 = the number of the window

● Clicking the full box (expands window):
element 0 = 23
element 1 = the number of the window

● Clicking on the arrows or in the grey part of the slider:
element 0 = 24
element 1 = window number
element 2 = action to perform (0 = page up, 1 = page down, 2 = row up, 3 = row down, 4 = page left, 5 = page right, 6 = column left, 7 = column right)

● Moving the horizontal slider:
element 0 = 25
element 1 = window number
element 2 = slider position

● Moving the vertical slider:
element 0 = 26
element 1 = window number
element 2 = slider position

● Changing the size of a window:
element 0 = 27
element 1 = window number
element 2 = x co-ordinate (top right)
element 3 = y co-ordinate (top right)
element 4 = new width
element 5 = new height

● Moving the window without altering the size:
element 0 = 28
element 1 = window number
element 2 = new x co-ordinate (top right)
element 3 = new y co-ordinate (top right)
element 4 = width (unchanged)
element 5 = height (unchanged)

● Making a window the top one:
element 0 = 21 or 29
element 1 = number of the window to re-draw

● Re-displaying the contents of a window:
element 0 = 20
element 1 = number of window to re-draw



It's good to talk, but it's better to communicate.
Frank Charlton separates the wheat from the chaff
and the lies from the fax.

alt.comms.stf@

JUST THE FAX

Q I wonder if you could help me with the following. I want to use my 1MByte STE for faxing messages – is this possible? If so, what is the cheapest and easiest way of converting my STE to enable me to send and receive faxes?

William John Davies, Bolton

A It certainly is possible, and you don't need to do any converting. You'll need to buy a few things, though.

First, you'll need a fax modem. Most new modems have built-in fax capabilities, but it pays to check. If you're only interested in using it as a fax machine and aren't likely to want to connect to bulletin boards or the Internet, then you may be able to pick up a secondhand bargain.

The original fax modems provided data connections at 2,400bps and fax connections at the standard 9,600bps. More modern modems offer much faster data speeds for BBS use, and if you want to do anything other than send faxes you should go for a minimum speed of 14,400bps. All new fax modems also offer fax connections speeds of 14,400, but most 'real' paper-based fax machines will only talk at 9,600. You'll get a 14,400 connection to another fax modem, though.

Second, you'll need some fax software. The excellent Straight Fax 2.1 (£72.99) provides a fully integrated fax suite complete with

printer drivers for popular applications such as Calamus and Papyrus, enabling you to print your documents to disk and send them as faxes.

Call First Computer Centre on ☎ 0113 2319444 for more information about Straight Fax. Alternatively, contact your local PD library. There are one or two shareware fax applications, such as BatFAX.

CLASS ACT

Q I have been given a US Robotics Sportster modem, which runs at 14,400bps. I really want to use it as a means of sending and receiving fax messages rather than for calling bulletin boards, so I bought a second-hand copy of Straight Fax 2 via an advert.

The documentation which came with my modem says the Sportster supports fax classes 1 and 2.0. When I try to configure Straight Fax, the dialog box only gives me options for classes 1 and 2. If I select class 2, the program switches itself back to class 1 again. Is this a bug in Straight Fax, or a problem with my modem?

Alf Ranson, Harpenden

A Neither your modem nor the software is at fault, Alf. The key to the problem is the fact that the Sportster supports class 2.0, rather than class 2. While the official standard

for class 2 was being developed, some hardware manufacturers jumped the gun and released modem chipsets which supported the complete – but unconfirmed – standard. When the standard was finally ratified, it was decided to call it class 2.0 to avoid confusion. Technically, there's very little difference between 2 and 2.0. Some modems support class 2, some support 2.0, and some support both standards.

Future releases of Straight Fax may support class 2.0. In the meantime, just leave the software set to fax class 1. This setting will work with the Sportster modem, and you won't notice any difference. *stf*

The US Robotics Sportster is a fine modem that supports fax classes 1 and 2.0.



Fax modem owners can send and receive faxes with Straight Fax 2.

CHATLINES

Q Having discovered the joys of using the STiK software to access the Internet, I'm intrigued by this oddity known as IRC. I've been on to the #atari channel a few times, and they seem a helpful bunch. I don't want to seem daft, but how do I create a channel of my own? How can I make it stay open for other users while I'm not on-line? Do any of you at ST FORMAT ever use IRC? Stephen Hillswick, London

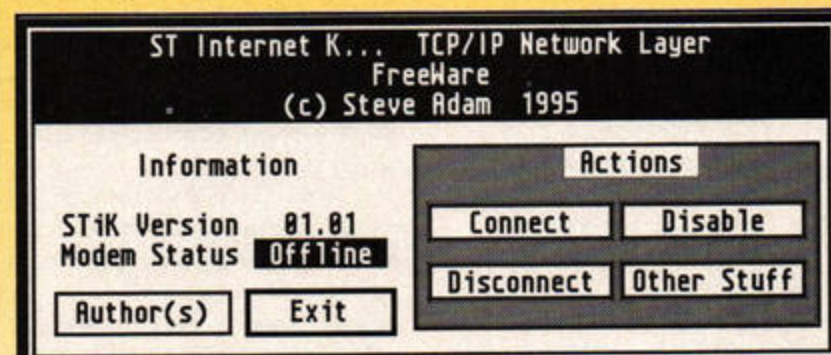
A You create a new IRC – Internet Relay Chat – channel by using the /join

command, just as if you were accessing an existing channel. If you specify a channel that doesn't exist, the server creates it and gives you operator status. Typing /join #mychannel will do the trick.

Unfortunately, though, the channel will close as soon as there are no users left. Hardened IRC hacks use programs called bots to keep the channel open, but you need a 24-hour Internet connection to do this.

Music and MIDI Editor Andy Curtis and I crop up on #atari quite often, you just need to keep your eyes open...

You can write to Frank at the usual address: alt.comms.stf@, ST FORMAT, Future Publishing, 30 Monmouth St, Bath BA1 2BW, but e-mailers should note that he's on the move again. E-mail your questions to his new address: Frank.Charlton@dial.pipex.com.



Chat to other ST owners by using STiK to access Internet Relay Chat.

HTML coding made easy

This month we show you how to improve your HTML documents by adding colourful graphics. Frank Charlton leads the way.

By now you'll have had plenty of time to experiment with the basic examples of HTML coding we covered last issue (if you missed it, turn to page 61 and order your copy now). This month we'll be

showing you how to add eye-catching images and logos to create graphically stunning HTML pages.

Graphics aren't just there to make an HTML page look pretty, though. Used sensibly, they can impart information in

a way that sticks in the mind far more effectively than a plain text page ever would. What you shouldn't do is go 'graphics happy', though, with a litter of useless images all over the place. Remember: most of your readers are browsing through your document because they want some information, not because they like looking at pictures.

Image formats

The accepted graphics standard for HTML documents is GIF (Graphics Interchange Format), which was originally introduced by the CompuServe on-line service. As the name implies, it was invented to distribute images across different computer platforms, regardless of variables like screen sizes or operating systems. GIF files can hold image data of any size, in 256 colours or less.

The graphical data is stored in a compressed format, using LZW compression for fast, tight packing. GIFs also have other advantages when it comes to HTML coding, such as transparency and interlacing. With more advanced graphics capabilities now available on the Falcon, Mac and PC, people are forsaking GIF files for the 24-bit JPG format (see The Big Squeeze feature in issue 77 for more on image compression). While advanced Web browsers, such as Netscape on the Mac and PC, support the use of JPG images in HTML pages, CAB from issue 77's Cover Disk doesn't, so we'll be sticking to GIF files for now.

Tag team

Adding images to your pages is like everything else in HTML – it's a simple case of learning the right tag. The basic image tag looks like this:

```
<IMG SRC="EXAMPLE.GIF">
```

The first part, IMG, tells the browser to expect an image, while the SRC parameter provides the path and filename of the image you wish to display. If your images are in the same directory as your HTML page, just use the filename. That said, it's common practice to keep things tidy by using a separate folder for pictures. In the following example we're storing our GIFs in a directory called IMAGES, inside our main HTML folder, so the tag looks like this:

```
<IMG SRC="IMAGES/EXAMPLE.GIF">
```

(all one line)

This is called 'relative linking' – all the filenames stored are relative to the current directory, so if a reader copied your files to his hard drive, the HTML code would still work. You could use a tag like:

```
<IMG SRC="A:/HTML/IMAGES/EXAMPLE.GIF">
```

(all one line)

However, this causes problems if you move the files, or put your pages on-line. Using relative linking makes it much easier to keep track of your files without editing your HTML every time.

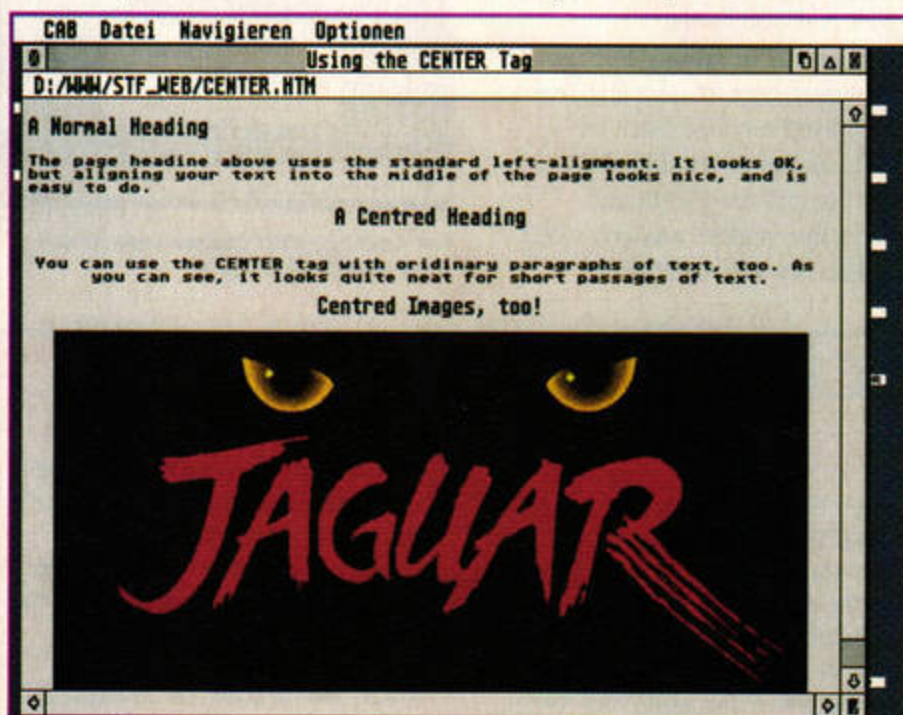
The IMG tag accepts other parameters, too. Take a look at the following:

```
<IMG SRC="IMAGES/EXAMPLE.GIF" ALT="An Example image should be here!">
```

(all one line)

The ALT parameter provides an alternative text description of your image. This is useful for readers who have image loading switched off, or for those using a text-only browser, such as Lynx. ALT is optional, but it's polite to use it.

Another optional parameter is the ALIGN tag. If you have some text next to an image, the browser needs to know whether it should start the text at the top, centre or bottom of the image. The



With a simple pair of tags, you can justify both text and images in the centre of the screen. This is obviously useful when planning your titles.

INTERLACING

If you're planning to put your HTML pages on-line for other Internet users to view, you should consider 'interlacing' your images. Most browsers can display an interlaced image as it downloads, rather than waiting for the download to finish and showing the picture in one go.

If your graphics are big, interlacing also gives the viewer a chance to abort or skip to another page, rather than being forced to wait as another huge logo

downloads. The CAB browser doesn't support interlacing directly, but readers with Macs and PCs will thank you for your efforts. Interlacing makes an image slightly larger, but it's nothing to worry about.

To interlace an image, click on the interlacing button in ImageCopy (it's beneath the transparency one – see the Transparency step-by-step guide panel opposite) and re-save your image. And that's it.

ALIGN tag looks like this:

```
<IMG SRC="IMAGES/EXAMPLE.
GIF" ALIGN=top> (all one line)
```

Obviously, you can replace the ALIGN=top part with either ALIGN=middle or ALIGN=bottom according to the effect you're after.

Finally, there's another set of tags that aren't directly supported by CAB yet, but which make loading a page in Netscape much faster. These are known as the WIDTH and HEIGHT parameters, and again they are optional. Normally when the browser finds an image tag in your page, it has to load the image before it can continue laying out the rest of the page.

However, if you tell it the exact dimensions of your picture in advance, it speeds the process up. Here's an example:

```
<IMG SRC="IMAGES/
EXAMPLE.GIF" WIDTH="256"
HEIGHT="181"> (all one line)
```

As you can see, the WIDTH and HEIGHT parameters tell the browser the dimensions of the image in pixels. You can use a viewer program, such as ImageCopy or

GEMView, to find out the exact size of your image.

As with all the optional tags not currently supported by CAB, you should still get into the habit of using them whenever possible. It standardises your HTML code, and improves the way other browsers interpret your pages.

Another point worth mentioning about the IMG tag's parameters is that they can be listed in any order, so both of the following lines are equally valid:

```
<IMG SRC="IMAGES/EXAMPLE.
GIF" ALIGN=top> (all one line)
<IMG ALIGN=top SRC="IMAGES/
EXAMPLE.GIF"> (all one line)
```

Stuck in the Middle

There's another useful tag that works with both images and text. The CENTER tag works with CAB, and it can improve the look of your documents no end – just watch out for the American spelling. As you might expect, this tag places anything held within it, whether it's text or an image, at the centre of the screen. What's more, it doesn't matter

NEW LINE

Since HTML ignores blank spaces or lines in your document, you need to tell the browser when you want to start a new line or paragraph. Adding the tag
 at the end of a sentence forces the next

sentence on to a new line, with no space in between. Conversely, using a <P> tag at the end forces a paragraph break, and adds a blank line before commencing the new paragraph.

what size screen you are using, the text or image will stay in the middle. Like the text effect tags we showed you last month, the CENTER tag is used as a pair to switch the effect on and off. It looks like this:

```
<CENTER>This is in the
Middle!</CENTER>
```

(above all one line)

Next month

Okay, that's it for this month. Next issue we'll show you how to create HyperText 'links' to other pages, images, sounds, or even other Web pages. Plus everything you need to know to bring your documents to life with other quick and easy HyperText

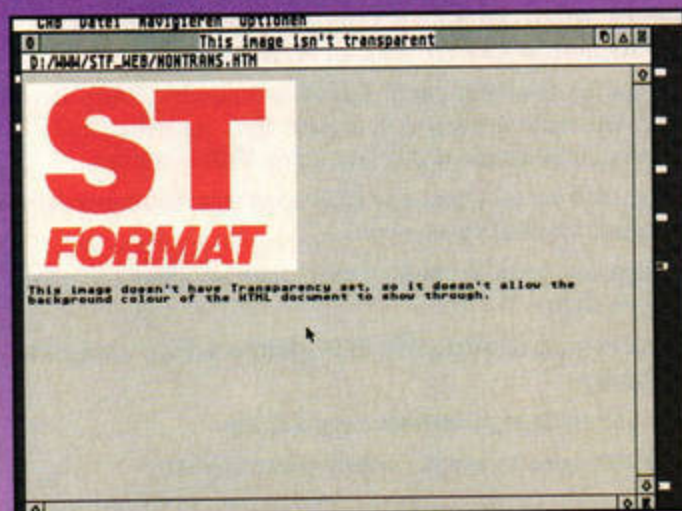


The Netscape browser on Mac and PC introduced extensions to HTML for coloured and textured backgrounds – and they're coming very soon to CAB.

elements as found in programs such as ST Guide. Make sure you don't miss it! stf

TRANSPARENCY

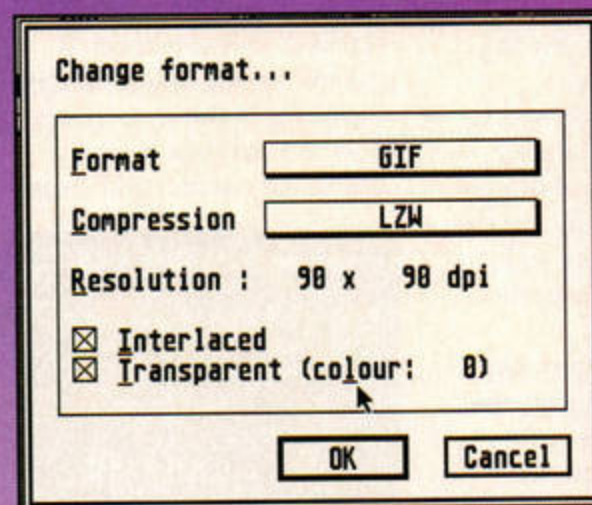
If you've studied other people's HTML work, or have spent any time on the World Wide Web, you're sure to have come across the transparency effect. You know the sort of thing – logos and pictures that seems to float above the page, with an almost 'blended in' look. That's image transparency. To create the effect, you need to make one of the image's colours 'invisible',



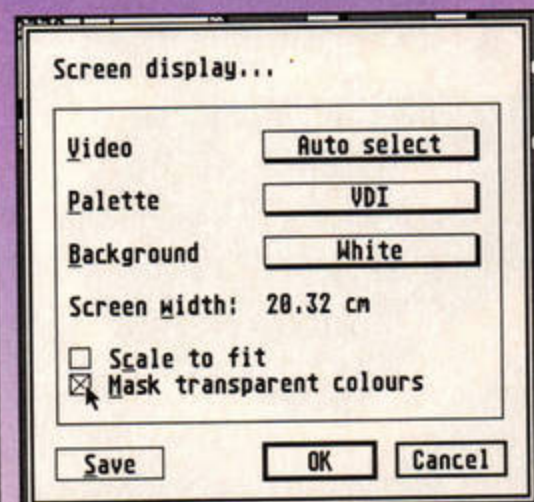
1 Here we've embedded the logo that we want to use in our HTML document at the top of the page. While it looks quite nice, it doesn't really cut the graphical mustard. What we need is something a little less intrusive, so we're going to make the background of the logo transparent.

so that the page underneath shows through in its place.

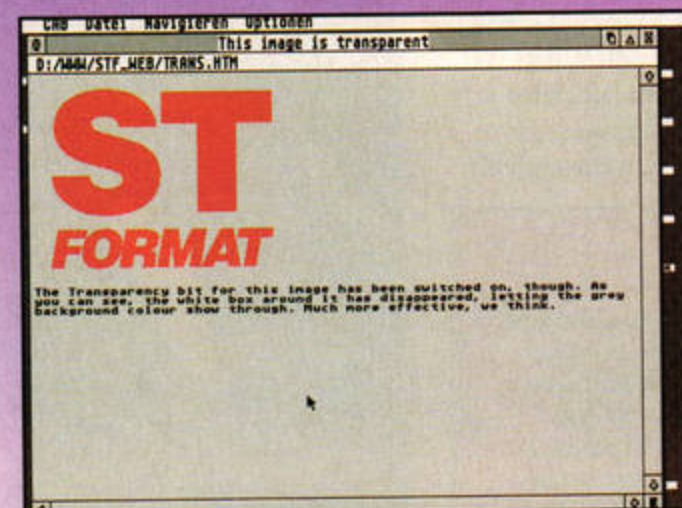
Unfortunately, you can't achieve the transparency effect via an HTML tag command, you need some extra software to do it. The only commercial software capable of doing this currently is ImageCopy 4 from the FaST Club, and we'll be using that for this example.



2 Fire up ImageCopy and load the GIF image. Next, press [CONTROL+F] to bring up the Image Information dialog. The button for the transparency effect is at the bottom. Switch it on, then click in the colour field to the right. When the image window appears, click on the colour you want to make transparent.



3 You can also 'mask' transparent colours to check if the transparency effect works properly. If you can't pick out the right colour, use an art package to swap the colour you want to make transparent for a vivid one that isn't used elsewhere. This makes it much easier to pick out in ImageCopy.



4 Now save the modified picture in ImageCopy, relaunch your browser and you can instantly see the effect. You don't need to make changes to the actual HTML code, as the browser detects the transparent shade and masks it out automatically. There, a much more satisfying effect.



The Score

It's time for our monthly mosey into music and MIDI land with resident tambourine man, Andy Curtis.

MIDI file give-away

This month, *ST FORMAT* is proud to bring you a fantastic set of commercially produced MIDI files. Some of the files are stand-alone pieces, while others are tutorial and MIDI tool kit files. All the files are in standard GM format to offer maximum compatibility with your system.

BASSDEMO.MID: This file features some classy bass playing with simple rhythm accompaniment. It includes

examples played on a fretless bass, plus pick and slap bass techniques. Using cut and paste you should be able to incorporate these techniques into your own work.

BASSLIDE.MID: The bass slide, if done well on a sequencer, goes a long way to convincing people that they are listening to the real thing. The trick is to set a sufficiently large pitch bend range and use your pitch wheel to achieve the 'slide'.

BLUEDEMO.MID: From pop and funk to jazz and soul, this demo gives you a taster of what your sound module is really capable of. Extensive use is made of volume and program changes to vary the mix.

BLUESCAL.MID: The basis of a sensational blues solo is the basic blues scale. This file takes you through all

the standard configurations in the key of C.

BUMBLE.MID: Demonstrating the flexibility of General MIDI, this is a superb rendition of *The Flight of the Bumble Bee* by Rimsky Korsakov from the opera

Legend of Tsar Saltan.

The famous orchestral interlude is faithfully rendered in GM and runs at the obligatory break-neck pace.

Strum it

GTRDEMO.MID:

This is a good exam-

ple of how you can achieve successful guitar strumming effects. The data was input using a MIDI guitar pickup, enabling the guitarist to play as normal and the result to be recorded on a sequencer. If you are careful, you should be able to apply the strumming effect in your own work by cutting out a strum and chang-

ing its pitch. Remember to make sure that you always use chords that are possible on a real guitar.

MIXDEMO.MID: This is a file from MIDI Magic's *Mix 'n' Match* disk. You are presented with different versions of the bass, drums and other parts. If there are three drum parts, for example, mute two of them and check the sound. You can then switch between different styles, trying each of them in turn. When you find a combination you like, delete the other tracks and save the piece you mixed.

MADEMIX.MID: This mix was created with one of MIDI Magic's *Mix 'n' Match* files.

PATCH01.MID: This sound patch for the Roland Sound Canvas is for Roland GS Modules only.

RAG.MID: Probably the most famous ragtime tune of all is *The Entertainer*. Now you have the opportunity to examine in detail a short rendition of Scott Joplin's masterpiece.

RECUERDO.MID: *Recuerdos de la Alhambra* by Francisco Tarrega is a Spanish guitar piece. This MIDI file is completely faithful to the orig-



GM compatible and absolutely free to all *ST FORMAT* readers. We're just too good to you, you know.

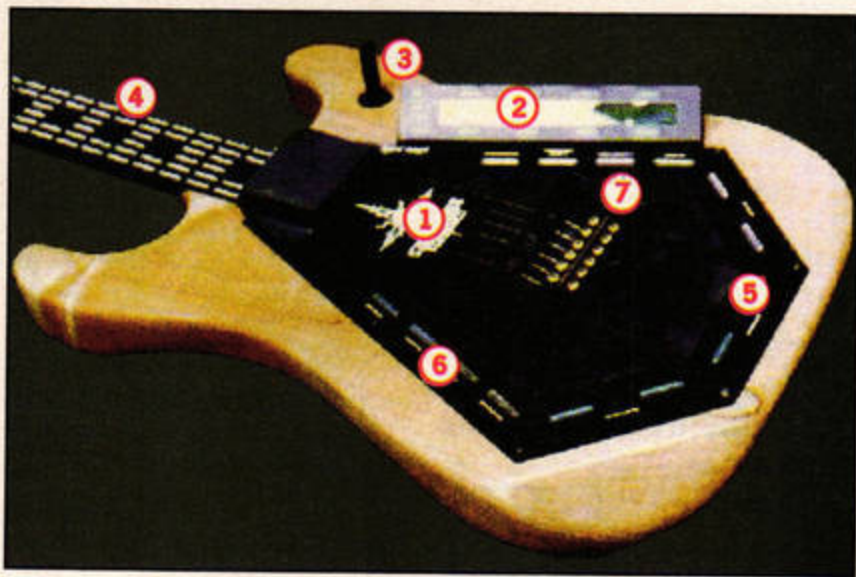
The bass demo file includes all sorts of styles which you can incorporate into your own compositions.



MIDI GUITAR

The phrase 'MIDI Guitar' pops up whenever we talk about natural guitar effects via MIDI. So, let's take a look at what a MIDI guitar really is.

- 1 These short strings, which run from the bridge to the bottom of the neck, are used in the normal way for strumming and picking.
- 2 Unlike a normal guitar, this MIDI guitar (which is made by ZTAR) has an LCD status display. The instrument is a complete MIDI controller and offers patch selection, modulation and many other MIDI functions.
- 3 This short joystick can be assigned any MIDI controller functions, such as volume, pitch bend, modulation or reverb.
- 4 Rather than strings, the neck is covered with touch sensitive pads that register your desired pitch.
- 5 These multi-function pads surround the MIDI guitar's bridge area and can be used as triggers.
- 6 Hot keys enable you to change settings very quickly.
- 7 This mute bar enables you to create muted guitar effects.



FREEBIE!

If you would like a free catalogue detailing MIDI Magic's complete range of commercial MIDI files give them a call on ☎ 01792 642381. You will also receive a free demo disk featuring some more great MIDI files.

If you haven't got a MIDI guitar pickup, you can still get believable strumming effects by using cut and paste.



inal and it demonstrates the extreme skill required to maintain a 'Mandolin-like' tune and a picked accompaniment on one guitar.

SAMBA.MID: The Samba is one of the more tricky percussion rhythms to master. With this handy drum track you can generate instant Samba whenever you need it.

SCALPATS.MID: This is a practice file, which you can use to improve your scale playing on a guitar or keyboard. If you have access to score editing facilities, you should find the music very easy to follow.

SHUFFL02.MID: More than just a simple shuffle drum beat, this file contains many rolls that you can use in your own music. Use the different breaks and fills throughout your piece to generate variety.

SYNTHFX.MID: You should play this file one track at a time using the 'solo' function on your sequencer. Each individual track within this file is a mini demo of a synthesiser effect. If you need to use any of these effects, simply copy and paste them into your own work.*stf*

If you'd like to see a particular topic covered in The Score, write to: The Score, ST FORMAT, 30 Monmouth Street, Bath, BA1 2BW. Or e-mail Andy at: andy@adlib.co.uk

WHAT'S BEHIND THE MIDI MAGIC?

MIDI Magic is one of the biggest MIDI file producers and retailers in the UK. We talked to Leighton Collins, the company's owner, to find out what goes on behind the scenes, and what it takes to become a professional MIDI programmer.

stf: When was MIDI Magic launched, and how did you get into the MIDI file business?

Leighton Collins: MIDI Magic launched in July 1992, but I have been composing MIDI sequences since the mid 80s. I used to play in a band and I wrote the brass and strings orchestrations using an old Yamaha CX-5. This enabled me to preview the arrangements before giving them to the musicians. After this, I was completely hooked on MIDI composition.

I produced 200 or more backing tracks to accompany myself in a live setting, and when I saw commercial companies producing MIDI files it occurred to me that I could produce MIDI sequences for a living. The company has grown from small beginnings and now we expect to sell thousands of titles each year, rather than hundreds.

stf: Many people think that the MIDI files are too expensive to buy; why can't they be cheaper?

Leighton Collins: Taking into account the cost of the disks, the programmers' time, royalties to the copyright owner, the overheads of the business and the cost of employing admin staff, the actual charge for MIDI files is really very low. To get the price down significantly we would have to lower the quality of the files, and we are not prepared to do that.

stf: Can people use your files commercially for performance work?

Leighton Collins: People do perform live to our sequences, but they should bear in mind that each time they perform a song live, a payment has to be made to the Performing Rights Society. This is usually handled by the venue, but it is something to be aware of.

stf: Can people use your files commercially for recording work?

Leighton Collins: If someone wants to record one of our tracks with their voice or a solo for retail sale, we ask for a copy of the track to listen to and a one-off fee to cover our copyright. They then also need to contact MCPS for standard recording rights.

stf: How important is it to make the MIDI file sound exactly like the original recording?

Leighton Collins: This is one of our prime concerns. The only time we take liberties is when there are a large number of cover versions of the same track. Generally speaking, if the artist is listed with the track in our catalogue, our file

will be their version. Unfortunately, some of the original performances aren't that good, so an accurate transcription sounds pretty awful. It is very tempting to improve on the performances, particularly of early recordings, but we usually manage to resist.

stf: Do you, or any of your colleagues, use an Atari to produce sequences?

Leighton Collins: There's always an Atari computer here, and most programmers own, or have owned, an Atari at one time or another. In fact, the bulk of our catalogue started life on an Atari ST.

stf: How would someone go about getting into the commercial sequencing

market with a company like yours?

Leighton Collins: You would need to send out demos of your work in MIDI file format. It is important that you have a reasonably large selection of songs – at least 30 – in order to make the deal worthwhile, and the accuracy of the work is important. The quality required is very high, so don't be disappointed if a few companies knock you back.

stf: What are the most common faults with sequences produced by amateurs?

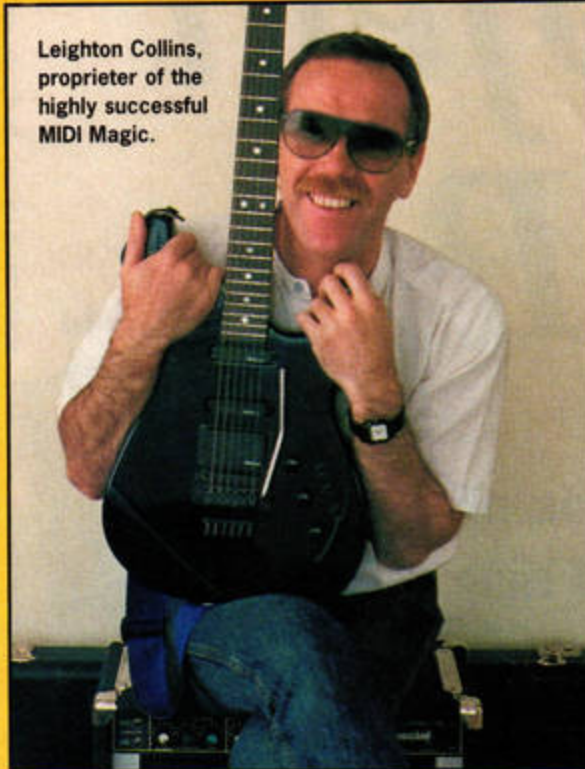
Leighton Collins: A piece of music can appear to be quite good technically, but sound very mechanical. This is usually because of over-use of the quantise feature. Rhythm tracks often lack variety and faithfulness to the original. It is important to play only what the actual instruments are capable of.

stf: How do you program your sequences to give them a real professional gloss?

Leighton Collins: Extensive use of MIDI guitars enables us to produce convincing tracks that are genuinely faithful to the original. Even wind instruments, such as the saxophone, benefit from being played in on a guitar, because saxophone phrasing is often very similar to that of guitar solos.

We like to preserve the impact of the track by only slight use of quantising. This means inputting most of the data in real time and not by step entry. The drum tracks are given special attention to ensure variety – no-one wants to listen to the same four bar drum loop over and over again.

Leighton Collins, proprietor of the highly successful MIDI Magic.



FOR FREE CATALOGUE CONTACT: MIDI MAGIC INTERNATIONAL
20 MARSDEN TICE, SWANSEA SA1 2PZ UK
TEL/FAX: (01792) 642381
MCPS LICENSED. ALL FILES © MIDI MAGIC 1995

MIDI MAGIC

MIX 'n' MATCH

Midi Magic

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MIDI MAGIC

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The professionals' choice

Project DSP

In the final article of this series, Paul Hills explains the theory and practice of sampling on the Falcon.



How do we get an audio sound inside a computer? The computer certainly can't store real-world analog values in its memory. It can only store digital numbers, so we'll have to use blocks of digital numbers to represent analog waveforms.

Each analog voltage will be represented by one digital number. If we measure the analog voltage quickly enough, and convert these measurements into digital numbers, we can store the original analog waveform in the computer's memory. This process is called 'sampling'.

Sampling

To illustrate this process, let's examine the changing price of shares in a company. The share price was checked once a

week, and the following data was gathered:

Week	Price
0	3.10
1	2.10
2	2.00
3	3.00
4	4.80
5	7.10
6	4.90

Plotting the prices against time (Chart One) gives us a set of 'snapshots' showing the progress of the shares. The snapshots are called samples. The price of the shares, of course, varies daily, so there will be fluctuations in the price that we will not see if we sample only once a week. Imagine if, in the first week, the price actually changed as follows:

Mon	3.20
Tue	4.60
Wed	8.80
Thu	13.80
Fri	2.10

This is a bit of a wild example, but it could happen, and wouldn't you be sick if you only sampled once a week and sold your shares at the end of the week? The problem arises because the sampling frequency is too low; if we had sampled every day, we wouldn't have

been caught out by fluctuations.

Sound

Now let's now think about audio signals. How fast do they change, and how often must we sample them? We need to introduce some terminology here, so take a look at Chart Two on the right.

Chart Two is a graph of an audio signal. The vertical axis measures the voltage, or magnitude, of the signal, and the horizontal axis is time. At the beginning of the time shown, the voltage was just above zero. After a millisecond it had risen to 0.4V. After another millisecond, it had come back down to -0.1V, and so on.

The height that the signal goes up to (and down to) is called its amplitude. For audio signals, the height and depth are generally the same. The amplitude of the signal shown is 0.8V peak-to-peak (0.4V up plus 0.4V down).

Frequency

As you can see, the signal is wobbling back and forth about the 0V line. The faster it wobbles, the higher the note. The number of times it wobbles in one second is called the frequency of the note.

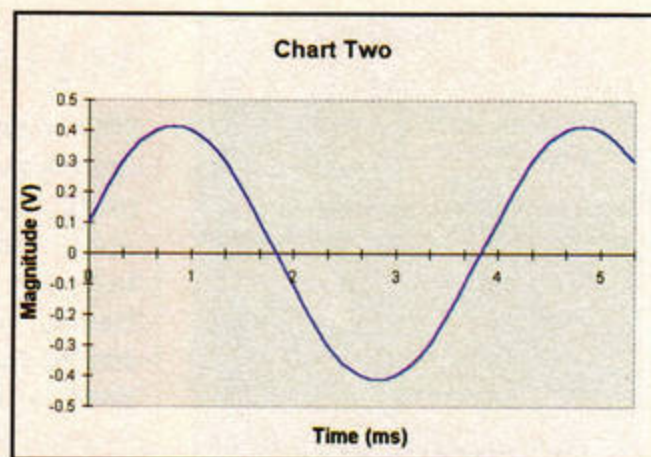
In our example, the signal wobbled up, down, and back to its original position in about 4 milliseconds, that is 0.004 seconds. Over this period it is said to have completed one cycle. The time that it takes to do this is the period. The frequency can now be calculated:

$$f = \frac{1}{0.004} = 250\text{Hz}$$

That's enough definitions, now let's sample the waveform. The vertical lines in Chart Three represent the samples taken at regular intervals. In this example, there are three samples every millisecond, so the sampling frequency is:

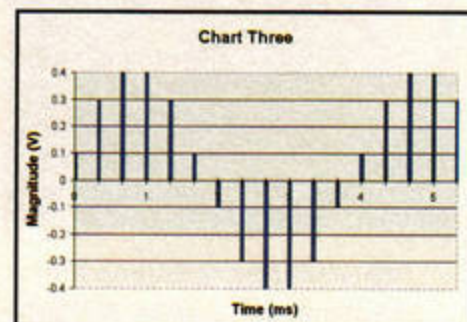
$$f = \frac{1}{0.00033} = 3000\text{Hz or } 3\text{kHz}$$

There are twelve samples in every cycle of the audio wave-



An audio signal can be represented by a graph of voltage (signal magnitude) against time.

form, so the sampling frequency is twelve times the signal frequency. This sampling frequency is more than fast enough to ensure you don't miss any sudden changes in the audio waveform.

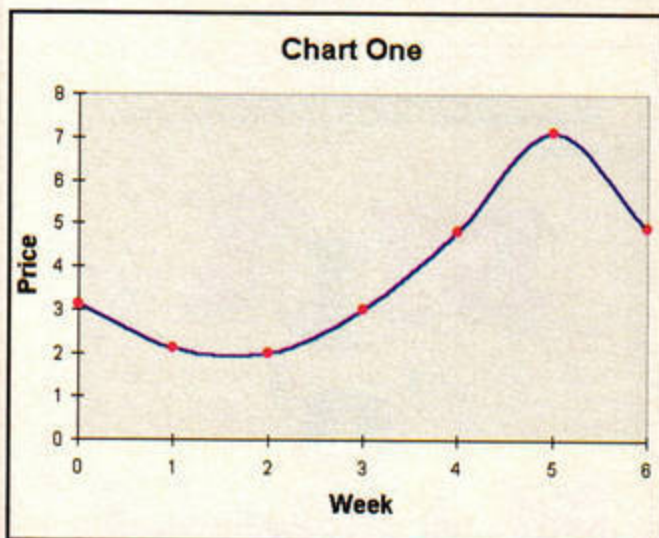


Sampling the waveform three times every millisecond gives a good idea of its shape.

But what about real audio waveforms? What frequency are they and how fast will you have to sample them? Well, some people claim to be able to hear sounds at 18kHz. To be on the safe side, the highest audible frequency is normally put at 20kHz. At the bottom end, 12Hz is about the lowest frequency humans can hear, although we can 'feel' frequencies lower than that.

Most real world sounds aren't just one frequency, however. A single frequency sound is like the beeps made by early home computers – it sounds very boring and plain. Real world sounds consist of many notes of different frequencies all added together. A typical example is shown overleaf.

The frequency at which you must sample to get all the information necessary about a waveform is twice the highest frequency present. It is often known as the Nyquist frequency. If you assume the highest audible frequency is 20kHz, then anything above that can be ignored, so you can sample at 40kHz. This is a



Recording share prices weekly shows us the overall trends, but hides day-to-day fluctuations.



Real world sounds consist of many notes of different frequencies.

reasonable sampling rate: CDs are sampled at 44.1kHz and DAT at 48kHz. The Falcon can sample at 50kHz, which would make the highest frequency it can measure 25kHz. This is more than adequate for high quality audio signals.

To put all this in perspective, the maximum frequency of a signal on AM radio is 4.5kHz. If only voice is required, you can go lower; the maximum frequency on the telephone is 3kHz.

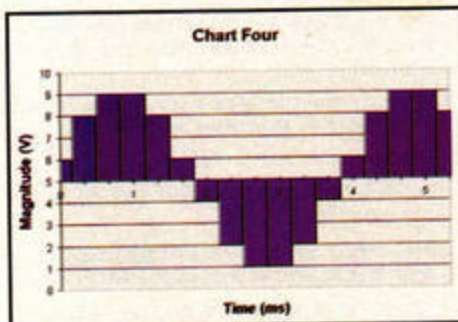
Quantisation

When a sample is taken, it has to be converted into a digital number that the DSP can store in its memory. This is done by an Analog to Digital Converter (ADC), and the process is called Quantisation. It can be thought of as classifying the samples into bands.

Consider the simplest case, where there are just two bands. We could call the bands positive and negative. When each sample is taken, check to see if it is positive (above the 0V line), or negative (below the 0V line). If it is positive, allocate a binary 1 to it; and if it is negative, allocate a binary 0. Try quantising the example in Chart Three; you should get the result 1111100000011111.

Each sample has been represented by one bit. This one bit converter is not much use. The original shape of the waveform has been forgotten, only whether it was positive or negative remains.

Let's add some more quantisation levels. In the diagram below, the vertical axis of the graph has been marked off into nine bands. Look to see



When you quantise a waveform, you are basically classifying the samples into bands.

EXTRA FOR EXPERTS

This series has introduced you to the 56001, the Falcon's audio system, and digital signal processing in general. If you want to go further, here are some good books and other sources worth looking at:

Books

● DSP56000/DSP56001 DSP User's Manual

This is the bible of the 56001. It has all the information on the control registers, as well as a full list of the instruction set and addressing modes that we haven't had space to cover so far.

● Modern Atari System Software

This book is a full reference of the new operating system functions available on the Falcon. Each function is described in detail.

● The Atari Compendium

This massive book is the Atari bible. The new version includes all the new operating system calls for the Falcon and has memory maps for all the ST series of computers. However, they are not ideal from a DSP programmer's point of view, missing out important registers such as the Host Interface.

● DevpacDSP

I know this is an assembler/debugger, but it also comes with a manual which has a brief introduction to transferring data between the CPU and DSP. I can also highly recommend the software!

The above four items are all available from HiSoft, call 01525 718181 for more details.

● A Simple Approach to Digital Signal Processing

Written by Craig Marven and Gillian Ewers, this book provides a very readable introduction to the theory behind DSP. It is available from Texas Instruments, 0181 6919000.

which band each sample falls into, and store that band number, giving 68998642112468998.

Obviously, the more bands you have, the more accurately the DSP can represent the waveform. The Falcon uses a 16-bit ADC which has 65,536 levels. The best ADCs around today, which are very expensive, are 24-bit (which would give over 16 million levels), but they sample very slowly – about 500 times a second at most. They are used for very accurate measurements, not for audio sampling.

On the Falcon

Right, enough theory, let's see how to do it in practice.

If you look at the block diagram in the last issue, you can see that we need to configure the switch matrix so that a signal sampled by the CODEC gets to the DSP. This is done with the XBIOS function:

```
long Devconnect(int Source,
int Dest, int SrcClk, int
Prescale, int Protocol);
```

The parameters are shown in the table above. The prescale value, along with the SrcClk, selects the sampling frequency:

On the Internet

● Newsgroup: comp.dsp

This newsgroup carries quite a lot of traffic, and usually has postings on both technical and basic subjects. Well worth a look.

● FTP site: ftp.uni-

kl.de/pub3/atari/falcon/programming

There are several files in this area to do with DSP programming on the Falcon. Some are header and source files for operating calls, while others are 56001 code.

● Web site: http://motserv.indirect.com/

This site holds a library of 56001 assembler source files. There is a full floating point library, plus code to do numerous other things.

● Other Internet sites:

ftp://schutz.ee.uts.edu.au/pub/dsp

http://www.qut.edu.au/bee/eese/sprc/homepage.html

http://www.bati.com/faq/dsp_faq.htm

http://www.inforamp.net/~poynton/poynton-dsp.html

http://dataura.cerl.uiuc.edu/netstuff/

sigsoundlinks.html

http://innet.com/~condor/wghome.html

http://www.dsp.ucd.ie/dsp-home.html

● More site lists:

http://www.cera.com

Public domain libraries

Floppyshop's disk F.4218 contains over 200 56001 source code examples, many of which may also be on the Motorola pages (http://motserv.indirect.com, above). Give the folks at Floppyshop a call on 01224 312756 for details.

Source	Dest	SrcClk
0 DMA playback	0 DMA Record	0 Internal 25.175MHz
1 DSP Transmit	1 DSP Receive	1 External clock
2 External input	2 External output	2 Internal 32MHz
3 ADC (Mic)	3 DAC (spkr)	

Prescale Divisor

Prescale	Divisor
1	512
2	768
3	1024
4	1280
5	1536
6	1792
7	2048
8	2304
9	2560
10	2816
11	3072
12	3328

The sampling frequency is then given by:

$$\frac{\text{SrcClk}}{\text{Divisor}}$$

The DSP SSI lines must then be enabled:

```
Dsptristate(int tx, int rx);
```

```
/* 1=enable, 0=disable */
```

The SSI itself and the way it communicates with the CODEC are very complicated. Each has numerous different modes, most of which will not work with the other device.

We suggest you stick with the

values set up in the example code on this month's subscribers' Wonder Disk.

There are several programs on the Wonder Disk. The first is a basic template which simply reads values from the ADC and sends values to the DAC. It can be used to create DSP-CODEC applications.

The second program is a simple mixer by Anthony Jacques. Built around the basic template, it mixes the left and right channels and puts out a mono signal.

There are several other programs that were not written for the Falcon, but for general purpose 56001 systems. They are fully developed musical effects, but they do not have code for reading samples and writing to the DAC (you may like to try doing this yourself, using the template). They include Reverb, Chorus, and Flanger, and are all available in the public domain. *stf*

Reader ADS

SALES

Concerto 24-track MIDI sequencing solution for Atari. As new boxed and guaranteed, £20 inc P&P. Atari ST 512K upgrade to 1MByte never used, boxed and guaranteed, £18 inc P&P. Tel: 01232 456377 (Belfast).

Atari 520STFM 2.5MByte upgrade. New mono monitor, mouse, sequencer and games, £250 ono. Tel: 0181 5959145 (Dagenham).

VideoMaster colour digitiser and RGB splitter box for Atari Falcon030, only £30. Tel: 01268 561066.

50+ copies of ST User, from Mar 86-Dec 91. Missing Aug and Dec 86, Apr 87-Apr 89. No split. Tel Scott: 01708 525081.

Megafile 20 hard drive, £70. Golden Image brush with Deluxe Paint, £10. Floppy disks 10p each! Tel Gary: 01293 534415 after 6pm.

300 disks full of games and utils, 2400 modem with MNP5, Sound Master 2 sampler, all for £70 or £50, £20, £20 separately. Tel Alex: 01524 65201 ext 5177 or email: egd049@CENT1.LANCS.ac.uk.

4MByte STE, AT Once and IBM emulator, 32MByte HD, SM124 monitor, SLM804 laser, Spectre GCR Macintosh emulator, software, £600. No offers, will not split. Tel Keith: 01235 512095 after 7pm.

100+ commercial games at PD prices, from 50p. Atari 8-bit disks and tapes from 30p. 800XL and 1050 disk drive £60. Large SAE to: Mr Loughton, 34 Collindale Avenue, Erith, Kent DA8 1EE.

Master System and light gun £20. Games: Cool Spot, Sonic 1, Sonic 2, Pacmania, Champions of Europe, Chuck Rock, World Cup USA £4 each. Atari games: Dalek Attack, Lemmings, STOS 3D, Titan, £7 each or £20 the lot. Tel James: 01692 403917.

40MByte hard disk, perfect order, £90. Atari colour monitor, excellent condition, £90. Tel Derek: 01494 438541.

1MByte STFM, high-res monitor, second floppy drive, Mastersound 2, Devpac 2, Timeworks, DTP, games, books, ST FORMAT 18 to present, £200 the lot, may split. Tel Iain: 01923 237620 after 4pm.

For sale: Power hand scanner, box, instructions and software included. Brand new, worth £100, selling for £50-70. Tel Paul: 01698 286852.

Special clearance - ten Atari ST games including Streetfighter, R-Type, Future Wars, Hard Driving, RAC Rally, Borodino, International Soccer and Bismark, all for £22 including postage. Tel Mark: 01778 393680, evenings or weekends.

Falcon030, 4MByte RAM, 65MByte hard drive, Wordflair, Atari Works, Speedo and DOS 5, lots of fonts, 14-inch SVGA colour monitor, £575. Tel Graham: 01332 832829.

1040STFM, Atari mono monitor, pro music software, manual and loads more, £225 ono. Tel Lee: 01512 840363.

1040STFM, Philips CM8833, LC10 colour, second drive, greyscale scanner, some software, computer table/chair, disks, boxes etc, £500 ono. Tel: 01895 621705.

Canon BJ105X bubblejet printer with manual and jetfill twin refill pack. Perfect working order, £120. Tel: 01283 500944 after 6.30pm.

Replay 16, 16-bit ST sampler with manuals, hints booklet and disks full of sounds, £60. Tel Paul: 01323 504711, evenings.

Atari 1040STFM plus software, Epson FX-80 printer, d/disk drive. Perfect condition, little used, £330. Colour monitor. Tel: 01707 272355 (Hatfield).

1MByte STM, hard drive, Atari mono monitor, 1MByte floppy, many games and utility disks, manuals, £300. Panasonic printer £50. Tel: 01241 430282 after 6pm.

Lotus Trilogy, Soccer Mania, Super Monaco, Golden Axe, £5 (all boxed). Xenon 1/2, RAC Rally, TV Sports Football, Pro Tennis, £3. Tel Martin: 01308 421103, after 4pm.

NEC multisync monitor and lead for STE, superb picture, Gasteiner 170MByte hard drive, as new loaded with software, £145. STE software with manuals, Calamus, OutlineArt, Megapaint etc £45. Tel: 01902 22360.

Team £15. Kick Off 2 with Final Whistle and Return to Europe £7.50. European Champions, Premier Manager 2, Battle Command £5 each. Goal! European Champs Kick Off 1, £3 each. Tel: 0114 2366819.

Flight of the Intruder £5 ono, good order. Tel Jason: 01849 464129.

Hip hop, jazz, soul mods for trackers, £2 each. Tel: 0181 9086674.

Two 40MByte SyQuest removable hard drive cartridges. Both new and unused. Open to offers. Tel: 01343 830961.

Atari 520STE, 4MByte, TOS 1.62, Atari SC1435 colour monitor, Cumana extra floppy drive, mouse, trackball, joysticks, ST FORMAT 27-71, blank disks, disk boxes, £350 ono. Tel Andy: 01444 230435.

Boxed original ST games. £15-£3 including Sensible Soccer, Chaos, Engine, Railroad Tycoon Frontier. For details send SAE to: A Conniff, 62 Stonefield Way, Burgess Hill, West Sussex RH15 8SG or tel: 01444 230435.

2MByte upgrade for STE £40. Auto/mouse joystick switch £10. Forget-me-clock £10. Timeworks 2 £30. Brush mouse (to go with Deluxe Paint) £15. Tel: 01376 514397.

Devpac 3 £30. Truepaint £10. Hand scanner for ST or Falcon £50. Tel: 01925 631198 after 6pm.

Atari 520STFM, 4MByte, D/S drive, mouse and leads, clock cart, £155 ono. External floppy D/S drive with power £30 ono. Tel: 01442 234684.

Gasteiner 120MByte hard drive £120 ono. SpeedoGDOS £20 ono. Nudi £25 ono. Timeworks £15 ono. Atari Works £35 ono. All boxed as new. Tel: 01442 234684.

Atari 800 XL, 1050 disk drive, 1010 data recorder, all leads. Offers. Tel Steve: 0115 9701043.

Atari User magazine vol 1, no 1 and 2, vol 2 no 4-6 and others. Tel Steve: 0115 9701043.

For sale! 50 3.5-inch disks £10. Includes labels. Tel Matthew: 0181 5238058 (day) or 0973 301882.

Large collection of PC PD, tested with most of the Atari PC emulators. Tel: 01463 241403.

STFM leads and mouse, £65 ono. Tel: 0116 260 9248.

2MByte STE, TOS 2.06, clock cartridge, 234MByte hard drive, joystick, mouse, approx 100 Atari mags, most with cover disks, £475 ono. Tel: 01924 820085.

Memory boards for STE, four 256K SIMMs £8. Will split. Tel: 0113 2533368.

800 PD disks - latest compilations, demos, games, utils. Tel Anthony: 01929 551846, 6-6.30pm.

WANTED

512K to 1MByte upgrade kit for STFM. Also, has anyone out there got the Good News Bible on disk for Atari STFM? Tel: 01849 464129.

ST contacts in Britain. 100% reply. Write to: Simon Osborne, 59 Renton Road, Manchester M22 9TQ.

Wanted: NVDI 3.0 and Speedo 5. Also interested in Timeworks 2.04, Calamus 1.09, DA's Layout, Imagecopy 4 and Easytext Pro vector. Tel: 01494 862074.

Manual for Deluxe Paint or copy or even just details on tweening. Would also be interested in any cheap hardware. Write to: Martin Anderson, 9 St Michaels Road, Liverpool L17 7AN.

ST contacts to swap ideas, tips, hints etc. Also any Atari ST books wanted. Write to: Paul Pickering, 24 Leigh Gardens, Tanfield Lea, Stanley, Co Durham.

Scrabble (US Gold), boxed if possible with instructions. Tel Peter: 01484 862656.

Wanted! In order of priority: Cannon Fodder, Lotus Trilogy, Speedball 2, Megalo Mania, Railroad Tycoon. About £5 each. Tel: 01737 833188 after 6pm.

Complete version of Wordflair, no longer available through supplier. Tel Charmaine: 0121 5510186.

Calamus 1.09 or Calamus S. Also John Barnes Football. Tel: Al Buchanan 01522 691477.

Any hints for Leather Goddesses of Phobos, Zork 1, Planetfall, Cadaver, Galdregons Domain, Sorcerer, Crime Does Not Pay. Tel: 01333 450867.

Printer driver for Pagestream and HP Laserjet 500 or 320 colour printer. I'm desperate. Tel Chris: 0181 6989138.

Working copy of a compilation pack called 2 Hot 2 Handle, includes Shadow Warriors, Golden Axe, Total Recall and Super Off Road. Write to: Chan Le, 21 Enfield Ave, Preston, Victoria, Australia 3072.

Working copy of a compilation pack called Super Fighter, includes Final Fight, Wrestle Mania and Pit Fighter. Write to: Chan Le, 21 Enfield Ave, Preston, Victoria, Australia 3072.

Working copy of Moonwalker, Double Dragon 2, Swiv, Turbo Outrun, Super Monaco GP, Strider 2, Switch Blade 2, Turracan 2, Rodland, Rainbow Island, R-Type 2 and Dyna Blaster. Write to: Chan Le, 21 Enfield Ave, Preston, Victoria, Australia 3072.

GFA basic compiler with manual, version 3.5. Tel: 01473 715685, ask for Tony or leave message.

Solution to Hacker. Also Canon Fodder hint book or photocopy of same and cheat for Starglider 2. Write to: Steve Hislop, HMYB, BFPO 239.

Shuttle Flight sim, original games at reasonable prices. Tel Paul: 01737 242170 (Surrey).

Totally free!

Has anyone got Railroad Tycoon or Manic Mansion? Will pay £5 each. Write to: Scott Smith, 28 Carrick Gardens, Hamilton, Strathclyde, Scotland ML3 8XE.

Help! Finally got a copy of Thunderhawk from a car boot sale but no instructions. Can anyone help. Tel Steve: 0115 9701043.

Wanted a copy of Tornado buy or swap. Tel Steve: 0115 9701043.

MT-32 software. Tel Donald: 01463 221895.

CAD program (mechanical), PD or commercial, 1MByte max. Also clip-art of all things Wild West. Tel Chris: 01639 633715.

Clip-art of the Wild West in any format. Also MIDI files of pedal steel and banjo riffs. Tel Chris: 01639 633715.

Microprose Golf - please phone - I'm sure we can come to an arrangement. Tel Paul: 01903 230534.

Cover Girl Poker for ST wanted. Tel Paul: 01455 823164, between 6-8pm.

AT Speed C16 maths co-processor or AT speed C16 fitted with maths co-processor. Tel: 01302 531725.

LDW Power spreadsheet. Can anyone supply me with a printer driver for HP LaserJet 520 or HP LaserJet 550c for the above spreadsheet. Tel: 0121 6031205.

Drakkhen disks 1, 2 and 3 - UVK won't fix trashed boot sectors. Tel: 01209 831519.

High density external floppy drive unit for Atari SOS Help. I need a copy of the TUS software - cash negotiable and lots of thanks. Tel: 01698 834160.

Anyone in Wiltshire/Avon/Somerset selling a Falcon? Try Andy: 01225 782679 after 7pm.

Wanted urgently - has anyone got a copy of Headcoach v3 American Football management sim. If yes, tel Mark: 01924 267152.

Help! Has anyone any hints for Cadaver? I urgently need help. Write to: JB Hamilton, 10 Simpson Court, Crail, Anstruther, Fife, Scotland, KY10 3SZ.

SWAPS

Wanted Falcon. Would swap with SL804 laser printer Wang Lapton Archi A3000 Amiga CDTV oric Atmos, don't need HD. Tel Mick: 01480 475036.

Atari ST games, 100s to choose from. Will swap for what you have. Send SAE to: P Yeomans, 137 Badger Ave, Crewe, Cheshire CW1 3JN.

Swap 512K STE upgrade for copy of Another World. Write to: R Shread, 35 Hickling Way, Cotgrave, Nottingham NG12 3NY.

Anyone wishing to swap sounds and tips for the MT-32, contact Donald: 01463 221895.

15 games to swap, including Sensible Soccer and Magic Pockets. Will consider swap for anything especially Mega-lo-Mania or Hunter. Tel Dave: 0181 6760500.

Wish to swap ST disks, games, utilities etc. Write to: Albert Lindsay, 36 Noble Street, Whyalla Stuart, South Australia 5608.

Elvira 1 and 2, Bat 1 and 2, Tracksuit Manager, Canon Fodder, SWIV, Elf, Hunter, Mega-lo-Mania, Cadaver, Substation, Sabreteam and many others wanted. Will swap for mine or buy, any game considered. Tel Dave: 0181 6760500.

Boxed original games wanted to swap for mine, old or new, anything considered. May also buy or sell. Tel Dave: 0181 6760500.

This is Dave Mike of Clubland asking who wants their music written by us? Just send a disk and state what style house/dance/jungle. Write to: Dave Mike, 5 Mullacre Rd, Manchester M22 8DB.

ST contacts wanted to swap PD and shareware. Prefer local contacts (Manchester). Tel Simon: 0161 4377474.

Musician requires ST group to join. Write to: Vision, 59 Renton Road, Manchester, M22 9TQ.

To Ironic: I'm Sorry. From NMI.

I am NMI, I am not bad, I am nice really. So please note everyone.

Does anyone want to set up a coding group in South Manchester? Tel Simon: 0161 4377474.

Hello to Paz, Dave, Matt, James, John, Bob, Flintstone, Carl, Darran and Wizard from Keith at Bun PD. Thanks for your support in 1995.

Anybody would like to correspond with me, I have an Atari STE (1MByte). Write to: FS Matthews, 19 Malabar Rd, Truro, Cornwall TR1 3NU.

ST contacts wanted to exchange software (games, utility etc), write to: Levent Bas, Balozusk No 3/1 Acibadem, Istanbul, Turkey.

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Oregon Research:
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Sam Trameil, Atari:
75300.3443@compuserve.com

Atari ftp sites:
atari.archive.umich.edu/atari/
ftp.demon.co.uk/atari
micros.hensa.ac.uk/micros/atari/
src.doc.ic.ac.uk/packages/atari/umich/

Atari ST Usenet newsgroups:
comp.sys.atari.advocacy
comp.sys.atari.announce
comp.sys.atari.st
comp.sys.atari.st.tech
demon.ip.support.atari

Mark Smith's Atari Web Page:
<http://www.mcc.ac.uk/~dlms/atari.html>

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ATARI USER GROUP (SCOTLAND), 9/3 North Hillhousefield, Edinburgh, EH6 4HU
ATARI-YAMAHA USER, 49 Summerfield Road, Wythenshaw, Manchester M22 1AE
BLOXWICH COMPUTER CLUB, 29 Station St, Bloxwich, Walsall WS3 2PD
BOURNEMOUTH and POOLE ATARI USER GROUP, 110 Bridle Way, Canford Bottom, Wimborne, Dorset BH21 2UX
BRENTWOOD USER GROUP, Grindelwald, Crow Green Lane, Pilgrim's Hatch, Brentwood CM15 9RH
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CALAMUS USER GROUP, PO Box 148, Deal, Kent, CT14 7QN
CHESHUNT COMPUTER CLUB, 196 Coates Way, Garston, Watford, Herts WD2 6AE
COLCHESTER ATARI USER GROUP, 61 Rayner Rd, Colchester, Essex CO2 9AE
FALCON FACT FILE (FFF), 11 Pound Meadow, Whitchurch, Hampshire, G28 7LG
FALCON OWNERS GROUP (FOG), 10 Oak Drive, Portishead, Avon BS20 8QS
ICTARI PROGRAMMERS USER GROUP, 63 Woolsbridge Road, Ashley Heath, Ringwood, Hants BH24 2LX

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SEAFORD AND DISTRICT COMPUTER CLUB, 23 Kedale Rd, Seaford, Sussex BN25 2BX
STENCH UK, 59 Renton Rd, Wythenshawe, Manchester M22 9TQ
SWINDON ATARI USER GROUP, 46 Eastcott Rd, Swindon, Wilts SN1 3LR
TARILAND CLUB INC, PO Box 332, Kumeu 1250, Auckland, New Zealand
UDDINGTON ATARI/AMIGA USERS, 28 Croft Wynd, Uddington, Glasgow G71 8BJ
WIGAN COMPUTER CLUB, 1 Lidgate Close, Wigan, Lancs, WN3 6HA
WEST OF SCOTLAND ATARI USER GROUP, Roisbheinn, Overton Cres, Johnstone, Renfrewshire, PA5 8JB (e-mail: agoold@cix.compulink.co.uk)

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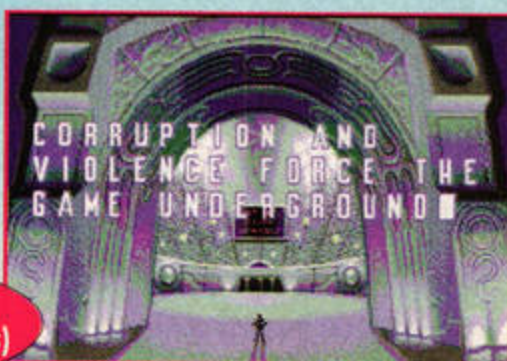
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Obsession is a technically brilliant re-creation of pinball that scored a massive 94% in issue 67. There are four tables, featuring magnets, kickbacks, overhead runs, combination targets and comments on how badly you played – it's highly addictive. Our reviewer described it as "one of the greatest ST games ever."

UDS followed up *Obsession* with *SubStation*, the first attempt at *Doom* on the STE and Falcon. It scored 75% in issue 72 and "holds its own as a 3D blast-'em-down," according to our reviewer. You must roam a dangerous underwater energy plant that's lost contact with the surface. *SubStation* also features the realistic DD-Audio 3D sound system.

Now you can get *Obsession* and *SubStation* together, for less than the price of the individual games! Just turn the page, fill in the form and get your order in today.

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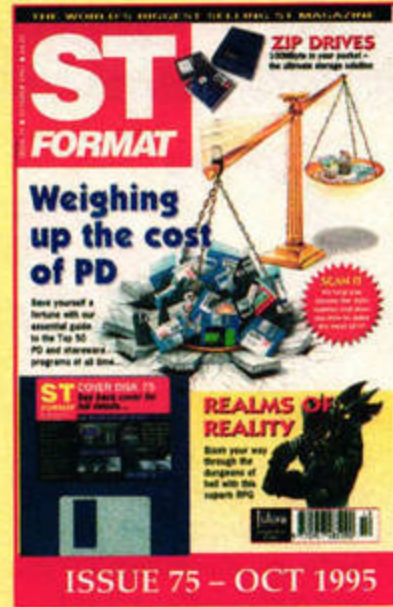
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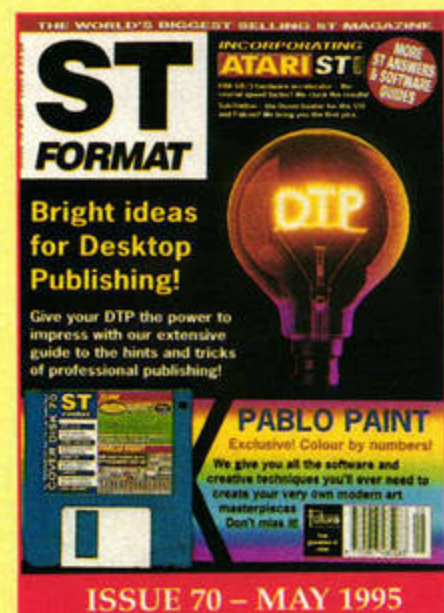
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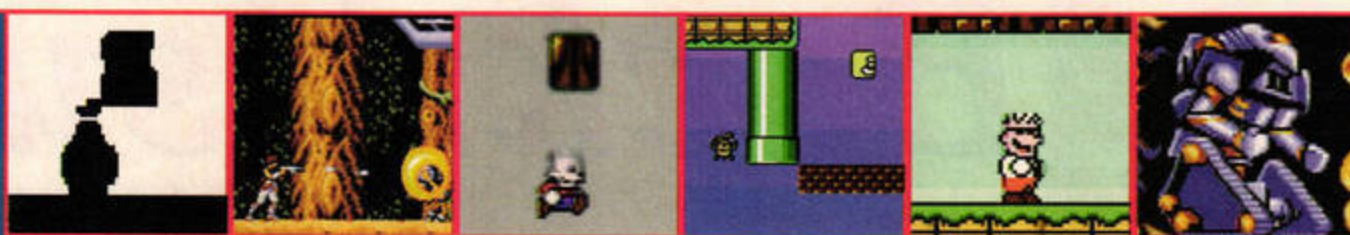
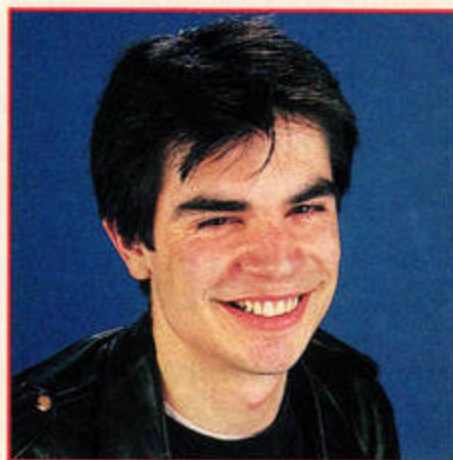
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Having trouble with the *STario* series? Well, don't worry, we've got all the help you need. Now will someone please change that cheesy photo?

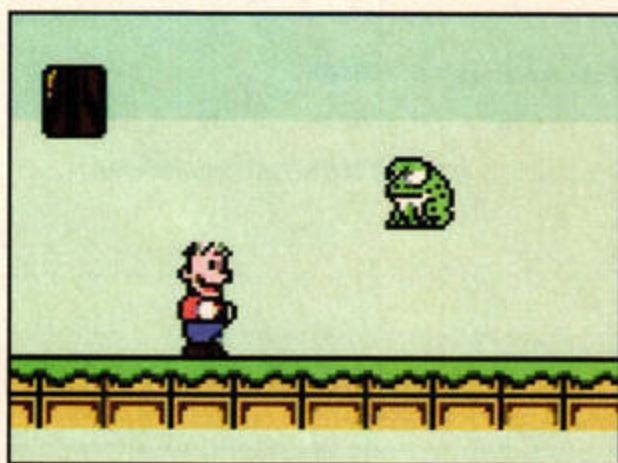
Gamesbusters

STario special!

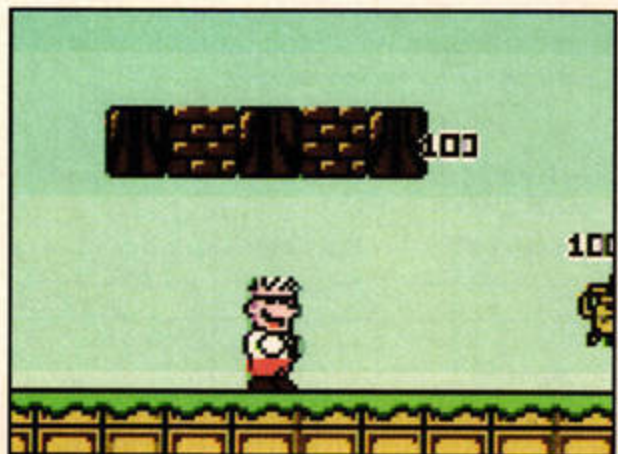
With the help of James Matthews of Top Byte Software, this month we present a wonderful guide to *STarioland* and its successor *STario's Christmas*. You can get hold of both games from Top Byte (☎ 01622 763056) for just £30. Look out for *Space Ace STario* and another sequel in the coming months.

Size is all

The first bonus you're likely to encounter, in the vial of red liquid, is the spell which turns you into Super STario. When you're Super STario you can take an extra hit before dying.



He's big, he's strong, he's Super STario. Hurrah!



If you manage to get the fire bonus, you can blast your enemies from a relatively safe distance.

Small may be beautiful, but big is better, innit?

Other bonuses worth pursuing include invisibility, the ability to throw fireballs and flying. If you get the flying bonus (the carrot), your feet will flash and you can 'fly' through the entire level. All you have to do is jump, and then jump again while you're still in the air.

Check every bonus block you can, because even the coins are useful – 100 coins add up to another precious life. There are even invisible bonus blocks, so if there's time, try bouncing around – you may look strange but who knows what you'll find? Remember that [Fire] speeds up STario's movement, so if time becomes a problem, hold it down to speed through the level more quickly (remember that inertia, though).

Nasty nasties

Everything that moves in the *STario* series is out to prevent you from rescuing your girlfriend, STacey. Not every nasty can be killed by jumping on its head – some are lethal to the touch – but follow this guide and you can turn the tables on the forces that oppose you.

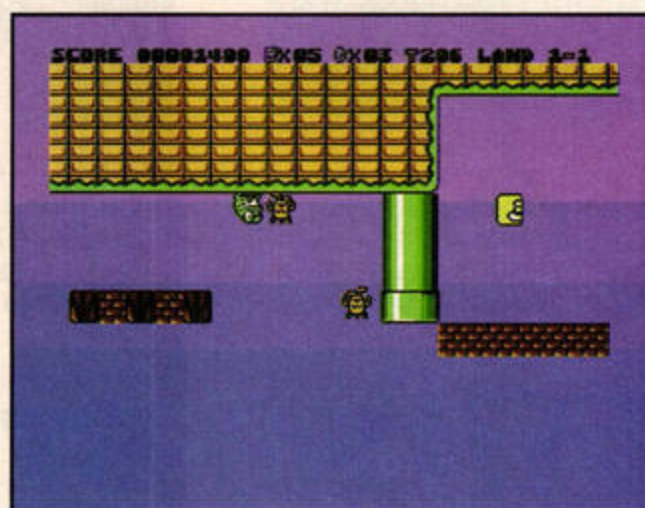
Jumping frogs should be leapt on, because although you can use STario's

inertia to avoid them, they will chase you. Bats should be killed as quickly as possible too. Wait until they are almost next to you and then jump up to avoid or crush them.

Armadillos have a nasty afterlife – they turn into bombs when you jump on them. Make sure you plan an escape route before tackling these nasty creatures. The swooping birds can be fooled into diving prematurely, but although you can duck the more wayward ones, you'll need precise timing to get past more accurate bombing raids.

Fish cause many problems in *STarioland*. Deal with them as you dealt with the bats, but don't jump too much because that's what attracts them in the first place.

Finally, sharks and crocodiles have to be avoided – wait for their approach and then leap as high as possible in case



It's dark, STario's upside-down and he's been turned into a frog! What will his girlfriend think now?

they make a lunge for you.

The safest way to deal with nasties is to get underneath their platforms. You can then knock the blocks beneath them to kill them.

Cheat, cheat!

There are many hidden cheats in *STarioland*, and we've persuaded Top Byte to reveal a few codes to help, hinder and entertain you. You should enter the codes into the high score table at the end of each game (you'll hear STario jump if the code is entered correctly), and they can be mixed to your heart's desire.

STarioland codes

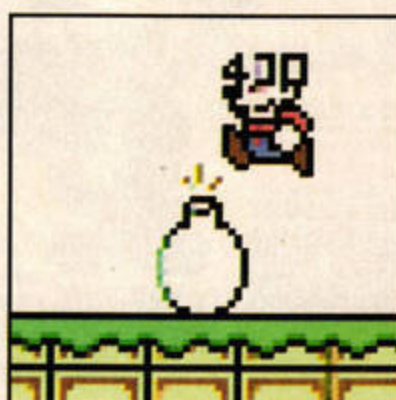
PRACTISE: gives you ten lives, but you can only play the first two worlds.

EXPERT: jump around levels randomly and access the harder ones.

AUSTRALIA: turn the game screen upside-down for a fresh perspective.

ASFROG: turn STario into a jumping frog.

SUNSET: alter the background to purple.



Nice hit. You got the armadillo. Now run away, very quickly.

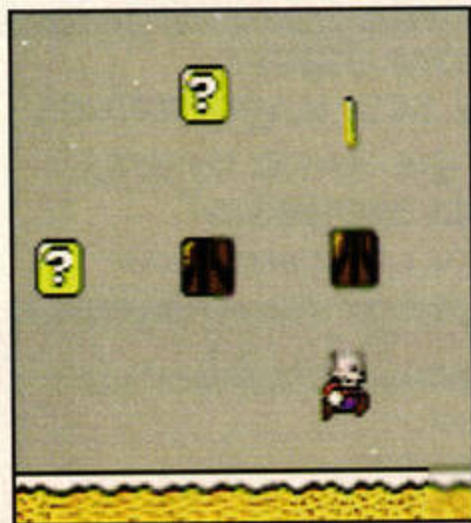
NORMAL: reverse everything to the default settings.

Stario's Christmas

SHAKEY: produce random earthquakes for more ground-breaking gameplay.

REVERSE: turn STario around to make things more tricky.

RUBBISH: make the game slow and jerky. It's ideal for practising. *stf*



Now you can make the earth move for you courtesy of the SHAKEY password.

DINOS

And finally, here are some of the level codes for *Evolution Dino Dudes*.

- 6 LONG SHADOW
- 7 BOW AND ARROW
- 8 HAPPEY VALLEY
- 9 RED ROOSTER
- 10 OLYMPIAN GODS
- 12 DOWN THE ROAD
- 13 NEVER NEVER
- 14 ZINC BUCKET
- 15 ALL WEEK LONG
- 16 BRONZE SWORD
- 17 GLASS OF MILK
- 19 JURY SERVICE
- 20 DUDE RANCH
- 21 AMBROSIA
- 22 JUNGLE BEAT
- 23 SINK OR SWIM
- 24 ROMAN HELMET
- 25 LAST WALTZ
- 26 HOUSE MOUSE

Thanks to 16/32 Systems for providing the codes. Falcon gamers can get hold of *Evolution Dino Dudes* (STF 77, 81%) for £24 by ringing 01634 710788.

QUICKIES

We are quite often inundated with queries for games we've never even heard of, let alone played. However, caring people that we are, we've decided to help a few of you poor souls out.

P Blackwood from Galashiels is being driven mad by level two of *Strider 2*. Although he already has infinite lives (thanks to the 'swift' cheat), he'd like a solution to the level, or failing that a cheat for invincibility. Well, anyone who's read issue 69 of *ST FORMAT* will know that when the cheat icon is accessed, pressing [E] gives you more energy, and [D] destroys the robots.

Two people we can't help are N Murgatroyd from Halifax, who wants to know where the auxiliary reactor is in *Space Quest 3*, and Robert Lawrence of Manchester who can't solve either part of the Riddle-Master's second puzzle in *Amberstar*. If anyone has solutions to these problems please write in to: Gamebusters, *ST FORMAT*, 30 Monmouth St, Bath, Avon BA1 2BW - we may even give you a prize.

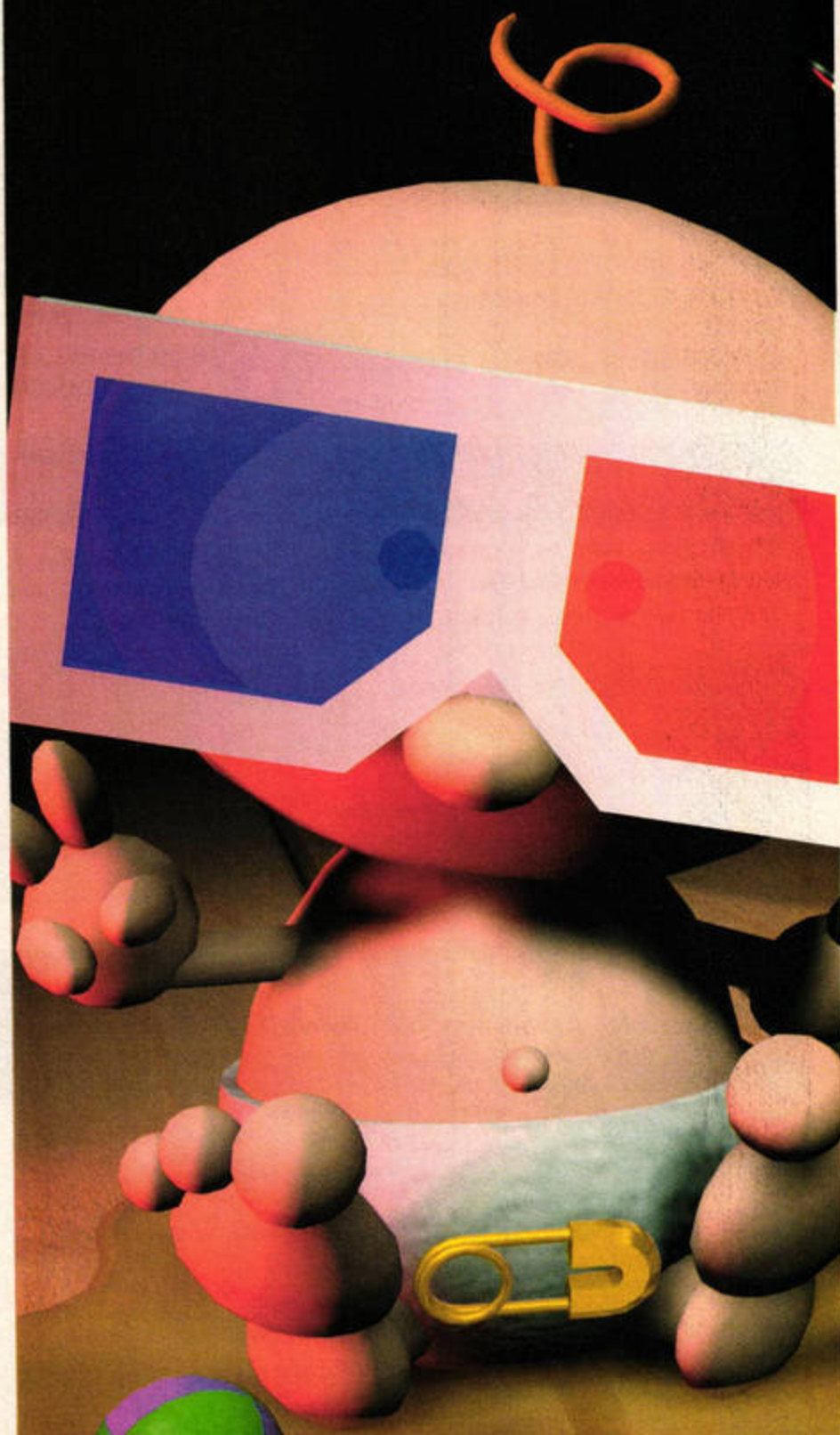
And if you're having problems with any ST game, send in your query and we'll try to help. Alternatively, try *The Cheater's Digest*, which contains over 5,500 cheats. It costs just £4.99 from PjH Publishing, 4 Manor Close, Brampton, Huntingdon, Cambridgeshire, PE18 8UF (make cheques payable to PjH Publishing).



For the benefit of those who missed issue 69, here are the cheats for *Strider 2*. And we are never, ever printing them again.

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Atari comes under fire and PD giants steal the ST crown. Karen Levell hands out yellow cards.

Atari storm



As a long-standing subscriber to your excellent magazine

(suck, suck), I was delighted to see that you will be talking to Sam Tramiel and Darryl Still. I was just wondering if you could include some of the following questions...

1 Has Atari ever considered trying that radical new marketing strategy called advertising? I know Atari is a relatively small company, but couldn't it fund the campaign by diversifying into the highly profitable emu farming industry, or something?

2 Is Atari giving up completely on home computers, or will we see a new machine in more profitable times?

3 Has Atari considered venturing into the PC market? Or manufacturing a PC-compatible computer?

4 Is it true the staff in Atari's marketing department all died of boredom and no-one noticed for six months?

Rodney Booker, via e-mail

I've been an avid ST supporter ever since I purchased my 520STFM way back in 1986, and in 1993 I added a 1040STE to my collection. During that time I have watched the general decline of Atari computer usage and the deterioration of the company's reputation.

I have every respect for Atari and its achievements, from the first VCS consoles (the 8-bit 400 and 800, and the 65XL) to the ST range and beyond. I even plan to purchase a Jaguar with CD-ROM, rather than following the masses and going for the Sony Playstation or Sega Saturn.

But what is Atari doing to reassure ST enthusiasts, like myself, that we will be catered for in the future? As we have all seen in the past, Atari produces fantastic hardware at a reasonable price, but then lets itself down by virtually keeping it a secret. The question is: does Atari even have a marketing and advertising department?

Les Rayner, Thetford



Atari circulated a million supplements to raise the Jaguar's profile.

QUICKIES

On issue 77's Cover Disk there was a game called *Pipetris*, which I thought was brilliant. Is there a full version available?

stf: Erm, that was the full version.

Can we have some *Beavis and Butthead* in *ST FORMAT*?

stf: No way. *Beavis and Butthead* really suck... huh, huh, huh.

I've just bought a 28,800 modem and am seeing if it works. I buy your mag every week.

stf: That's funny, we only produce one a month.

I keep seeing the name Mary in the subscriber's letter. Who is she and what does she look like?

stf: Mary Lojkine is the mistress of the deadlines, the one who cracks the whip when we're not

working hard enough; she is also responsible for the spelling and grama (That's spelling and grammar - Mary) in *ST FORMAT*. She's only $\frac{3}{8}$ here, though.



Rumour has it Mary edited the stone tablets God gave to Moses.

stf: As Darryl Still points out in this month's interview (see page 18), Atari is already running a huge ad campaign for the Jaguar. It's so huge, in fact, that none of us have seen it. Still, perhaps Atari could advertise its advertising campaign?

What do you think? Have you seen or heard these ads? Have you come across the Jaguar CD? And what do think of Atari's decision to aim its console at the under 15s? Given Atari's history, would you feel confident about buying a Jaguar? Drop us a line at the usual address.

Vapourware?



At the ST Review show in Newcastle (April 1994), I picked up an Atari

leaflet about the software being developed for the Falcon. In the back of the booklet there was a section about future game releases. Included in this list was *Space Junk* from Imagitec. What happened to this game? I bought a copy of the demo from Floppyshop and it was great.

I heard recently that 16/32 Systems has grabbed the

COMIC CAPERS

After reading our Comic Capers feature in issue 77, one of our readers (whose letter, along with his name and address, has sadly gone astray) sent us a copy of *Atari Force*, a comic book littered with references to the big A itself. A little *ST FORMAT* investigation reveals that when Atari launched the 2600 all those years ago, it approached DC Comics with the idea of bundling these comics with games to encourage sales. These original comic books feature an earth of the not-too-distant future searching for a new home.

The comics were such a good idea that the story runs through 20 issues, leading on to a second series of five mini-comics, one of which is now framed on our wall. The story follows Martin Champion, his son Tempest, the obligatory lass who he'll get off with later in the series, and three aliens. Their adventures seem to revolve around stealing ships, jumping through universes, fighting in renegade battles and seeking out an unknown enemy (which the wildcard Champion has a hunch is there). Top stuff.

The blend of bad plotting and cheesy lines proved such a hit with the predominantly American audience that the story continued yet further, in a spin-off called *Star Raiders*. Somewhere along the line there was also an *Atari Force Special* containing three more stories.

If anyone else has any of these comics, we'd love to see them. If you want more information, nip along to: http://quest.com/~lkseitz/comics/AtariForce/af_fa.html, where you'll find an extensive FAQ.



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Rome AD92 as seen on an Amiga. This is another title that has been converted for the Falcon, but whether it will ever see the light of day remains to be seen.

rights to some of the games that were supposed to be released when the Falcon was launched. Has it got the rights to *Space Junk*? Could you also tell me what happened to the other games in the list:

Black Sect, Chaos Engine, Cyber Assault, Daughters of Serpents, Eclipse, Harrier Av8, Humans, Ishar, Raiden, Road Riot 4WD, Rome AD92, Steel Talons, Striker, Suriya, Tornado Flight Simulator, Transartica, Vroom 2 and Yuppie's Land?

Frankie Williams, South Shields

stf: According to Nick Harlow of 16/32 Systems, *Space Junk* – along with *Harrier Av8* and *Vroom 2* – was only ever developed to the beta test stage, and will probably never be finished now. That said, the *Chaos Engine* project was supposed to be dead and roasting in development hell, but the rumours now suggest it is still being developed, so who knows?

On a more positive note, 16/32 has already released *Humans*, *Ishar* and *Steel Talons*, although *Humans* is now called *Evolution Dino Dudes*. It is also about to release *Road Riot 4WD* – watch for a review 'real soon now'.

Raiden, *Rome AD92*, *Striker*, *Tornado Flight Simulator* and *Transartica* are all complete, but whether they will ever be released depends on the copyright owners. As Nick says, many companies feel the potential sales in the ST market are too low to make it worthwhile licensing the games to smaller companies, such as 16/32. It's a case of wait and see, I'm afraid.

As for *Black Sect*, *Cyber Assault*, *Daughters of Serpents*, *Eclipse*, *Suriya* and *Yuppie's Land*, we've never heard of them. Nick is very keen to track down all potential ST and Falcon releases, however, so if you send a photocopy of the leaflet to him at: 16/32 Systems, 173 High Street, Strood, Kent ME2 4TW he may be able to locate and release some of this elusive software.

Shocking



I was shocked to read that Unique Developments Sweden, the creator of *Obsession* and *Substation*, is abandoning the Atari market. After all, if UDS is now a respectable sized company, it is due to the support of Atari users.

All UDS did was create clones of other games (such as *Pinball Dreams* and *Doom*) for the STE, but these games really sold. Why? Simply because the STE and Falcon market is starving for games.

The PC market, on the other hand, is saturated with titles. Even superb games can have a tough time – there are just so many games coming out each month. No PC owner would buy *Wing Commander* when they could buy *Wing Commander 4* or *Tie Fighter*. A *Wing Commander* or *X-Wing* clone would sell extremely well on the ST or Falcon, though, because Atari owners are starving for games.

Navid Imani, Portugal

stf: UDS will be sorely missed, but that's not to say it won't be replaced. If there is a genuine gap in the market, it will be filled. *Merlin*, for instance, has already taken over the development of the Falcon version of *Obsession*.

Unfortunately, sheer weight of numbers dictates that even a poor PC game will outsell a popular ST one. That said, the exodus of larger companies does offer smaller developers the chance to show what they can do. Wouldn't you rather have a first-rate piece of software from an Atari enthusiast than a grudging release from a big corporation?

Send your letters to the editor, Karen Levell, at: Feedback, **ST FORMAT**, Future Publishing, 30 Monmouth St, Bath, Avon, BA1 2BW or e-mail: klevell@futurenet.co.uk. You can also reach her via our Web site at: <http://www.futurenet.co.uk>. Note: letters may be edited for length and clarity.

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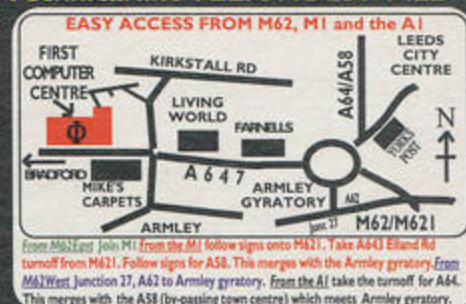
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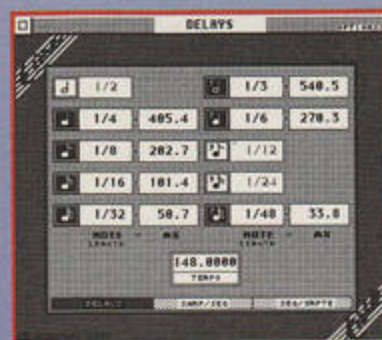
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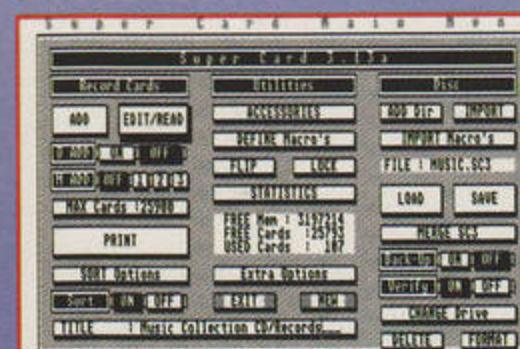
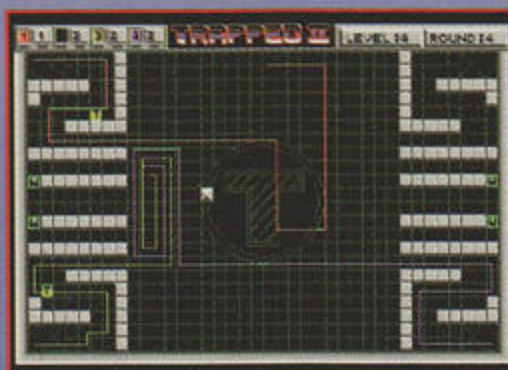
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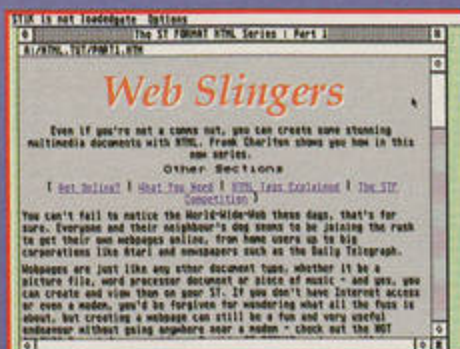
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